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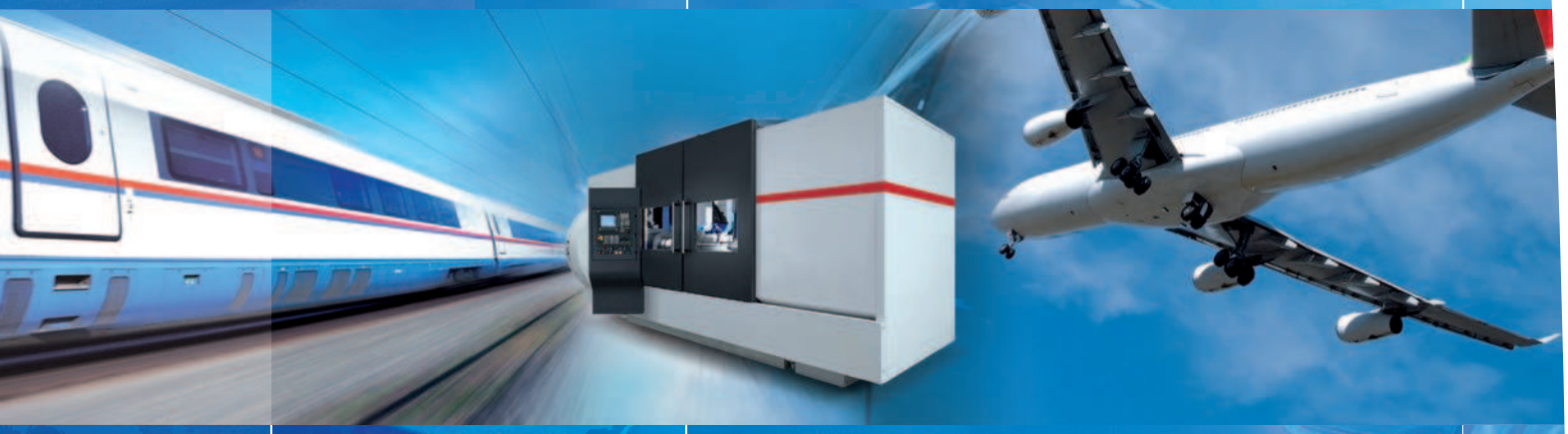
INDUSTRIAL - PUBLIC TRANSPORTATION

CML INNOVATIVE TECHNOLOGIES
WHERE INNOVATION COMES TO LIGHT

LED Lamps for Signalisation
LED Panel Mount Indicators

www.cml-it.com



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CML - ENTSTEHUNG UND STANDORTE
CML - HISTORY AND LOCATIONS

CML Innovative Technologies ist ein weltweit agierendes, ISO zertifiziertes Unternehmen mit Entwicklung und Herstellung von hochqualitativen Miniatur-Leuchtmitteln.

Seit unserer Gründung im Jahr 1931 bauen wir stetig unsere Erfahrung aus und haben damit viele Marktstandards setzen können. Als Folge sind wir daher führend in der Branche und mit dem umfangreichsten Sortiment am Markt aktiv. Über 1000 Mitarbeiter engagieren sich in den Bereichen Entwicklung, Fertigung, Vertrieb und Kundendienst für unsere Kunden. Höchste Kundenansprüche spornen uns an, die optimale Lösung für unterschiedlichste Applikationen zu finden und zu realisieren.

CML Innovative Technologies is an ISO certified company which develops and manufactures high quality miniature lighting products for the global marketplace.

Since our formation in 1931, we have continually increased our expertise to set new standards for the lighting industry and this has led us to being a market leader with the ability to offer the most comprehensive product range available. Our 1000+ employees aim to provide high quality solutions for a diverse range of applications, whilst continuing to meet our customers' high expectations in product development, manufacturing and customer service.

2012
2004
2001
2000
1998
1988
1987
1980
1978
1974
1969
1966
1939
1931

Entstehung und Historie:	***Our history:***
CML Gruppe wird in den Firmenverbund Grupo Antolin integriert	*CML becomes part of Grupo Antolin*
Umfirmierung der Gruppe zu CML Innovative Technologies	*Renaming of the group to CML Innovative Technologies*
EBT wird von SLI (Sylvania Light Industries) übernommen	*EBT is taken over by SLI (Sylvania Light Industries)*
EBT Bad Dürkheim errichtet ein neues Lager mit einer Fläche von 1700m²	*EBT Bad Dürkheim opens a new warehouse with an area of 1700m²*
VCH International Ltd wird Teil des Europäischen Geschäfts von SLI Miniature Lighting Ltd	*VCH International Ltd becomes part of the European branch of SLI Miniature Lighting Ltd*
EBT Bad Dürkheim entwickelt LED Signalleuchten, eine innovative Generation von Einbausignalleuchten	*EBT Bad Dürkheim develops LED indicators, a new generation of panel mount indicators*
Management buyout innerhalb des General Instrument Lampen Bereichs und Zusammenführung von Vitaliy (V), Chicago Miniature Lamp (C) und Hyvac (H) zu VCH International Ltd	*Management buyout and integration of Vitality (V), Chicago Miniature Lamps (C) and Hyvac (H) to VCH International Ltd*
EBT Bad Dürkheim entwickelt MultiLED Lampen, ein revolutionäres Produkt als Ersatz für Kleinstglühlampen	*EBT Bad Dürkheim develops MultiLED lamps a revolutionary new product to replace incandescent miniature lamps*
Beginn der Fertigung von Glimmlampen-Assemblies bei EBT in Bad Dürkheim	*Start manufacturing of neon assemblies at EBT Bad Dürkheim*
Gründung von EBT als Handelsunternehmen von Kleinstglühlampen mit Sitz in Bad Dürkheim	*Formation of EBT as trading firm for incandescent miniature lamps located in Bad Dürkheim*
Vitality Bulbs wird von General Instruments Corporation übernommen und firmiert zu Vitality Ltd und später zu General Instrument Lamps Ltd um	*Vitality Bulbs is taken over by General Instruments Corporation and renamed Vitality Ltd, later changed to General Instrument Lamps Ltd*
Vitality Bulbs zieht in die neu errichtete Lampenfertigung in Bury St Edmonds, Suffolk	*Vitality Bulbs moves to the new purpose built premises in Bury St Edmunds, Suffolk*
Wartburg Lamps firmiert zu Vitality Bulbs und zieht nach Green Wood, London um	*Wartburg Lamps trades as Vitality Bulbs and moves to Green Wood, London*
Gründung von Wartburg Lamps (später Teil des UK Geschäfts von CML Innovative Technologies) in Kentish Town, London	*Formation of Wartburg Lamps (later to become part of the UK business of CML Innovative Technologies) in Kentish Town, London*

INDUSTRY

Unsere Produkte finden in den unterschiedlichsten Märkten ihre Anwendung.

Our products are used in various markets and applications

Mit der hohen Effizienz und Langlebigkeit unserer LED Lampen und Signalleuchten decken wir nahezu alle Anforderungen aus Gewerbe und Industrie an flexiblen Signalisierungslösungen ab. Nachhaltige Einsparungen durch sehr geringen Wartungsaufwand sichern einen erheblichen Kostenvorteil.

With our highly efficient long life LED lamps and indicators CML provides flexible solutions for all sections of the industrial market. Our low maintenance products guarantee significant cost savings.

AVIATION

Hochwertige LED Lampen und Glühlampen für den Einsatz in der Luftfahrtindustrie haben sich seit vielen Jahren bewährt.

CML is a leading brand name in the world of aviation lighting. High quality incandescent, halogen, fluorescent and LED products for the aviation industry have been the first choice of airlines for many years.

Gerne senden wir Ihnen unseren ausführlichen Katalog für den Aviation-Markt zu.

Please ask for our detailed aviation market catalogue.

RAILWAY

Licht für eine Welt in Bewegung! CML Produkte sind seit vielen Jahren ein innovativer Bestandteil für Beleuchtungs- und Signalisierungslösungen im Transportwesen.

Light for a world in motion! CML products have been a key element in lighting and signalling solutions for many years.

BUS

Vom Schienenverkehr bis hin zum öffentlichen Straßenverkehr finden LED Produkte von CML ihren Einsatz. Von der Fahrerstands-Signalisierung bis hin zur Kabinen-Beleuchtung sind unsere Produkte im Markt vertreten.

LED products from CML can be found in all markets and applications, from railway to public road transport as well as from driver's stations signals to cabin lighting.

MEDICAL

Anwendungsspezifische Lampen für den Bereich der Medizintechnik: OP Mikroskop Lampen, OP Bereichs Lampen, Dental Lampen und Lampen für verschiedenste medizinische Geräte.

Specific lamps for application in medical instrumentation and technology including microscope lamps, operating theatre lighting, dental lamps and other lamps for a wide variety of medical equipment.

Gerne senden wir Ihnen unseren ausführlichen Katalog für den medizintechnischen Markt zu.

Please ask for our detailed medical market catalogue.

OFFSHORE

Die technologischen Fortschritte bei der Lichtstärke und Lichtausbeute von LEDs bieten viele Möglichkeiten zur Entwicklung von diversen speziellen Lichtlösungen im Offshore Bereich. Langlebige und vibrationsfeste Produkte helfen hier, den Wartungsaufwand gering zu halten.

The technical progress in luminous intensity and efficiency of LEDs offers many possibilities for the development of specific lighting solutions for the offshore industry. Long lasting and vibration resistant products help to reduce maintenance costs.

LED LAMPEN FÜR SIGNALISIERUNG
LED LAMPS FOR SIGNALISATION

LED Lampen als klassische Alternative zu Kleinglühlampen.
Bitte besuchen Sie unsere Website www.cml-it.com für weitere Details und Informationen.

LED lamps as alternatives for miniature incandescent lamps.
Please visit our website at www.cml-it.com for further details and information.

Detailierte Informationen finden Sie auf den Seiten 16 - 35.
Detailed information can be found on pages 16 - 35.

LED SIGNALLEUCHTEN
LED PANEL MOUNT INDICATORS

LED Signalleuchten als perfekte Alternative zu herkömmlichen Meldeleuchten mit Glühlampen.
Bitte besuchen Sie unsere Website www.cml-it.com für weitere Details und Informationen.

LED panel mount indicators as alternatives to common indicators with incandescent lamps.
Please visit our website at www.cml-it.com for further details and information.

Detailierte Informationen finden Sie auf den Seiten 36 - 76.
Detailed information can be found on pages 36 - 76.

KUNDENSPEZIFISCHE LED PROJEKTE
CUSTOMIZED LED PROJECTS

Mit unseren hausinternen Abteilungen – Entwicklung und Labor – erarbeiten und realisieren wir spezielle Lösungen für unsere anspruchsvollen Kunden.
Gerne nehmen wir uns auch Ihrer Herausforderung an.
Wir freuen uns auf Ihre Kontaktaufnahme!

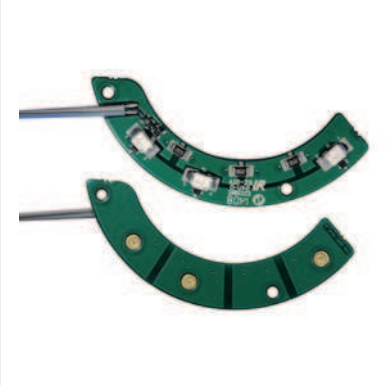
With our in-house departments – development and laboratory – we can develop bespoke solutions for your applications.
Please feel free to contact us!

Illumination mit CML Lichtleiter
Illumination with CML light pipe

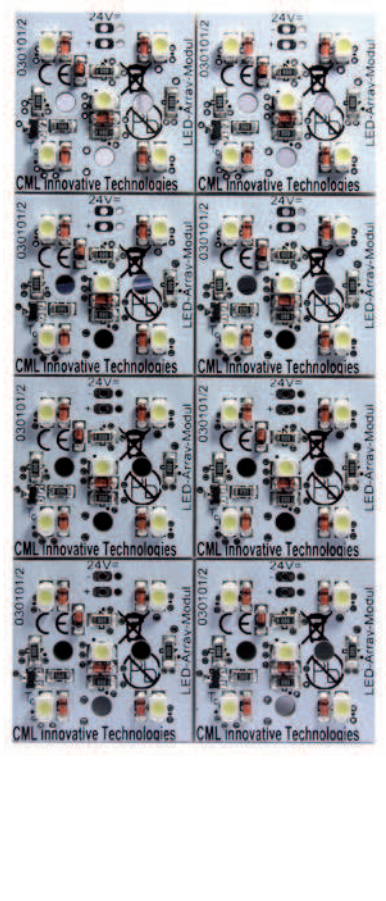
LED Lampe für Bahnanwendung
LED lamp for railway application

LED Leselampe
LED reading lamp

dimmbare LED Leselampe
Dimmable LED reading lamp



LED Module
LED modules



Ambiente-Beleuchtung
Ambient light

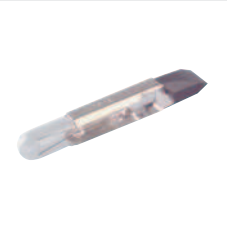
Tacho-Beleuchtung
Speedometer lighting

LED Module
LED modules

GLÜH- UND GLIMMLAMPEN
INCANDESCENT AND NEON LAMPS

Aufgrund ihrer spezifischen Eigenschaften haben diese Lampen nach wie vor ihre Daseinsberechtigung im Markt.
Unsere Glüh- und Glimmlampen sind in vielen verschiedenen Bauformen, Sockeln, Spannungen und Leistungen erhältlich.
Bitte besuchen Sie unsere Website www.cml-it.com für weitere Details und Informationen.

Due to their specific features, these lamps continue to be widely used in the market.
Our incandescent and neon lamps are available in a wide range of shapes, bases, voltages and wattages.
Please visit our website at www.cml-it.com for further details and information.

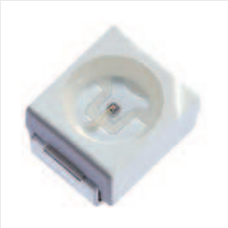


LEDS UND LED DISPLAYS
LEDS AND LED DISPLAYS

Als jahrzehntelanger Partner und Europäischer Generalimporteur von Kingbright, sowie Distributor von OSA Opto Light, bieten wir neben unseren Eigenprodukten auch ein sehr breites Spektrum an diversen LEDs an.
Gerne senden wir Ihnen den ausführlichen Kingbright Katalog zu.

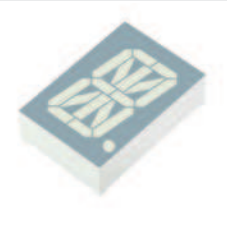
We have been a partner to and a European general importer for Kingbright for decades as well as being a distributor for OSA Opto Light.
Not only do we offer our own products, but also a wide range of various LEDs. Please ask for the detailed catalogue of Kingbright.

bedrahtete LEDs
through hole LEDs

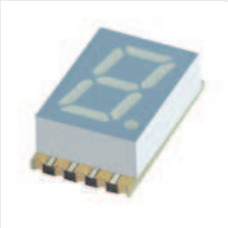


SMD LEDs

Circuit board indicators (CBIs)



bedrahtete LED Anzeigen
through hole LED displays



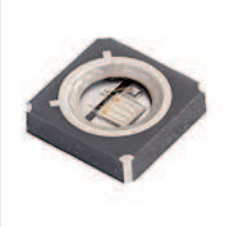
SMD LED Anzeigen
SMD LED displays

Optokoppler
Photo couplers

Lichtschranken
Photo interrupters

Gerne senden wir Ihnen ausführliche Informationen zu.
Please ask for detailed information.

SMD LEDs



UV und IR LEDs
UV and IR LEDs

LEDs

ALLGEMEINE INFORMATIONEN ZU LEUCHTDIODEN
GENERAL INFORMATION ON LEDS

Leuchtdioden werden durch eine Vielzahl von Kennwerten charakterisiert. Die wohl wichtigste ist die Lichtstärke (luminous intensity), die jedoch immer unter dem Aspekt des Abstrahlwinkels (viewing angle) gesehen werden muss. Denn gerade im Vergleich zum Lichtstrom (luminous flux), bei dem die gesamte emittierte Lichtleistung angegeben wird, handelt es sich bei der Lichtstärke um eine richtungsabhängige Größe. Abb.1 zeigt den Zusammenhang. Die Lichtstärke ist diejenige Lichtleistung, die auf eine kreisrunde Fläche von 1cm² in einem Abstand von 100mm oder 316mm, gemessen von der LED-Spitze aus, auftritt. Dabei ist es von besonderer Bedeutung, dass die LED in ihrer mechanischen Achse exakt zentrisch und senkrecht auf die Empfängerfläche ausgerichtet ist. Eine Fehljustage kann sich mehr oder weniger stark auf den Messfehler auswirken. Nach CIE 127 wird die Lichtstärke bei einem Abstand von 316mm im Fall I_{LEDA} und 100mm im Fall I_{LEDB} gemessen.

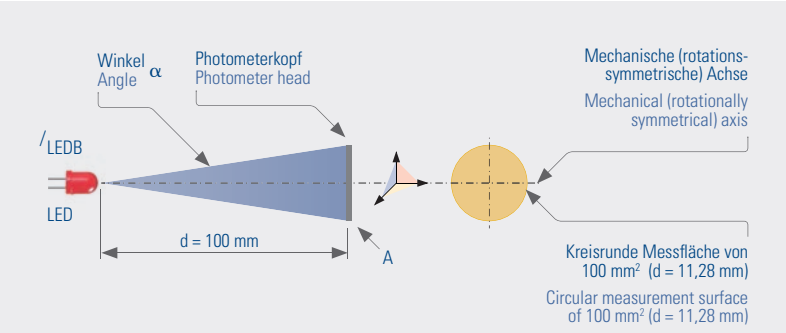


Abb.1 / Figure 1

Light-emitting diodes are characterised by various parameters. The most important characteristic parameter is the luminous intensity, which must always be considered relative to the viewing angle. This is due to the fact, that, in contrast to the luminous flux, for which the entire emitted luminous power is specified, the luminous intensity is a directional value. This connection is illustrated in Figure 1. The luminous intensity is the luminous power impinging on a circular area of 1 cm² at a distance of 100mm or 316mm, measured from the top of the LED. In this context, it is of particular importance that the mechanical axis of the LED is centrally and exactly vertically aligned with respect to the receiving surface. A mismatch can affect the accuracy of measurement. According to CIE 127, the luminous intensity is measured at a distance of 316mm (I_{LEDA}) and 100mm (I_{LEDB}).

LEDs

Leuchtdioden verfügen über eine mehr oder weniger ausgeprägte keulenförmige Abstrahlung. Zur Kennzeichnung des Abstrahlwinkels (viewing angle) wird der Winkel genommen, bei dem die Lichtstärke 50% des Maximalwertes annimmt. Dieser Winkel wird mit $\Theta_{1/2}$ bezeichnet und spannt sich von der Mittellinie hin zum 50% Wert auf. Üblich ist auch eine Verwendung des vollen Winkels, dann jedoch mit $2\Theta_{1/2}$ bezeichnet (s. Abb.2).

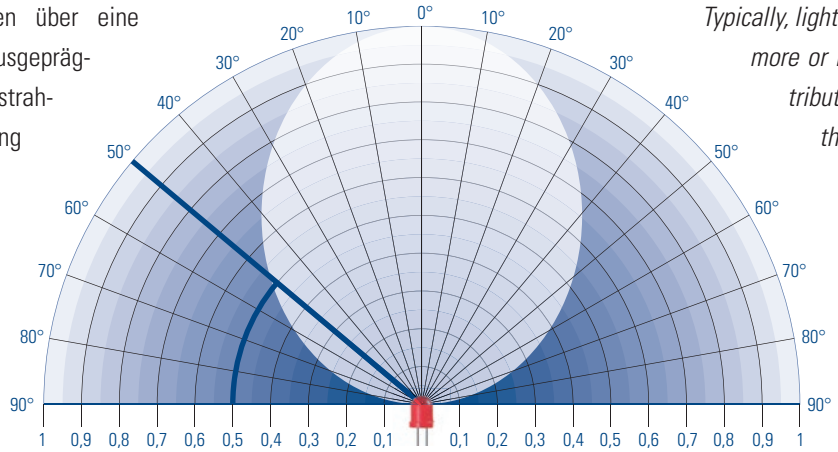


Abb. 2 / Figure 2

Bei der Beurteilung der Lichtstärke ist es nun nicht unwesentlich, neben dem Lichtstärkewert auch den Vollwinkel zu betrachten. Die Höhe der Lichtstärke alleine ist nämlich kein ausreichendes Kriterium zur Beurteilung der Helligkeit einer Leuchtdiode. In der Abb.2 ist die Abstrahlcharakteristik einer breit abstrahlenden LED aufgezeigt. Der Vollwinkel $2\Theta_{1/2}$ beträgt hier 100°. Zu beachten ist, dass sich das Maximum der Intensität auf die mechanische Achse bezieht.

Typically, light-emitting diodes show a more or less conical spatial distribution. In order to specify the viewing angle, we take the angle at which the luminous intensity achieves 50% of the maximum value. This angle is identified by $\Theta_{1/2}$ and extends from the centre line to the 50% value. Another common procedure is to use the round angle, which is identified by $2\Theta_{1/2}$ (see Figure 2).

With respect to the assessment of the luminous intensity, it is not only important to consider the luminous intensity value, but also the round angle, as the luminous intensity alone is not a sufficient criterion to assess the brightness of a light-emitting diode. Figure 2 shows the spatial dimension of a broadly diffusing LED. In this case, the full viewing angle $2\Theta_{1/2}$ is 100°. It must be noted that the maximum intensity refers to the mechanical axis.

LEDs

Eine weitere wichtige Kenngröße der Leuchtdiode ist die Wellenlänge. Es sind verschiedene Angaben, die zur Charakterisierung benutzt werden.

Die Abb. 3 zeigt die verschiedenen Wellenlängen auf. Die Peak-Wellenlänge (λ_{peak}) gibt lediglich diejenige Wellenlänge an, bei der das Maximum der Strahlungsfunktion auftritt und stellt somit einen radiometrischen Wert dar. Daneben wird auch noch vielfach die Halbwertsbreite der Strahlungsfunktion angegeben. Sie wird ermittelt, indem man die Breite des Wellenlängenbereiches bei den Schnittpunkten des 50%-Wertes des Maximums angibt.

Viel aussagekräftiger ist jedoch die Angabe der dominanten Wellenlänge (λ_{dom}). Sie wird rechnerisch ermittelt, berücksichtigt die Farbort-Koordinaten und gibt einen Wert, der das Farbempfinden des menschlichen Auges widerspiegelt. Er stellt somit einen kolorimetrischen Wert dar. Die Angabe der Schwerpunktwellenlänge ist in vielen Fällen ebenso sinnvoll. Sie berücksichtigt auch Banden in anderen Bereichen, beispielsweise wenn die Leuchtdiode einen ausgeprägten Infrarot-Anteil neben dem sichtbaren Anteil besitzt.

Another important characteristic parameter of the light-emitting diode is the wavelength. Different values are used for the characterisation of this value.

Figure 3 shows the various wavelengths. The peak wavelength (λ_{peak}) only specifies the wavelength value with the maximum of the spectral energy distribution. Thus, the peak wavelength represents a radiometric value. In addition, often the half-width value of the spectral energy distribution is specified. This value is determined by specifying the width of the wavelength range at 50% of the value of the maximum.

The specification of the dominant wavelength (λ_{dom}) is, however, much more meaningful. This value is determined by calculation. It considers the colour coordinates and results in a value, which reflects the sensitivity for colour of the human eye. Thus, the dominant wavelength represents a colourimetric value. In many cases, it is also useful to specify the center wavelength. This value also considers bands in other ranges, for example, if the light-emitting diode has, apart from the visible fraction, a distinct infrared fraction.

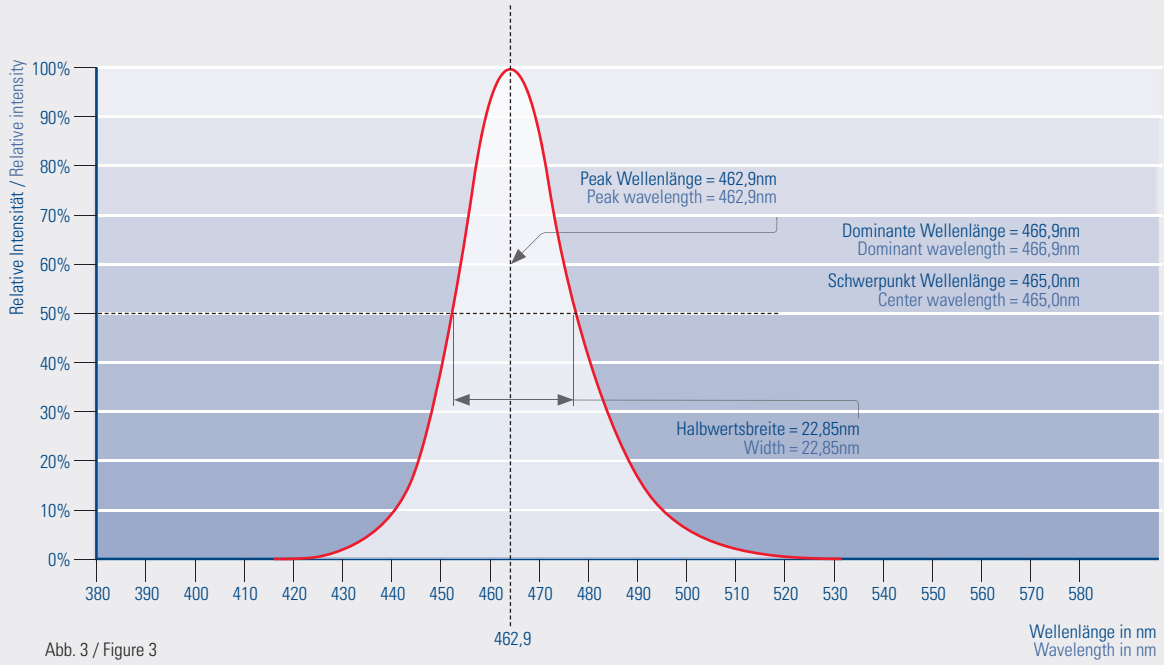


Abb. 3 / Figure 3

LEDs

In Abb. 4 sind beispielhaft verschiedene Leuchtdioden mit ihrer Strahlungsfunktion normiert aufgetragen. Die schwarze Kurve ist die Strahlungsfunktion einer weiß strahlenden Leuchtdiode.

Erkennbar ist hier das ausgeprägte Maximum im kurzwelligen Blau und die recht breite Verteilung im Gelb/Orangenen Bereich. Dieser Kurvenzug zeigt klar, dass es sich bei der weißen Leuchtdiode nicht um ein dem Temperaturstrahler kompatibles Leuchtelement handelt.

Eine weitere wichtige Kenngröße ist die ähnlichste Farbtemperatur (T_n), die jedoch nur bei der weiß abstrahlenden Leuchtdiode zum Tragen kommt. Die ähnlichste Farbtemperatur ist diejenige Temperatur, die einem Temperaturstrahler am nächsten kommt.

Figure 4 shows the fractional bandwidth of different light-emitting diodes with their spectral energy distribution. The black curve represents the spectral energy distribution of a white light-emitting diode.

In this case, the marked maximum in the short-wave blue range, and the rather broad distribution in the yellow/orange range can be easily identified. This curve clearly shows that the white light-emitting diode is not illuminantly compatible with the thermal radiator.

Another important characteristic parameter is the correlated colour temperature (T_n), which only applies to the white light-emitting diode. The correlated colour temperature is the temperature which comes closest to a thermal radiator.

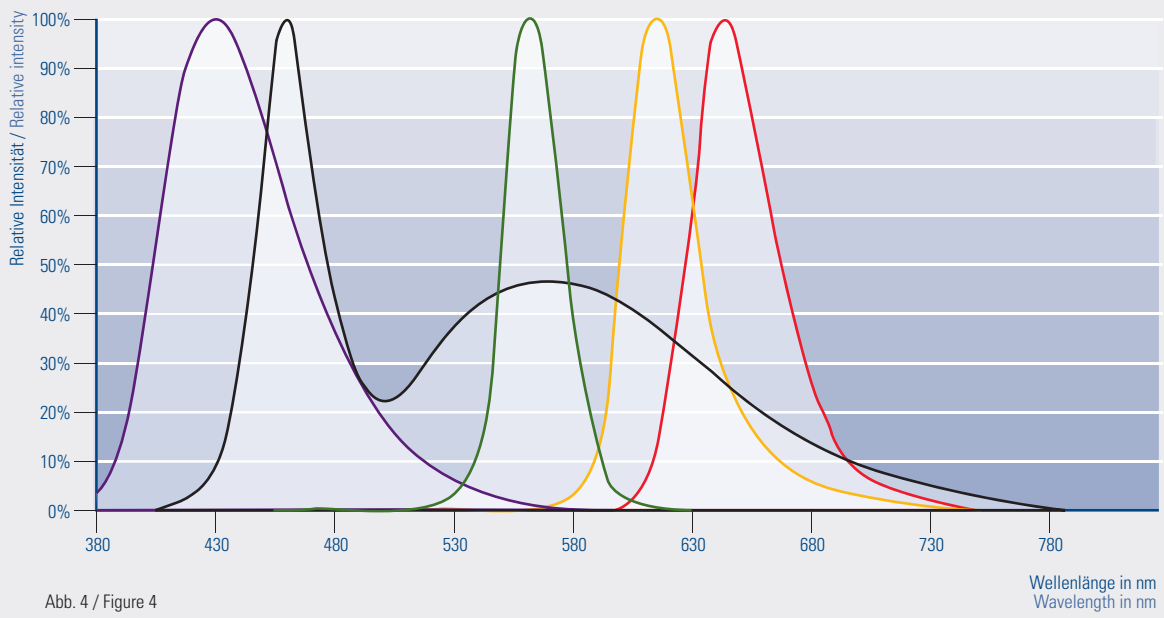


Abb. 4 / Figure 4

LED LAMPEN FÜR SIGNALISATION
LED LAMPS FOR SIGNALISATION

Allgemeine technische Informationen
General technical information

LED Lampen sind die klassische Alternative zu Kleinglühlampen zur Signalisierung.

LED Lampen besitzen zahlreiche Vorzüge gegenüber Kleinglühlampen:
- extrem lange Lebensdauer
- geringe Wärmeentwicklung
- niedrige Stromaufnahme
- große Stoß- und Vibrationsfestigkeit
- verschiedene Farben zur Auswahl

LED Lampen werden eingesetzt bei:
- schwierigen Betriebsbedingungen mit hohem Stoß- und Vibrationspegel
- Anwendungen, bei denen eine zuverlässige Anzeige erforderlich ist
- Anwendungen, bei denen Lampen schwer zugänglich sind bzw. eine Auswechslung zeitraubend und daher teuer ist

StarLEDs: LED Lampen mit einer bedrahteten oder einer SMD LED.

Mega StarLEDs: LED Lampen mit mehreren bedrahteten oder mehreren SMD LEDs.

Unsere LED Lampen verfügen über einen integrierten Widerstand und können in folgenden Ausführungen zur Verfügung stehen:

Ohne Gleichrichter: Nur für Einsatz an Gleichspannung geeignet. Polarität beachten!

Mit Einweggleichrichter: Diese LED Lampen sind alle mit einer Schutzdiode in Reihe zum Widerstand und der LED gefertigt. Sie können problemlos bei Gleich- und Wechselspannung eingesetzt werden.
Der typische Helligkeitsrückgang bei Wechselspannung gegenüber dem Betrieb an Gleichspannung liegt bei ca. 25%.

Mit Brückengleichrichter: Problemloser Einsatz an Gleich- und Wechselspannung. Keine Helligkeitsunterschiede. Bi-Polarität an DC-Betrieb.

LED lamps are the classical alternative for miniature incandescent lamps for signalisation.

LED lamps have a lot of advantages compared with miniature incandescent lamps:
- *extreme long lifetime*
- *low heat generation*
- *low power consumption*
- *shock and vibration proof*
- *variety of colours*

LED lamps are used in:
- *applications with a high vibration level*
- *applications where a reliable indicator is needed*
- *applications where it is difficult or expensive to change a lamp*

StarLEDs: *LED lamps with one through-hole LED or one SMD LED.*

Mega StarLEDs: *LED lamps with several through-hole LEDs or several SMD LEDs.*

Our LED lamps are built with an integrated resistor and they can be available in the following versions:

Without rectifier: *Only for use on DC voltage. Please be aware of the polarity!*

With half-wave rectifier: *The LED lamps are built with a protection diode in series with a resistor and LED. They can be used without any problems on DC voltage and AC voltage.*
The typical light reduction on AC voltage against DC voltage operation is about 25%.

With bridge rectifier: *Can be used without any problems on DC voltage and AC voltage with the same light output. Bi-polarity on DC voltage.*

Spannungstoleranz: +10%
Umgebungstemperatur: -20°C - +60°C
Lagertemperatur: -25°C - +80°C

Sicherheitsvorteil: Auch bei defekter oder entfernter Farbkappe eines Befehls- und Meldegerätes ist die Information des Farbsignals vorhanden.

Die 230V AC Typen eignen sich auch zum Einsatz in handelsüblichen Lampenfassungselementen mit integriertem Vorwiderstand. Sie ersetzen somit direkt die 130V 20mA Glühlampen.

LED Lampen mit „weiß klaren" und „weiß diffusen" LEDs unterscheiden sich in ihrer Abstrahlcharakteristik. Während die „weiß klare" LED konzentrierter strahlt, verfügt die „weiß diffuse" LED über einen größeren Abstrahlwinkel und gewährleistet eine homogenere Ausleuchtung.

Alle angegebenen Maße in mm.

Spannung
Die aufgeführten Spannungen sind Bemessungsspannungen. Sie sind die Versorgungsspannungen, auf die die LED Lampen dimensioniert sind. Die Angabe AC/DC/UC erfolgt entsprechend der DIN 40004 (UC bedeutet AC oder DC, gebräuchlich ist auch die Bezeichnung AC/DC). Wechselstromgrößen werden stets als Effektivwert eingesetzt.

Strom
Der aufgeführte Strom ist der Bemessungsstrom. Er fließt bei der Bemessungsspannung. Wechselstromgrößen werden, wenn nicht anders angegeben, als Effektivwert angegeben.

Umgebungstemperatur
Die Umgebungstemperatur ist diejenige Temperatur, die in unmittelbarer Nähe des Leuchtmittels auftritt. Alle Bemessungswerte beziehen sich grundsätzlich auf den offenen Aufbau und eine Umgebungstemperatur von 25°C.

Sockel
Die verschiedenen Baureihen beinhalten Metall- und Kunststoffsockel, welche internationalen und nationalen Vorschriften entsprechen.

Markierung
Eine Markierung erfolgt, je nach Platzverhältnissen, mit Spannung, Stromart, Fertigungsdatum und Polaritätskennzeichnung.

- Bei LED Lampen mit Flansch-, Rillen-, Bajonett- und Schraubsockel ist der mittlere Fußkontakt die Anode (+).
- Bei LED Lampen mit Bi-Pin- und Telefonstecksockel (Keilsockel) ist die Anode (+) durch + auf der Seite des Sockels markiert.
- Bei LED Lampen mit Quetschfuß ist die Anode (+) mit einer schwarzen Markierung auf dem Kunststoffsockel versehen.

Voltage tolerance: +10%
Ambient temperature: -20°C - +60°C
Storage temperature: -25°C - +80°C

Safety feature: *When the coloured lens of a pushbutton is broken or missing the indication is given by the colour of the LED.*

The 230V AC versions can be used in commercial lampholders with an integrated resistor. They replace directly the 130V 20mA incandescent lamps.

There is a difference between LED lamps with „white clear" LEDs and „white diffused" LEDs in their viewing characteristics. The „white clear" LEDs shines in a concentrated ray, the „white diffused" LED has a wider viewing angle, which ensures a more homogeneous illumination.

All dimensions are given in mm.

Voltage
The voltages listed are rated voltages. These voltages are the supply voltages for which the LED lamps are designed. The specifications AC/DC/UC are in accordance with DIN 40004. The abbreviation UC means AC or DC and is more commonly referred to as AC/DC. Alternating current is considered always at the effective value (RMS).

Current
The current, which is listed, is the rated current. The current will flow at the rated voltage. Alternating current is considered always at the effective value (RMS), if not otherwise specified.

Ambient temperature
The ambient temperature is the temperature taken within close proximity of the LED lamps. All rated values are referred to as an open set-up and an ambient temperature of 25°C.

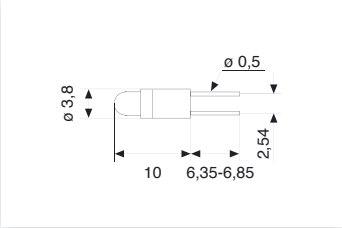
Base
All product types with bases from metal and plastic conform to international and national standards.

Marking
Marking made on bases are dependant on the space available. Specifications such as voltage, current, date of production and polarity can all be accommodated on the base, if required and if there is space available.

- *LED lamps with midget flange, midget groove, bayonet and screw base have their anode (+) as the base center contact.*
- *LED lamps with bi-pin and telephone base have the anode (+) marked with + at the side of the base.*
- *LED lamps with wedge base have a black mark on the plastic base for the anode (+).*

LED Lampen für Signalisation
LED Lamps for Signalisation

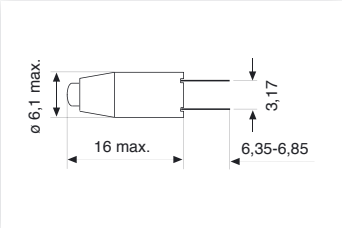
StarLEDs - T-1 (3mm) Bi-Pin LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
15015350	red	24V AC/DC	5mA AC / 10mA DC	230mcd
15015351	green	24V AC/DC	5mA AC / 10mA DC	1500mcd
15015352	yellow	24V AC/DC	5mA AC / 10mA DC	200mcd
15015357	blue	24V AC/DC	5mA AC / 10mA DC	480mcd
1501535W3	white clear	24V AC/DC	2mA AC / 4mA DC	1200mcd
1501535W3D	white diffused	24V AC/DC	2mA AC / 4mA DC	600mcd
15015450	red	28V AC/DC	5mA AC / 10mA DC	230mcd
15015451	green	28V AC/DC	5mA AC / 10mA DC	1500mcd
15015452	yellow	28V AC/DC	5mA AC / 10mA DC	200mcd
15015457	blue	28V AC/DC	5mA AC / 10mA DC	480mcd
1501545W3	white clear	28V AC/DC	2mA AC / 4mA DC	1200mcd
1501545W3D	white diffused	28V AC/DC	2mA AC / 4mA DC	600mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

StarLEDs - T-1 3/4 (6mm) Bi-Pin LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*

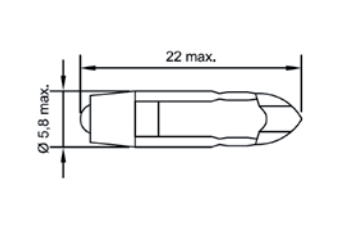


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
15095350	red	24V AC/DC	7mA AC / 14mA DC	330mcd
15095351	green	24V AC/DC	7mA AC / 14mA DC	2100mcd
15095352	yellow	24V AC/DC	7mA AC / 14mA DC	280mcd
15095357	blue	24V AC/DC	7mA AC / 14mA DC	650mcd
1509535W3	white clear	24V AC/DC	2,5mA AC / 5mA DC	1500mcd
1509535W3D	white diffused	24V AC/DC	2,5mA AC / 5mA DC	750mcd
15095450	red	28V AC/DC	7mA AC / 14mA DC	330mcd
15095451	green	28V AC/DC	7mA AC / 14mA DC	2100mcd
15095452	yellow	28V AC/DC	7mA AC / 14mA DC	280mcd
15095457	blue	28V AC/DC	7mA AC / 14mA DC	650mcd
1509545W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1509545W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

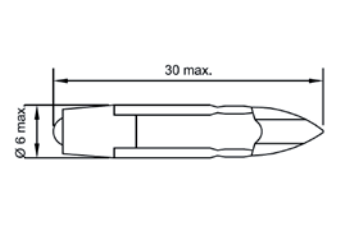
StarLEDs - T5,5k LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1504135UR3	red	24V AC/DC	7mA AC / 14mA DC	330mcd
1504135UG3	green	24V AC/DC	7mA AC / 14mA DC	2100mcd
1504135UY3	yellow	24V AC/DC	7mA AC / 14mA DC	280mcd
1504135B3	blue	24V AC/DC	7mA AC / 14mA DC	650mcd
1504135W3	white clear	24V AC/DC	2,5mA AC / 5mA DC	1500mcd
1504135W3D	white diffused	24V AC/DC	2,5mA AC / 5mA DC	750mcd
1504135L3	warm white	24V AC/DC	7mA AC / 14mA DC	1260mcd
1504145UR3	red	28V AC/DC	7mA AC / 14mA DC	330mcd
1504145UG3	green	28V AC/DC	7mA AC / 14mA DC	2100mcd
1504145UY3	yellow	28V AC/DC	7mA AC / 14mA DC	280mcd
1504145B3	blue	28V AC/DC	7mA AC / 14mA DC	650mcd
1504145W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1504145W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd
1504145L3	warm white	28V AC/DC	7mA AC / 14mA DC	1260mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

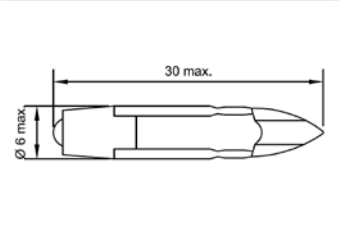
StarLEDs - T5,5 LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1505135UR3	red	24V AC/DC	7mA AC / 14mA DC	330mcd
1505135UG3	green	24V AC/DC	7mA AC / 14mA DC	2100mcd
1505135UY3	yellow	24V AC/DC	7mA AC / 14mA DC	280mcd
1505135B3	blue	24V AC/DC	7mA AC / 14mA DC	650mcd
1505135W3	white clear	24V AC/DC	2,5mA AC / 5mA DC	1500mcd
1505135W3D	white diffused	24V AC/DC	2,5mA AC / 5mA DC	750mcd
1505135L3	warm white	24V AC/DC	7mA AC / 14mA DC	1260mcd
1505145UR3	red	28V AC/DC	7mA AC / 14mA DC	330mcd
1505145UG3	green	28V AC/DC	7mA AC / 14mA DC	2100mcd
1505145UY3	yellow	28V AC/DC	7mA AC / 14mA DC	280mcd
1505145B3	blue	28V AC/DC	7mA AC / 14mA DC	650mcd
1505145W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1505145W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd
1505145L3	warm white	28V AC/DC	7mA AC / 14mA DC	1260mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

StarLEDs - T5,5 LED DC zweifarbig / *bi-colour*

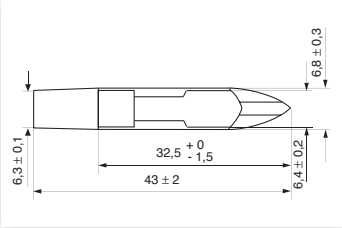


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1505135RG3	red/green	24V DC	15/14mA DC	1950/1400mcd
1505145RG3	red/green	28V DC	15/14mA DC	1950/1400mcd

Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

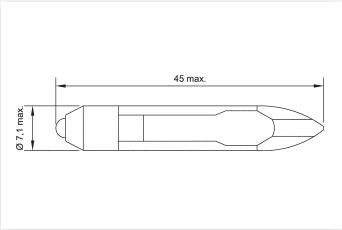
StarLEDs - T6,8 LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1507135R3	red	24V AC/DC	9mA AC / 17mA DC	400mcd
1507135G3	green	24V AC/DC	9mA AC / 17mA DC	2550mcd
1507135Y3	yellow	24V AC/DC	9mA AC / 17mA DC	340mcd
1507135B3	blue	24V AC/DC	9mA AC / 17mA DC	780mcd
1507135W3	white clear	24V AC/DC	3mA AC / 6mA DC	1800mcd
1507135W3D	white diffused	24V AC/DC	3mA AC / 6mA DC	900mcd
1507145R3	red	28V AC/DC	9mA AC / 17mA DC	400mcd
1507145G3	green	28V AC/DC	9mA AC / 17mA DC	2550mcd
1507145Y3	yellow	28V AC/DC	9mA AC / 17mA DC	340mcd
1507145B3	blue	28V AC/DC	9mA AC / 17mA DC	780mcd
1507145W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1507145W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

StarLEDs - T6,8 LED AC/DC (ohne Reflektor) mit Einweggleichrichter / *(without reflector) with half-wave rectifier*

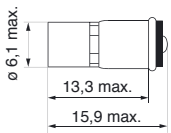


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1507535R3	red	24V AC/DC	9mA AC / 17mA DC	400mcd
1507535G3	green	24V AC/DC	9mA AC / 17mA DC	2550mcd
1507535Y3	yellow	24V AC/DC	9mA AC / 17mA DC	340mcd
1507535B3	blue	24V AC/DC	9mA AC / 17mA DC	780mcd
1507535W3	white clear	24V AC/DC	3mA AC / 6mA DC	1800mcd
1507535W3D	white diffused	24V AC/DC	3mA AC / 6mA DC	900mcd
1507535LW3	warm white	24V AC/DC	9mA AC / 17mA DC	1530mcd
1507545R3	red	28V AC/DC	9mA AC / 17mA DC	400mcd
1507545G3	green	28V AC/DC	9mA AC / 17mA DC	2550mcd
1507545Y3	yellow	28V AC/DC	9mA AC / 17mA DC	340mcd
1507545B3	blue	28V AC/DC	9mA AC / 17mA DC	780mcd
1507545W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1507545W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd
1507545LW3	warm white	28V AC/DC	9mA AC / 17mA DC	1530mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

StarLEDs - T-1 3/4 (6mm) SX6s (Midget Flange) LED DC ohne Verpolungsschutz / *without protection diode*

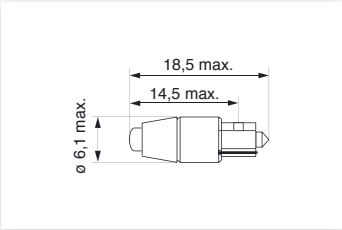


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1510135UR3	red	24V DC	14mA DC	330mcd
1510135UG3	green	24V DC	14mA DC	2100mcd
1510135UY3	yellow	24V DC	14mA DC	280mcd
1510135B3	blue	24V DC	14mA DC	650mcd
1510135W3	white clear	24V DC	5mA DC	1500mcd
1510135W3D	white diffused	24V DC	5mA DC	750mcd
1510145UR3	red	28V DC	14mA DC	330mcd
1510145UG3	green	28V DC	14mA DC	2100mcd
1510145UY3	yellow	28V DC	14mA DC	280mcd
1510145B3	blue	28V DC	14mA DC	650mcd
1510145W3	white clear	28V DC	5mA DC	1500mcd
1510145W3D	white diffused	28V DC	5mA DC	750mcd

Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Diese StarLED hat keine Schutzdiode, deshalb ist unbedingt darauf zu achten, dass die Polarität korrekt ist!
This StarLED can only be manufactured without a protection diode. Only for use on direct voltage. Please be aware of the polarity!
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

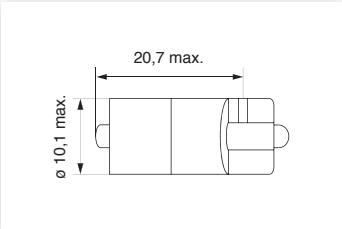
StarLEDs - T-1 1/2 (5mm) W2x4,6d (Wedge Base) LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1511A35UR3	red	24V AC/DC	5mA AC / 10mA DC	230mcd
1511A35UG3	green	24V AC/DC	5mA AC / 10mA DC	1500mcd
1511A35UY3	yellow	24V AC/DC	5mA AC / 10mA DC	200mcd
1511A35B3	blue	24V AC/DC	5mA AC / 10mA DC	480mcd
1511A35W3	white clear	24V AC/DC	2mA AC / 4mA DC	1200mcd
1511A35W3D	white diffused	24V AC/DC	2mA AC / 4mA DC	600mcd
1511A35L3	warm white	24V AC/DC	5mA AC / 10mA DC	900mcd
1511A45UR3	red	28V AC/DC	5mA AC / 10mA DC	230mcd
1511A45UG3	green	28V AC/DC	5mA AC / 10mA DC	1500mcd
1511A45UY3	yellow	28V AC/DC	5mA AC / 10mA DC	200mcd
1511A45B3	blue	28V AC/DC	5mA AC / 10mA DC	480mcd
1511A45W3	white clear	28V AC/DC	2mA AC / 4mA DC	1200mcd
1511A45W3D	white diffused	28V AC/DC	2mA AC / 4mA DC	600mcd
1511A45L3	warm white	28V AC/DC	5mA AC / 10mA DC	900mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

StarLEDs - T-3 1/4 (10mm) W2,1x9,5d (Wedge Base) LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*

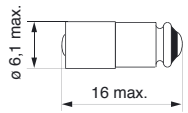


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1511B35UR3	red	24V AC/DC	7mA AC / 14mA DC	330mcd
1511B35UG3	green	24V AC/DC	7mA AC / 14mA DC	2100mcd
1511B35UY3	yellow	24V AC/DC	7mA AC / 14mA DC	280mcd
1511B35B3	blue	24V AC/DC	7mA AC / 14mA DC	650mcd
1511B35W3	white clear	24V AC/DC	2,5mA AC / 5mA DC	1500mcd
1511B35W3D	white diffused	24V AC/DC	2,5mA AC / 5mA DC	750mcd
1511B35L3	warm white	24V AC/DC	7mA AC / 14mA DC	1260mcd
1511B45UR3	red	28V AC/DC	7mA AC / 14mA DC	330mcd
1511B45UG3	green	28V AC/DC	7mA AC / 14mA DC	2100mcd
1511B45UY3	yellow	28V AC/DC	7mA AC / 14mA DC	280mcd
1511B45B3	blue	28V AC/DC	7mA AC / 14mA DC	650mcd
1511B45W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1511B45W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd
1511B45L3	warm white	28V AC/DC	7mA AC / 14mA DC	1260mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

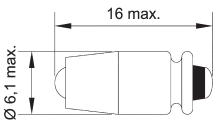
StarLEDs - T-1 3/4 (6mm) S5,7s (Midget Groove) LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1512135UR3	red	24V AC/DC	7mA AC / 14mA DC	330mcd
1512135UG3	green	24V AC/DC	7mA AC / 14mA DC	2100mcd
1512135UY3	yellow	24V AC/DC	7mA AC / 14mA DC	280mcd
1512135B3	blue	24V AC/DC	7mA AC / 14mA DC	650mcd
1512135W3	white clear	24V AC/DC	2,5mA AC / 5mA DC	1500mcd
1512135W3D	white diffused	24V AC/DC	2,5mA AC / 5mA DC	750mcd
1512135L3	warm white	24V AC/DC	7mA AC / 14mA DC	1260mcd
1512145UR3	red	28V AC/DC	7mA AC / 14mA DC	330mcd
1512145UG3	green	28V AC/DC	7mA AC / 14mA DC	2100mcd
1512145UY3	yellow	28V AC/DC	7mA AC / 14mA DC	280mcd
1512145B3	blue	28V AC/DC	7mA AC / 14mA DC	650mcd
1512145W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1512145W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd
1512145L3	warm white	28V AC/DC	7mA AC / 14mA DC	1260mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

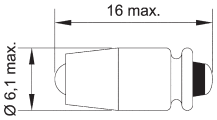
StarLEDs - T-1 3/4 (6mm) S5,7s (Midget Groove) LED AC/DC (ohne Reflektor) mit Einweggleichrichter / *(without reflector) with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1512535UR3	red	24V AC/DC	7mA AC / 14mA DC	330mcd
1512535UG3	green	24V AC/DC	7mA AC / 14mA DC	2100mcd
1512535UY3	yellow	24V AC/DC	7mA AC / 14mA DC	280mcd
1512535B3	blue	24V AC/DC	7mA AC / 14mA DC	650mcd
1512535W3	white clear	24V AC/DC	2,5mA AC / 5mA DC	1500mcd
1512535W3D	white diffused	24V AC/DC	2,5mA AC / 5mA DC	750mcd
1512535L3	warm white	24V AC/DC	7mA AC / 14mA DC	1260mcd
1512545UR3	red	28V AC/DC	7mA AC / 14mA DC	330mcd
1512545UG3	green	28V AC/DC	7mA AC / 14mA DC	2100mcd
1512545UY3	yellow	28V AC/DC	7mA AC / 14mA DC	280mcd
1512545B3	blue	28V AC/DC	7mA AC / 14mA DC	650mcd
1512545W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1512545W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd
1512545L3	warm white	28V AC/DC	7mA AC / 14mA DC	1260mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

StarLEDs - T-1 3/4 (6mm) S5,7s (Midget Groove) LED DC (ohne Reflektor) zweifarbig / *(without reflector) bi-colour*

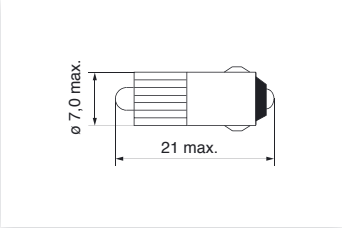


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1512535URG	red/green	24V DC	15/14mA DC	600/630mcd
1512535UGY	green/yellow	24V DC	14/15mA DC	630/375mcd
1512535URY	red/yellow	24V DC	15/15mA DC	600/375mcd
1512535UGB	green/blue	24V DC	14/14mA DC	630/105mcd
1512545URG	red/green	28V DC	15/14mA DC	600/630mcd
1512545UGY	green/yellow	28V DC	14/15mA DC	630/375mcd
1512545URY	red/yellow	28V DC	15/15mA DC	600/375mcd
1512545UGB	green/blue	28V DC	14/14mA DC	630/105mcd

Passender Lampenzieher: Bestell-Nr. 55000112 / *A suitable lamp remover: part number 55000112*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

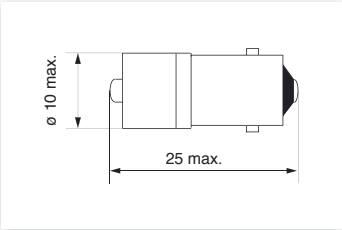
StarLEDs - T-2 (7x20mm) BA7s LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1516135UR3	red	24V AC/DC	7mA AC / 14mA DC	330mcd
1516135UG3	green	24V AC/DC	7mA AC / 14mA DC	2100mcd
1516135UY3	yellow	24V AC/DC	7mA AC / 14mA DC	280mcd
1516135B3	blue	24V AC/DC	7mA AC / 14mA DC	650mcd
1516135W3	white clear	24V AC/DC	2,5mA AC / 5mA DC	1500mcd
1516135W3D	white diffused	24V AC/DC	2,5mA AC / 5mA DC	750mcd
1516145UR3	red	28V AC/DC	7mA AC / 14mA DC	330mcd
1516145UG3	green	28V AC/DC	7mA AC / 14mA DC	2100mcd
1516145UY3	yellow	28V AC/DC	7mA AC / 14mA DC	280mcd
1516145B3	blue	28V AC/DC	7mA AC / 14mA DC	650mcd
1516145W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1516145W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / Luminous intensity data of the LED on direct voltage
Passender Lampenzieher: Bestell-Nr. 55000112 / A suitable lamp remover: part number 55000112
Andere Spannungen auf Anfrage / Other voltages on request

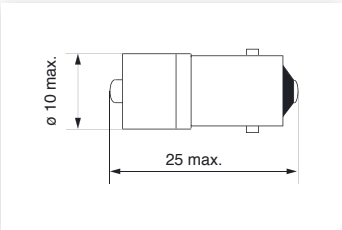
StarLEDs - T-3 1/4 (10x25mm) BA9s LED für Mehrbereichsspannung / *for multi-range-voltage*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18600E50	red	6-32V DC	8mA DC	200mcd
18600E51	green	6-32V DC	8mA DC	1200mcd
18600E52	yellow	6-32V DC	8mA DC	180mcd
18600E57	blue	6-32V DC	8mA DC	400mcd
18600E5W3	white clear	6-32V DC	8mA DC	2400mcd
18600E5W3D	white diffused	6-32V DC	8mA DC	1200mcd

Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*

StarLEDs - T-3 1/4 (10x25mm) BA9s LED mit Niederspannungsabschaltung / *with low-voltage-shutdown*

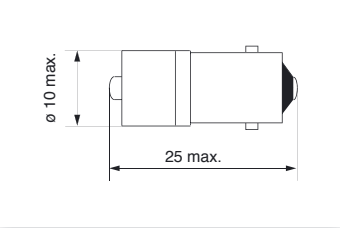


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
186003A0	red	24-30V DC	13-19mA DC	300-440mcd
186003A1	green	24-30V DC	12-18mA DC	1800-2700mcd
186003A2	yellow	24-30V DC	13-19mA DC	270-380mcd
186003A7	blue	24-30V DC	12-18mA DC	560-800mcd
186003AW3	white clear	24-30V DC	7-11mA DC	1200-1800mcd
186003AW3D	white diffused	24-30V DC	7-11mA DC	600-900mcd

Niederspannungsabschaltung: <7,5V DC / *Low-voltage-shutdown: <7.5V DC*
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

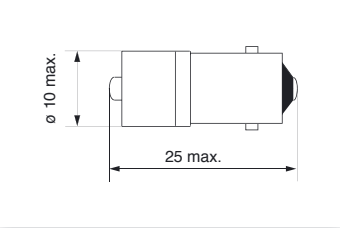
StarLEDs - T-3 1/4 (10x25mm) BA9s LED blinkend / *flashing*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
186002B0	red	12-15V DC	14-18mA DC	330-420mcd
186002B1	green	12-15V DC	17-19mA DC	2550-2850mcd
186002B2C	yellow	12-15V DC	14-18mA DC	700-900mcd
186002B7	blue	12-15V DC	17-19mA DC	780-820mcd
186002BW3	white clear	12-15V DC	17-19mA DC	1400-1900mcd
186002BW3D	white diffused	12-15V DC	17-19mA DC	700-950mcd
186003B0	red	24-28V DC	14-18mA DC	330-420mcd
186003B1	green	24-28V DC	17-19mA DC	2550-2850mcd
186003B2C	yellow	24-28V DC	14-18mA DC	700-900mcd
186003B7	blue	24-28V DC	17-19mA DC	780-820mcd
186003BW3	white clear	24-28V DC	17-19mA DC	1400-1900mcd
186003BW3D	white diffused	24-28V DC	17-19mA DC	700-950mcd

Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

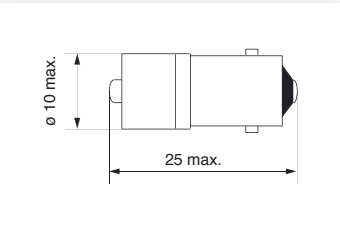
StarLEDs - T-3 1/4 (10x25mm) BA9s LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18600350	red	24V AC/DC	9mA AC / 17mA DC	400mcd
18600351	green	24V AC/DC	9mA AC / 17mA DC	2550mcd
18600352	yellow	24V AC/DC	9mA AC / 17mA DC	340mcd
18600357	blue	24V AC/DC	9mA AC / 17mA DC	780mcd
1860035W3	white clear	24V AC/DC	3mA AC / 6mA DC	1800mcd
1860035W3D	white diffused	24V AC/DC	3mA AC / 6mA DC	900mcd
18600450	red	28V AC/DC	9mA AC / 17mA DC	400mcd
18600451	green	28V AC/DC	9mA AC / 17mA DC	2550mcd
18600452	yellow	28V AC/DC	9mA AC / 17mA DC	340mcd
18600457	blue	28V AC/DC	9mA AC / 17mA DC	780mcd
1860045W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1860045W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

StarLEDs - T-3 1/4 (10x25mm) BA9s LED AC/DC mit Brückengleichrichter / *with bridge rectifier*

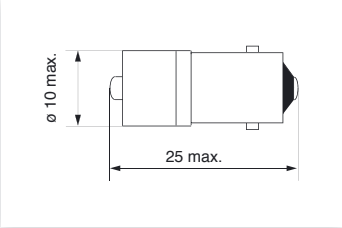


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18602350	red	24V AC/DC	15mA AC/DC	350mcd
18602351	green	24V AC/DC	15mA AC/DC	2250mcd
18602352	yellow	24V AC/DC	15mA AC/DC	300mcd
18602357	blue	24V AC/DC	15mA AC/DC	680mcd
1860235W3	white clear	24V AC/DC	7mA AC/DC	2100mcd
1860235W3D	white diffused	24V AC/DC	7mA AC/DC	1050mcd
1860235L3	warm white	24V AC/DC	15mA AC/DC	1350mcd
18602450	red	28V AC/DC	13mA AC/DC	300mcd
18602451	green	28V AC/DC	13mA AC/DC	1950mcd
18602452	yellow	28V AC/DC	13mA AC/DC	270mcd
18602457	blue	28V AC/DC	13mA AC/DC	590mcd
1860245W3	white clear	28V AC/DC	5mA AC/DC	1500mcd
1860245W3D	white diffused	28V AC/DC	5mA AC/DC	750mcd
1860245L3	warm white	28V AC/DC	13mA AC/DC	1170mcd

Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

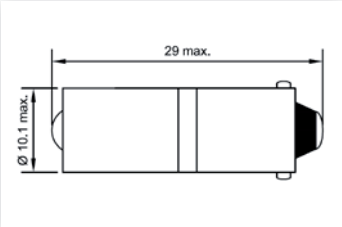
StarLEDs - T-3 1/4 (10x25mm) BA9s LED 130/230V AC



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18606130	red	130V AC	5mA AC	180mcd
18606131	green	130V AC	5mA AC	750mcd
18606132	yellow	130V AC	5mA AC	160mcd
18606137	blue	130V AC	5mA AC	230mcd
1860613W3	white clear	130V AC	2mA AC	600mcd
1860613W3D	white diffused	130V AC	2mA AC	300mcd
1860613L3	warm white	130V AC	5mA AC	450mcd
18606230	red	230V AC	3mA AC	120mcd
18606231	green	230V AC	3mA AC	450mcd
18606232	yellow	230V AC	3mA AC	110mcd
18606237	blue	230V AC	3mA AC	200mcd
1860623W3	white clear	230V AC	1,5mA AC	450mcd
1860623W3D	white diffused	230V AC	1,5mA AC	225mcd
1860623L3	warm white	230V AC	3mA AC	270mcd

Die 130V AC StarLED ist zum direkten Anschluss an die Versorgungsspannung von 130V AC dimensioniert. Ein Betrieb an einer höheren Versorgungsspannung mittels handelsüblicher Lampenfassungselemente mit intergriertem Vorwiderstand ist nicht zulässig.
The 130V AC StarLED has been developed to run on a supply voltage of 130V AC only. An operation at a higher supply voltage using commercial lampholders with integrated resistor is not allowed.
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

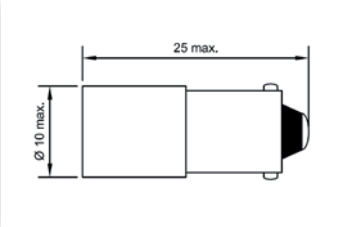
StarLEDs - T-3 1/4 (10x28mm) BA9s LED AC/DC extrahell mit Brückengleichrichter / *very bright with bridge rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18302450A	red	28V AC/DC	14mA AC/DC	7700mcd
18302451A	green	28V AC/DC	13mA AC/DC	12400mcd
18302452A	yellow	28V AC/DC	14mA AC/DC	4200mcd
18302457A	blue	28V AC/DC	13mA AC/DC	2700mcd
1830245W5A	white	28V AC/DC	13mA AC/DC	17200mcd

Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

StarLEDs - T-3 1/4 (10x25mm) BA9s SMD LED zweifarbig / *bi-colour*

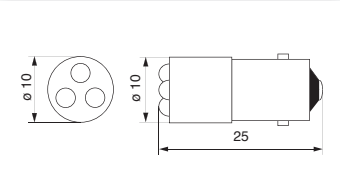


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
1880035RG	red/green	24V DC	15mA DC	1200/900mcd
1880035RY	red/yellow	24V DC	15mA DC	1200/550mcd
1880035GY	green/yellow	24V DC	15mA DC	900/550mcd

Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

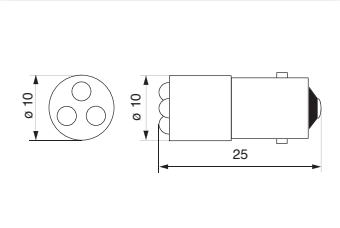
Mega StarLEDs - T-3 1/4 (10x25mm) BA9s 3x3mm LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18620350	red	24V AC/DC	9mA AC / 17mA DC	3x 400mcd
18620351	green	24V AC/DC	5mA AC / 10mA DC	3x 1500mcd
18620352	yellow	24V AC/DC	9mA AC / 17mA DC	3x 340mcd
18620357	blue	24V AC/DC	9mA AC / 17mA DC	3x 780mcd
1862035W3	white clear	24V AC/DC	4mA AC / 8mA DC	3x 2400mcd
1862035W3D	white diffused	24V AC/DC	4mA AC / 8mA DC	3x 1200mcd
18620450	red	28V AC/DC	9mA AC / 17mA DC	3x 400mcd
18620451	green	28V AC/DC	5mA AC / 10mA DC	3x 1500mcd
18620452	yellow	28V AC/DC	9mA AC / 17mA DC	3x 340mcd
18620457	blue	28V AC/DC	9mA AC / 17mA DC	3x 780mcd
1862045W3	white clear	28V AC/DC	3,5mA AC / 7mA DC	3x 2100mcd
1862045W3D	white diffused	28V AC/DC	3,5mA AC / 7mA DC	3x 1050mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

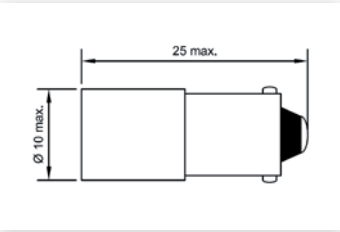
Mega StarLEDs - T-3 1/4 (10x25mm) BA9s 3x3mm LED 130/230V AC



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18626130	red	130V AC	5mA AC	3x 180mcd
18626131	green	130V AC	5mA AC	3x 750mcd
18626132	yellow	130V AC	5mA AC	3x 160mcd
18626137	blue	130V AC	5mA AC	3x 230mcd
1862613W3	white clear	130V AC	2mA AC	3x 600mcd
1862613W3D	white diffused	130V AC	2mA AC	3x 300mcd
18626230	red	230V AC	3mA AC	3x 120mcd
18626231	green	230V AC	3mA AC	3x 450mcd
18626232	yellow	230V AC	3mA AC	3x 110mcd
18626237	blue	230V AC	3mA AC	3x 200mcd
1862623W3	white clear	230V AC	1,5mA AC	3x 450mcd
1862623W3D	white diffused	230V AC	1,5mA AC	3x 225mcd

Die 130V AC StarLED ist zum direkten Anschluss an die Versorgungsspannung von 130V AC dimensioniert. Ein Betrieb an einer höheren Versorgungsspannung mittels handelsüblicher Lampenfassungselemente mit intergriertem Vorwiderstand ist nicht zulässig.
The 130V AC StarLED has been developed to run on a supply voltage of 130V AC only. An operation at a higher supply voltage using commercial lampholders with integrated resistor is not allowed.
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

Mega StarLEDs - T-3 1/4 (10x25mm) BA9s 4x SMD LED für Bahnanwendung DIN EN 50155 / *for railway application DIN EN 50155*

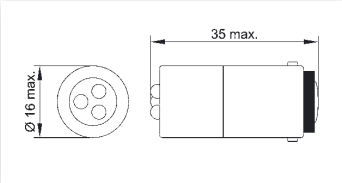


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Flux
18824A30	red	72V AC/DC	2,2mA AC/DC	0,4lm
18824A31	green	72V AC/DC	2,2mA AC/DC	1,5lm
18824A32	yellow	72V AC/DC	2,2mA AC/DC	0,35lm
18824A37	blue	72V AC/DC	2,2mA AC/DC	0,28lm
18824A3W	white	72V AC/DC	2,2mA AC/DC	1,2lm
18824120	red	110V AC/DC	2mA AC/DC	0,4lm
18824121	green	110V AC/DC	2mA AC/DC	1,6lm
18824122	yellow	110V AC/DC	2mA AC/DC	0,4lm
18824127	blue	110V AC/DC	2mA AC/DC	0,27lm
1882412W	white	110V AC/DC	2mA AC/DC	1,4lm

Niederspannungsabschaltung: <24V AC/DC / *Low-voltage-shutdown: <24V AC/DC*
Ausfallschutz (2x2 SMD LEDs) / *Fails-safe (2x2 SMD LEDs)*
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

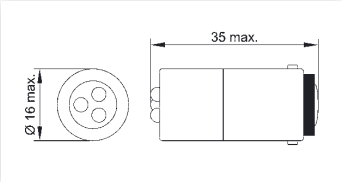
Mega StarLEDs - T-5 (16x35mm) BA15d 3x3mm LED AC/DC mit Brückengleichrichter / *with bridge rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18630350	red	24V AC/DC	17mA AC/DC	3x 400mcd
18630351	green	24V AC/DC	15mA AC/DC	3x 2250mcd
18630352	yellow	24V AC/DC	17mA AC/DC	3x 340mcd
18630357	blue	24V AC/DC	15mA AC/DC	3x 680mcd
1863035W3	white clear	24V AC/DC	7mA AC/DC	3x 2100mcd
1863035W3D	white diffused	24V AC/DC	7mA AC/DC	3x 1050mcd
18630450	red	28V AC/DC	17mA AC/DC	3x 400mcd
18630451	green	28V AC/DC	16mA AC/DC	3x 2400mcd
18630452	yellow	28V AC/DC	17mA AC/DC	3x 340mcd
18630457	blue	28V AC/DC	16mA AC/DC	3x 720mcd
1863045W3	white clear	28V AC/DC	7mA AC/DC	3x 2100mcd
1863045W3D	white diffused	28V AC/DC	7mA AC/DC	3x 1050mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

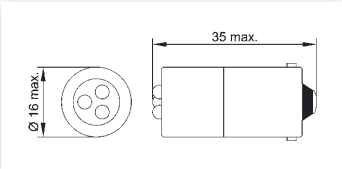
Mega StarLEDs - T-5 (16x35mm) BA15d 3x3mm LED 130/230V AC/DC mit Brückengleichrichter / *with bridge rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18631130	red	130V AC/DC	7mA AC/DC	3x 190mcd
18631131	green	130V AC/DC	7mA AC/DC	3x 1050mcd
18631132	yellow	130V AC/DC	7mA AC/DC	3x 170mcd
18631137	blue	130V AC/DC	7mA AC/DC	3x 340mcd
1863113W3	white clear	130V AC/DC	3mA AC/DC	3x 900mcd
1863113W3D	white diffused	130V AC/DC	3mA AC/DC	3x 450mcd
18631230	red	230V AC/DC	4mA AC/DC	3x 150mcd
18631231	green	230V AC/DC	4mA AC/DC	3x 600mcd
18631232	yellow	230V AC/DC	4mA AC/DC	3x 140mcd
18631237	blue	230V AC/DC	4mA AC/DC	3x 220mcd
1863123W3	white clear	230V AC/DC	2mA AC/DC	3x 600mcd
1863123W3D	white diffused	230V AC/DC	2mA AC/DC	3x 300mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

Mega StarLEDs - T-5 (16x35mm) BA15s 3x3mm LED AC/DC mit Brückengleichrichter / *with bridge rectifier*

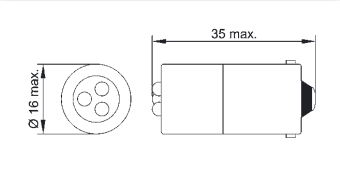


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18633350	red	24V AC/DC	17mA AC/DC	3x 400mcd
18633351	green	24V AC/DC	15mA AC/DC	3x 2250mcd
18633352	yellow	24V AC/DC	17mA AC/DC	3x 340mcd
18633357	blue	24V AC/DC	15mA AC/DC	3x 680mcd
1863335W3	white clear	24V AC/DC	7mA AC/DC	3x 2100mcd
1863335W3D	white diffused	24V AC/DC	7mA AC/DC	3x 1050mcd
18633450	red	28V AC/DC	17mA AC/DC	3x 400mcd
18633451	green	28V AC/DC	16mA AC/DC	3x 2400mcd
18633452	yellow	28V AC/DC	17mA AC/DC	3x 340mcd
18633457	blue	28V AC/DC	16mA AC/DC	3x 720mcd
1863345W3	white clear	28V AC/DC	7mA AC/DC	3x 2100mcd
1863345W3D	white diffused	28V AC/DC	7mA AC/DC	3x 1050mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

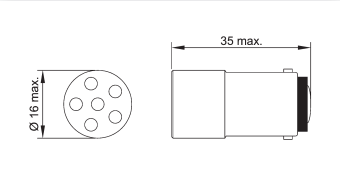
Mega StarLEDs - T-5 (16x35mm) BA15s 3x3mm LED 130/230V AC/DC mit Brückengleichrichter / *with bridge rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18634130	red	130V AC/DC	7mA AC/DC	3x 190mcd
18634131	green	130V AC/DC	7mA AC/DC	3x 1050mcd
18634132	yellow	130V AC/DC	7mA AC/DC	3x 170mcd
18634137	blue	130V AC/DC	7mA AC/DC	3x 340mcd
1863413W3	white clear	130V AC/DC	3mA AC/DC	3x 900mcd
1863413W3D	white diffused	130V AC/DC	3mA AC/DC	3x 450mcd
18634230	red	230V AC/DC	4mA AC/DC	3x 150mcd
18634231	green	230V AC/DC	4mA AC/DC	3x 600mcd
18634232	yellow	230V AC/DC	4mA AC/DC	3x 140mcd
18634237	blue	230V AC/DC	4mA AC/DC	3x 220mcd
1863423W3	white clear	230V AC/DC	2mA AC/DC	3x 600mcd
1863423W3D	white diffused	230V AC/DC	2mA AC/DC	3x 300mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

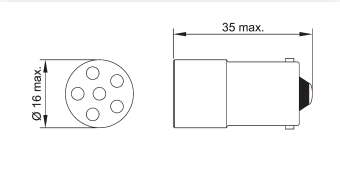
Mega StarLEDs - T-5 (16x35mm) BA15d 6x3mm LED AC/DC mit Brückengleichrichter / *with bridge rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18640350	red	24-28V AC/DC	32-42mA AC/DC	6x 390-480mcd
18640351	green	24-28V AC/DC	32-42mA AC/DC	6x 2400-3150mcd
18640352	yellow	24-28V AC/DC	32-42mA AC/DC	6x 320-420mcd
18640357	blue	24-28V AC/DC	32-42mA AC/DC	6x 720-860mcd
1864035W3	white clear	24-28V AC/DC	12-16mA AC/DC	6x 1800-2400mcd
1864035W3D	white diffused	24-28V AC/DC	12-16mA AC/DC	6x 900-1200mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

Mega StarLEDs - T-5 (16x35mm) BA15s 6x3mm LED AC/DC mit Brückengleichrichter / *with bridge rectifier*

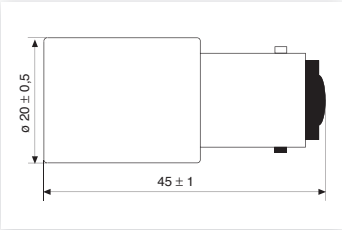


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18643350	red	24-28V AC/DC	32-42mA AC/DC	6x 390-480mcd
18643351	green	24-28V AC/DC	32-42mA AC/DC	6x 2400-3150mcd
18643352	yellow	24-28V AC/DC	32-42mA AC/DC	6x 320-420mcd
18643357	blue	24-28V AC/DC	32-42mA AC/DC	6x 720-860mcd
1864335W3	white clear	24-28V AC/DC	12-16mA AC/DC	6x 1800-2400mcd
1864335W3D	white diffused	24-28V AC/DC	12-16mA AC/DC	6x 900-1200mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

Mega StarLEDs - T-6 1/3 (20x46mm) BA15d 6x SMD LED AC/DC mit Brückengleichrichter für Signalsäulen / *with bridge rectifier for light towers*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18560350	red	24V AC/DC	16mA AC/DC	6x 1300mcd
18560351	green	24V AC/DC	15mA AC/DC	6x 1050mcd
18560352	yellow	24V AC/DC	16mA AC/DC	6x 400mcd
18560357	blue	24V AC/DC	15mA AC/DC	6x 210mcd
1856035W	white	24V AC/DC	15mA AC/DC	6x 1400mcd
18561130	red	130V AC/DC	6mA AC/DC	6x 480mcd
18561131	green	130V AC/DC	6mA AC/DC	6x 420mcd
18561132	yellow	130V AC/DC	6mA AC/DC	6x 150mcd
18561137	blue	130V AC/DC	6mA AC/DC	6x 84mcd
1856113W	white	130V AC/DC	6mA AC/DC	6x 570mcd
18561230	red	230V AC/DC	3mA AC/DC	6x 240mcd
18561231	green	230V AC/DC	3mA AC/DC	6x 210mcd
18561232	yellow	230V AC/DC	3mA AC/DC	6x 75mcd
18561237	blue	230V AC/DC	3mA AC/DC	6x 42mcd
1856123W	white	230V AC/DC	3mA AC/DC	6x 290mcd

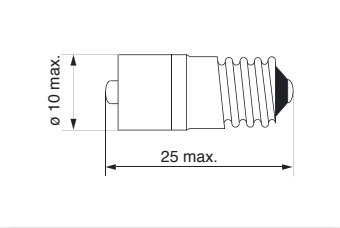
Andere Spannungen auf Anfrage / *Other voltages on request*

Die T20x46 Mega StarLEDs finden Ihren Einsatz in Warnleuchten. Sie können in allen gängigen Warnleuchtsäulen mit BA15d Lampenfassung eingesetzt werden.
Unabhängig vom Fabrikat gewährleisten sie eine optimale Ausleuchtung der Signalelemente.

The T20x46 Mega StarLEDs are developed for light towers. They can be used in all common light towers with BA15d lamp holder. They deliver an optimum illumination.

LED Lampen für Signalisation
LED Lamps for Signalisation

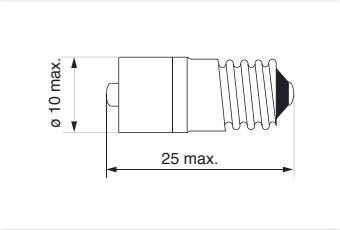
StarLEDs - T-3 1/4 (10x25mm) E10 LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18601350	red	24V AC/DC	9mA AC / 17mA DC	400mcd
18601351	green	24V AC/DC	9mA AC / 17mA DC	2550mcd
18601352	yellow	24V AC/DC	9mA AC / 17mA DC	340mcd
18601357	blue	24V AC/DC	9mA AC / 17mA DC	780mcd
1860135W3	white clear	24V AC/DC	3mA AC / 6mA DC	1800mcd
1860135W3D	white diffused	24V AC/DC	3mA AC / 6mA DC	900mcd
18601450	red	28V AC/DC	9mA AC / 17mA DC	400mcd
18601451	green	28V AC/DC	9mA AC / 17mA DC	2550mcd
18601452	yellow	28V AC/DC	9mA AC / 17mA DC	340mcd
18601457	blue	28V AC/DC	9mA AC / 17mA DC	780mcd
1860145W3	white clear	28V AC/DC	2,5mA AC / 5mA DC	1500mcd
1860145W3D	white diffused	28V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

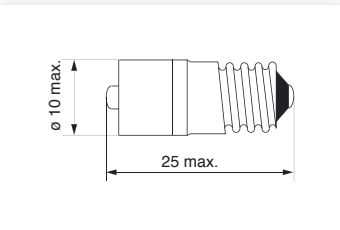
StarLEDs - T-3 1/4 (10x25mm) E10 LED AC/DC mit Brückengleichrichter / *with bridge rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18603350	red	24V AC/DC	15mA AC/DC	350mcd
18603351	green	24V AC/DC	15mA AC/DC	2250mcd
18603352	yellow	24V AC/DC	15mA AC/DC	300mcd
18603357	blue	24V AC/DC	15mA AC/DC	680mcd
1860335W3	white clear	24V AC/DC	7mA AC/DC	2100mcd
1860335W3D	white diffused	24V AC/DC	7mA AC/DC	1050mcd
18603450	red	28V AC/DC	13mA AC/DC	300mcd
18603451	green	28V AC/DC	13mA AC/DC	1950mcd
18603452	yellow	28V AC/DC	13mA AC/DC	270mcd
18603457	blue	28V AC/DC	13mA AC/DC	590mcd
1860345W3	white clear	28V AC/DC	5mA AC/DC	1500mcd
1860345W3D	white diffused	28V AC/DC	5mA AC/DC	750mcd

Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

StarLEDs - T-3 1/4 (10x25mm) E10 LED 130/230V AC

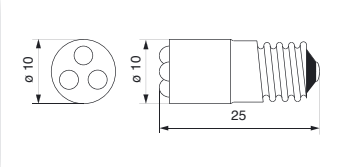


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18607130	red	130V AC	5mA AC	180mcd
18607131	green	130V AC	5mA AC	750mcd
18607132	yellow	130V AC	5mA AC	160mcd
18607137	blue	130V AC	5mA AC	230mcd
1860713W3	white clear	130V AC	2mA AC	600mcd
1860713W3D	white diffused	130V AC	2mA AC	300mcd
18607230	red	230V AC	3mA AC	120mcd
18607231	green	230V AC	3mA AC	450mcd
18607232	yellow	230V AC	3mA AC	110mcd
18607237	blue	230V AC	3mA AC	200mcd
1860723W3	white clear	230V AC	1,5mA AC	450mcd
1860723W3D	white diffused	230V AC	1,5mA AC	225mcd

Die 130V AC StarLED ist zum direkten Anschluss an die Versorgungsspannung von 130V AC dimensioniert. Ein Betrieb an einer höheren Versorgungsspannung mittels handelsüblicher Lampenfassungselemente mit intergriertem Vorwiderstand ist nicht zulässig.
The 130V AC StarLED has been developed to run on a supply voltage of 130V AC only. An operation at a higher supply voltage using commercial lampholders with integrated resistor is not allowed.
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

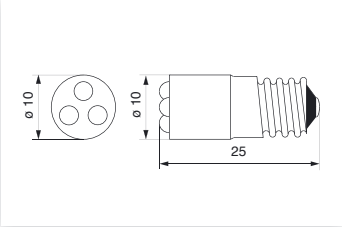
Mega StarLEDs - T-3 1/4 (10x25mm) E10 3x3mm LED AC/DC mit Einweggleichrichter / *with half-wave rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18621350	red	24V AC/DC	9mA AC / 17mA DC	3x 400mcd
18621351	green	24V AC/DC	5mA AC / 10mA DC	3x 1500mcd
18621352	yellow	24V AC/DC	9mA AC / 17mA DC	3x 340mcd
18621357	blue	24V AC/DC	9mA AC / 17mA DC	3x 780mcd
1862135W3	white clear	24V AC/DC	4mA AC / 8mA DC	3x 2400mcd
1862135W3D	white diffused	24V AC/DC	4mA AC / 8mA DC	3x 1200mcd
18621450	red	28V AC/DC	9mA AC / 17mA DC	3x 400mcd
18621451	green	28V AC/DC	5mA AC / 10mA DC	3x 1500mcd
18621452	yellow	28V AC/DC	9mA AC / 17mA DC	3x 340mcd
18621457	blue	28V AC/DC	9mA AC / 17mA DC	3x 780mcd
1862145W3	white clear	28V AC/DC	3,5mA AC / 7mA DC	3x 2100mcd
1862145W3D	white diffused	28V AC/DC	3,5mA AC / 7mA DC	3x 1050mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

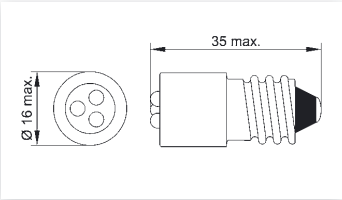
Mega StarLEDs - T-3 1/4 (10x25mm) E10 3x3mm LED 130/230V AC



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18627130	red	130V AC	5mA AC	3x 180mcd
18627131	green	130V AC	5mA AC	3x 750mcd
18627132	yellow	130V AC	5mA AC	3x 160mcd
18627137	blue	130V AC	5mA AC	3x 230mcd
1862713W3	white clear	130V AC	2mA AC	3x 600mcd
1862713W3D	white diffused	130V AC	2mA AC	3x 300mcd
18627230	red	230V AC	3mA AC	3x 120mcd
18627231	green	230V AC	3mA AC	3x 450mcd
18627232	yellow	230V AC	3mA AC	3x 110mcd
18627237	blue	230V AC	3mA AC	3x 200mcd
1862723W3	white clear	230V AC	1,5mA AC	3x 450mcd
1862723W3D	white diffused	230V AC	1,5mA AC	3x 225mcd

Die 130V AC StarLED ist zum direkten Anschluss an die Versorgungsspannung von 130V AC dimensioniert. Ein Betrieb an einer höheren Versorgungsspannung mittels handelsüblicher Lampenfassungselemente mit intergriertem Vorwiderstand ist nicht zulässig.
The 130V AC StarLED has been developed to run on a supply voltage of 130V AC only. An operation at a higher supply voltage using commercial lampholders with integrated resistor is not allowed.
Passender Lampenzieher: Bestell-Nr. 55001250 / *A suitable lamp remover: part number 55001250*
Andere Spannungen auf Anfrage / *Other voltages on request*

Mega StarLEDs - T-5 (16x35mm) E14 3x3mm LED AC/DC mit Brückengleichrichter / *with bridge rectifier*

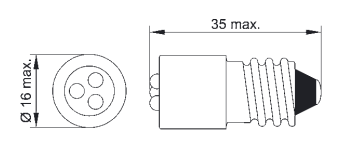


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18636350	red	24V AC/DC	17mA AC/DC	3x 400mcd
18636351	green	24V AC/DC	15mA AC/DC	3x 2250mcd
18636352	yellow	24V AC/DC	17mA AC/DC	3x 340mcd
18636357	blue	24V AC/DC	15mA AC/DC	3x 680mcd
1863635W3	white clear	24V AC/DC	7mA AC/DC	3x 2100mcd
1863635W3D	white diffused	24V AC/DC	7mA AC/DC	3x 1050mcd
18636450	red	28V AC/DC	17mA AC/DC	3x 400mcd
18636451	green	28V AC/DC	16mA AC/DC	3x 2400mcd
18636452	yellow	28V AC/DC	17mA AC/DC	3x 340mcd
18636457	blue	28V AC/DC	16mA AC/DC	3x 720mcd
1863645W3	white clear	28V AC/DC	7mA AC/DC	3x 2100mcd
1863645W3D	white diffused	28V AC/DC	7mA AC/DC	3x 1050mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

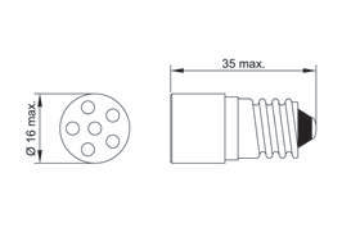
Mega StarLEDs - T-5 (16x35mm) E14 3x3mm LED 130/230V AC/DC mit Brückengleichrichter / *with bridge rectifier*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18637130	red	130V AC/DC	7mA AC/DC	3x 190mcd
18637131	green	130V AC/DC	7mA AC/DC	3x 1050mcd
18637132	yellow	130V AC/DC	7mA AC/DC	3x 170mcd
18637137	blue	130V AC/DC	7mA AC/DC	3x 340mcd
1863713W3	white clear	130V AC/DC	3mA AC/DC	3x 900mcd
1863713W3D	white diffused	130V AC/DC	3mA AC/DC	3x 450mcd
18637230	red	230V AC/DC	4mA AC/DC	3x 150mcd
18637231	green	230V AC/DC	4mA AC/DC	3x 600mcd
18637232	yellow	230V AC/DC	4mA AC/DC	3x 140mcd
18637237	blue	230V AC/DC	4mA AC/DC	3x 220mcd
1863723W3	white clear	230V AC/DC	2mA AC/DC	3x 600mcd
1863723W3D	white diffused	230V AC/DC	2mA AC/DC	3x 300mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

Mega StarLEDs - T-5 (16x35mm) E14 6x3mm LED AC/DC mit Brückengleichrichter / with bridge rectifier



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
18646350	red	24-28V AC/DC	32-42mA AC/DC	6x 390-480mcd
18646351	green	24-28V AC/DC	32-42mA AC/DC	6x 2400-3150mcd
18646352	yellow	24-28V AC/DC	32-42mA AC/DC	6x 320-420mcd
18646357	blue	24-28V AC/DC	32-42mA AC/DC	6x 720-860mcd
1864635W3	white clear	24-28V AC/DC	12-16mA AC/DC	6x 1800-2400mcd
1864635W3D	white diffused	24-28V AC/DC	12-16mA AC/DC	6x 900-1200mcd

Andere Spannungen auf Anfrage / *Other voltages on request*

LED Lampen für Signalisation
LED Lamps for Signalisation

Lampenzieher für LED Lampen mit Ø 4-7mm / *Lamp remover for LED Lamps with Ø 4-7mm*

Part Number				
55000112				

Lampenzieher für LED Lampen mit Ø 9-10mm / *Lamp remover for LED Lamps with Ø 9-10mm*

Part Number				
55001250				

LED SIGNALLEUCHTEN
LED PANEL MOUNT INDICATORS

Allgemeine technische Informationen
General technical information

Die hochwertigen LED Signalleuchten vom CML sind in Bezug auf Preis und Qualität die perfekte Alternative zu herkömmlichen Meldeleuchten mit Signal-Glühlampen.

Sie stehen mit hochglanzverchromtem, schwarzverchromtem, mattverchromtem Messing-Reflektor oder mit schwarzem Kunststoff-Reflektor zur Verfügung und können mit oder ohne integriertem Vorwiderstand geliefert werden.

Die Flachstecker der Signalleuchten ermöglichen ein schnelles und sicheres Anschließen an die Versorgungsspannung.

LED Signalleuchten gibt es für den Einbaudurchmesser 6, 8, 12, 14, 16, 19 und 22mm.

Sie zeichnen sich aus durch:
- günstiges Preis-Leistungsverhältnis
- sehr hohe Schockfestigkeit
- extrem lange Lebensdauer
- einfache Montage
- vielfältiger Einsatz durch hohe Schutzart
- niedriger Energieverbrauch

Spannungstoleranz:	+10%
Umgebungstemperatur:	-20°C - +60°C
Lagertemperatur:	-25°C - +80°C

Zulassungen:

High-grade LED panel mount indicators from CML are a perfect alternative to all common indicators with incandescent lamps in relation to price and quality.

They are available with satin chrome, black chrome, matt chrome metal bezel or with black plastic bezel. We offer them with or without integrated resistor.

Connection is made by faston tab terminals.

LED panel mount indicators are available for panel cut outs of 6, 8, 12, 14, 16, 19 and 22mm.

Features of these products are:
- *cost effectiveness*
- *shock and vibration proof*
- *extremly long lifetime*
- *easy to install*
- *high degree of protection*
- *low power consumption*

Voltage tolerance:	*+10%*
Ambient temperature:	*-20°C - +60°C*
Storage temperature:	*-25°C - +80°C*

Approvals:

6mm
8mm
12mm
14mm
16mm
19mm
22mm

LED Signalleuchten
LED Panel Mount Indicators

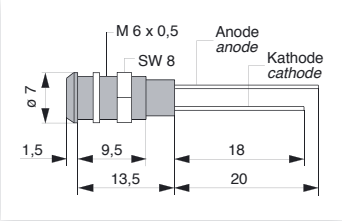
LED Signalleuchten für den Einbaudurchmesser von 6mm (+0,2mm) sind mit hellen, verschiedenfarbigen, diffusen 3mm LEDs bestückt. Sie sind mit hochglanzverchromten, schwarzverchromten oder mattverchromten Messingreflektoren lieferbar. Der Anschluss erfolgt in der Regel über Flachstecker 2,0 x 0,5mm. Die entsprechenden Flachsteckhülsen finden Sie auf der Zubehör-Seite. Die Montage der LED Signalleuchten erfolgt mittels der mitgelieferten Sprengringe und Muttern.

Messingflachstecker = Anode (+)
verzinnter Flachstecker = Kathode (-)

LED panel mount indicators for a 6mm (+0.2mm) mounting hole are manufactured with high brightness coloured diffused 3mm LEDs. These LEDs are fitted in high quality satin chrome, black chrome or matt chrome metal bezels, supplied with fixing nut and washer. Connection is usually by faston tab terminals 2.0 x 0.5mm. Suitable crimp connectors can be found on the page for accessories.

Brass terminals = anode (+)
Tinned terminals = cathode (-)

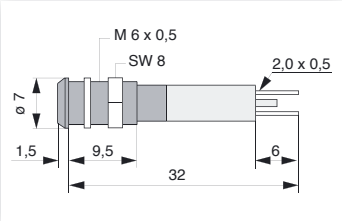
Superflacher Reflektor ohne Vorwiderstand IP40 / *Superflat bezel without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19000003	red	2,0V DC	–	13mcd at 20mA
19000001	green	2,2V DC	–	8mcd at 20mA
19000002	yellow	2,1V DC	–	8mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19001003	red	2,0V DC	–	13mcd at 20mA
19001001	green	2,2V DC	–	8mcd at 20mA
19001002	yellow	2,1V DC	–	8mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19002003	red	2,0V DC	–	13mcd at 20mA
19002001	green	2,2V DC	–	8mcd at 20mA
19002002	yellow	2,1V DC	–	8mcd at 20mA

Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*

Superflacher Reflektor mit Vorwiderstand IP40 / *Superflat bezel with resistor IP40*

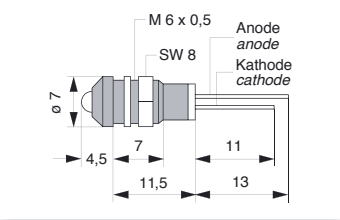


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19000253	red	12V DC	20mA DC	13mcd
19000251	green	12V DC	20mA DC	8mcd
19000252	yellow	12V DC	20mA DC	8mcd
19000353	red	24V DC	15mA DC	8mcd
19000351	green	24V DC	15mA DC	6mcd
19000352	yellow	24V DC	15mA DC	6mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19001253	red	12V DC	20mA DC	13mcd
19001251	green	12V DC	20mA DC	8mcd
19001252	yellow	12V DC	20mA DC	8mcd
19001353	red	24V DC	15mA DC	8mcd
19001351	green	24V DC	15mA DC	6mcd
19001352	yellow	24V DC	15mA DC	6mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19002253	red	12V DC	20mA DC	13mcd
19002251	green	12V DC	20mA DC	8mcd
19002252	yellow	12V DC	20mA DC	8mcd
19002353	red	24V DC	15mA DC	8mcd
19002351	green	24V DC	15mA DC	6mcd
19002352	yellow	24V DC	15mA DC	6mcd

Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

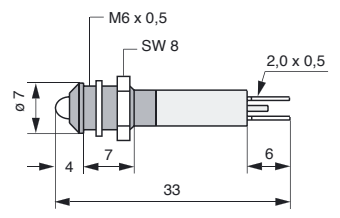
Außenreflektor ohne Vorwiderstand IP40 / *Prominent (exterior) bezel without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19020003	red	2,0V DC	–	13mcd at 20mA
19020001	green	2,2V DC	–	8mcd at 20mA
19020002	yellow	2,1V DC	–	8mcd at 20mA
19020007	blue	4,5V DC	–	40mcd at 20mcd
1902000W3D	white	3,2V DC	–	3000mcd at 20mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19021003	red	2,0V DC	–	13mcd at 20mA
19021001	green	2,2V DC	–	8mcd at 20mA
19021002	yellow	2,1V DC	–	8mcd at 20mA
19021007	blue	4,5V DC	–	40mcd at 20mcd
1902100W3D	white	3,2V DC	–	3000mcd at 20mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19022003	red	2,0V DC	–	13mcd at 20mA
19022001	green	2,2V DC	–	8mcd at 20mA
19022002	yellow	2,1V DC	–	8mcd at 20mA
19022007	blue	4,5V DC	–	40mcd at 20mcd
1902200W3D	white	3,2V DC	–	3000mcd at 20mcd

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*

Außenreflektor mit Vorwiderstand IP40 / *Prominent (exterior) bezel with resistor IP40*

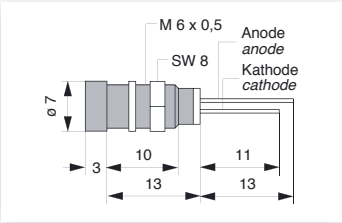


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19020253	red	12V DC	20mA DC	13mcd
19020251	green	12V DC	20mA DC	8mcd
19020252	yellow	12V DC	20mA DC	8mcd
19020257	blue	12V DC	18mA DC	36mcd
1902025W	white	12V DC	6mA DC	900mcd
19020353	red	24V DC	15mA DC	8mcd
19020351	green	24V DC	15mA DC	6mcd
19020352	yellow	24V DC	15mA DC	6mcd
19020357	blue	24V DC	15mA DC	26mcd
1902035W	white	24V DC	7mA DC	1050mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19021253	red	12V DC	20mA DC	13mcd
19021251	green	12V DC	20mA DC	8mcd
19021252	yellow	12V DC	20mA DC	8mcd
19021257	blue	12V DC	18mA DC	36mcd
1902125W	white	12V DC	6mA DC	900mcd
19021353	red	24V DC	15mA DC	8mcd
19021351	green	24V DC	15mA DC	6mcd
19021352	yellow	24V DC	15mA DC	6mcd
19021357	blue	24V DC	15mA DC	26mcd
1902135W	white	24V DC	7mA DC	1050mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19022253	red	12V DC	20mA DC	13mcd
19022251	green	12V DC	20mA DC	8mcd
19022252	yellow	12V DC	20mA DC	8mcd
19022257	blue	12V DC	18mA DC	36mcd
1902225W	white	12V DC	6mA DC	900mcd
19022353	red	24V DC	15mA DC	8mcd
19022351	green	24V DC	15mA DC	6mcd
19022352	yellow	24V DC	15mA DC	6mcd
19022357	blue	24V DC	15mA DC	26mcd
1902235W	white	24V DC	7mA DC	1050mcd

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

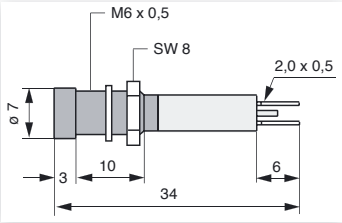
Innenreflektor ohne Vorwiderstand IP40 / *Recessed (interior) bezel without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19030003	red	2,0V DC	–	13mcd at 20mA
19030001	green	2,2V DC	–	8mcd at 20mA
19030002	yellow	2,1V DC	–	8mcd at 20mA
19030007	blue	4,5V DC	–	40mcd at 20mcd
1903000W3D	white	3,2V DC	–	3000mcd at 20mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19031003	red	2,0V DC	–	13mcd at 20mA
19031001	green	2,2V DC	–	8mcd at 20mA
19031002	yellow	2,1V DC	–	8mcd at 20mA
19031007	blue	4,5V DC	–	40mcd at 20mcd
1903100W3D	white	3,2V DC	–	3000mcd at 20mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19032003	red	2,0V DC	–	13mcd at 20mA
19032001	green	2,2V DC	–	8mcd at 20mA
19032002	yellow	2,1V DC	–	8mcd at 20mA
19032007	blue	4,5V DC	–	40mcd at 20mcd
1903200W3D	white	3,2V DC	–	3000mcd at 20mcd

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*

Innenreflektor mit Vorwiderstand IP40 / *Recessed (interior) bezel with resistor IP40*

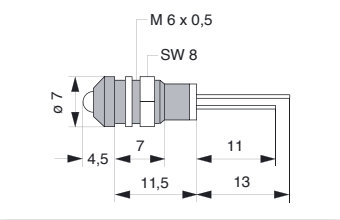


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19030253	red	12V DC	20mA DC	13mcd
19030251	green	12V DC	20mA DC	8mcd
19030252	yellow	12V DC	20mA DC	8mcd
19030257	blue	12V DC	18mA DC	36mcd
1903025W	white	12V DC	6mA DC	900mcd
19030353	red	24V DC	15mA DC	8mcd
19030351	green	24V DC	15mA DC	6mcd
19030352	yellow	24V DC	15mA DC	6mcd
19030357	blue	24V DC	15mA DC	26mcd
1903035W	white	24V DC	7mA DC	1050mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19031253	red	12V DC	20mA DC	13mcd
19031251	green	12V DC	20mA DC	8mcd
19031252	yellow	12V DC	20mA DC	8mcd
19031257	blue	12V DC	18mA DC	36mcd
1903125W	white	12V DC	6mA DC	900mcd
19031353	red	24V DC	15mA DC	8mcd
19031351	green	24V DC	15mA DC	6mcd
19031352	yellow	24V DC	15mA DC	6mcd
19031357	blue	24V DC	15mA DC	26mcd
1903135W	white	24V DC	7mA DC	1050mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19032253	red	12V DC	20mA DC	13mcd
19032251	green	12V DC	20mA DC	8mcd
19032252	yellow	12V DC	20mA DC	8mcd
19032257	blue	12V DC	18mA DC	36mcd
1903225W	white	12V DC	6mA DC	900mcd
19032353	red	24V DC	15mA DC	8mcd
19032351	green	24V DC	15mA DC	6mcd
19032352	yellow	24V DC	15mA DC	6mcd
19032357	blue	24V DC	15mA DC	26mcd
1903235W	white	24V DC	7mA DC	1050mcd

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

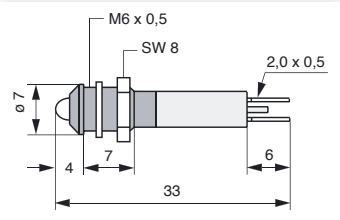
Außenreflektor zweifarbig ohne Vorwiderstand IP40 / *Prominent (exterior) bezel bi-colour without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19020004	red/green	2,0/2,2V DC	–	40/40mcd at 20mA
19020005	red/yellow	2,0/2,1V DC	–	40/20mcd at 20mA
19020006	green/yellow	2,2/2,1V DC	–	40/20mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19021004	red/green	2,0/2,2V DC	–	40/40mcd at 20mA
19021005	red/yellow	2,0/2,1V DC	–	40/20mcd at 20mA
19021006	green/yellow	2,2/2,1V DC	–	40/20mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19022004	red/green	2,0/2,2V DC	–	40/40mcd at 20mA
19022005	red/yellow	2,0/2,1V DC	–	40/20mcd at 20mA
19022006	green/yellow	2,2/2,1V DC	–	40/20mcd at 20mA

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*
Farbwechsel durch Umpolung der Versorgungsspannung
This colour is changed by changing polarity of the supply voltage.

Außenreflektor zweifarbig mit Vorwiderstand IP40 / *Prominent (exterior) bezel bi-colour with resistor IP40*

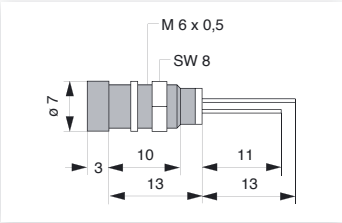


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19020254	red/green	12V DC	20mA DC	40/40mcd
19020255	red/yellow	12V DC	20mA DC	40/20mcd
19020256	green/yellow	12V DC	20mA DC	40/20mcd
19020354	red/green	24V DC	15mA DC	30/30mcd
19020355	red/yellow	24V DC	15mA DC	30/15mcd
19020356	green/yellow	24V DC	15mA DC	30/15mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19021254	red/green	12V DC	20mA DC	40/40mcd
19021255	red/yellow	12V DC	20mA DC	40/20mcd
19021256	green/yellow	12V DC	20mA DC	40/20mcd
19021354	red/green	24V DC	15mA DC	30/30mcd
19021355	red/yellow	24V DC	15mA DC	30/15mcd
19021356	green/yellow	24V DC	15mA DC	30/15mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19022254	red/green	12V DC	20mA DC	40/40mcd
19022255	red/yellow	12V DC	20mA DC	40/20mcd
19022256	green/yellow	12V DC	20mA DC	40/20mcd
19022354	red/green	24V DC	15mA DC	30/30mcd
19022355	red/yellow	24V DC	15mA DC	30/15mcd
19022356	green/yellow	24V DC	15mA DC	30/15mcd

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*
Farbwechsel durch Umpolung der Versorgungsspannung
This colour is changed by changing polarity of the supply voltage.
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

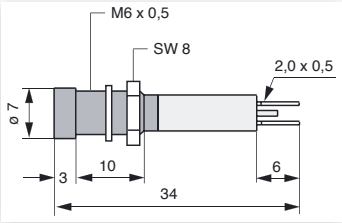
Innenreflektor zweifarbig ohne Vorwiderstand IP40 / *Recessed (interior) bezel bi-colour without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19030004	red/green	2,0/2,2V DC	–	40/40mcd at 20mA
19030005	red/yellow	2,0/2,1V DC	–	40/20mcd at 20mA
19030006	green/yellow	2,2/2,1V DC	–	40/20mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19031004	red/green	2,0/2,2V DC	–	40/40mcd at 20mA
19031005	red/yellow	2,0/2,1V DC	–	40/20mcd at 20mA
19031006	green/yellow	2,2/2,1V DC	–	40/20mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19032004	red/green	2,0/2,2V DC	–	40/40mcd at 20mA
19032005	red/yellow	2,0/2,1V DC	–	40/20mcd at 20mA
19032006	green/yellow	2,2/2,1V DC	–	40/20mcd at 20mA

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*
Farbwechsel durch Umpolung der Versorgungsspannung
This colour is changed by changing polarity of the supply voltage.

Innenreflektor zweifarbig mit Vorwiderstand IP40 / *Recessed (interior) bezel bi-colour with resistor IP40*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19030254	red/green	12V DC	20mA DC	40/40mcd
19030255	red/yellow	12V DC	20mA DC	40/20mcd
19030256	green/yellow	12V DC	20mA DC	40/20mcd
19030354	red/green	24V DC	15mA DC	30/30mcd
19030355	red/yellow	24V DC	15mA DC	30/15mcd
19030356	green/yellow	24V DC	15mA DC	30/15mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19031254	red/green	12V DC	20mA DC	40/40mcd
19031255	red/yellow	12V DC	20mA DC	40/20mcd
19031256	green/yellow	12V DC	20mA DC	40/20mcd
19031354	red/green	24V DC	15mA DC	30/30mcd
19031355	red/yellow	24V DC	15mA DC	30/15mcd
19031356	green/yellow	24V DC	15mA DC	30/15mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19032254	red/green	12V DC	20mA DC	40/40mcd
19032255	red/yellow	12V DC	20mA DC	40/20mcd
19032256	green/yellow	12V DC	20mA DC	40/20mcd
19032354	red/green	24V DC	15mA DC	30/30mcd
19032355	red/yellow	24V DC	15mA DC	30/15mcd
19032356	green/yellow	24V DC	15mA DC	30/15mcd

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*
Farbwechsel durch Umpolung der Versorgungsspannung
This colour is changed by changing polarity of the supply voltage.
Andere Spannungen auf Anfrage / Other voltages on request

LED Signalleuchten
LED Panel Mount Indicators

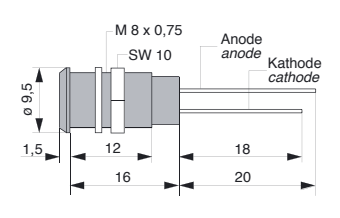
LED Signalleuchten für den Einbaudurchmesser von 8mm (+0,2mm) sind mit hellen, verschiedenfarbigen, diffusen 5mm LEDs bzw. Linsen bestückt. Sie sind mit hochglanzverchromten, schwarzverchromten oder mattverchromten Messingreflektoren lieferbar. Der Anschluss erfolgt in der Regel über Flachstecker 2,8 x 0,8mm. Die entsprechenden Flachsteckhülsen finden Sie auf der Zubehör-Seite. Die Montage der LED Signalleuchten erfolgt mittels der mitgelieferten Sprengringe und Muttern.

Messingflachstecker = Anode (+)
verzinnter Flachstecker = Kathode (-)

LED panel mount indicators for a 8mm (+0.2mm) mounting hole are manufactured with high brightness coloured diffused 5mm LEDs or lenses. These LEDs or lenses are fitted in high quality satin chrome, black chrome or matt chrome metal bezels, supplied with fixing nut and washer. Connection is usually by faston tab terminals 2.8 x 0.8mm. Suitable crimp connectors can be found on the page for accessories.

Brass terminals = anode (+)
Tinned terminals = cathode (-)

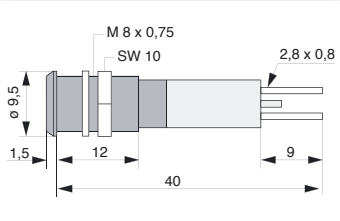
Superflacher Reflektor ohne Vorwiderstand IP40 / *Superflat bezel without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19010003	red	2,0V DC	–	13mcd at 20mA
19010001	green	2,2V DC	–	8mcd at 20mA
19010002	yellow	2,1V DC	–	8mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19011003	red	2,0V DC	–	13mcd at 20mA
19011001	green	2,2V DC	–	8mcd at 20mA
19011002	yellow	2,1V DC	–	8mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19012003	red	2,0V DC	–	13mcd at 20mA
19012001	green	2,2V DC	–	8mcd at 20mA
19012002	yellow	2,1V DC	–	8mcd at 20mA

Maximale Frontplattenstärke 10mm / *Maximum panel thickness 10mm*

Superflacher Reflektor mit Vorwiderstand IP67 / *Superflat bezel with resistor IP67*

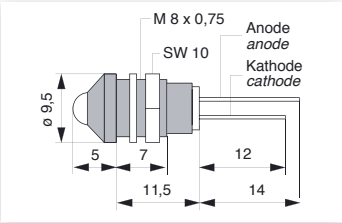


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19010253	red	12V DC	20mA DC	13mcd
19010251	green	12V DC	20mA DC	8mcd
19010252	yellow	12V DC	20mA DC	8mcd
19010353	red	24V DC	20mA DC	13mcd
19010351	green	24V DC	20mA DC	8mcd
19010352	yellow	24V DC	20mA DC	8mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19011253	red	12V DC	20mA DC	13mcd
19011251	green	12V DC	20mA DC	8mcd
19011252	yellow	12V DC	20mA DC	8mcd
19011353	red	24V DC	20mA DC	13mcd
19011351	green	24V DC	20mA DC	8mcd
19011352	yellow	24V DC	20mA DC	8mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19012253	red	12V DC	20mA DC	13mcd
19012251	green	12V DC	20mA DC	8mcd
19012252	yellow	12V DC	20mA DC	8mcd
19012353	red	24V DC	20mA DC	13mcd
19012351	green	24V DC	20mA DC	8mcd
19012352	yellow	24V DC	20mA DC	8mcd

Maximale Frontplattenstärke 10mm / *Maximum panel thickness 10mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

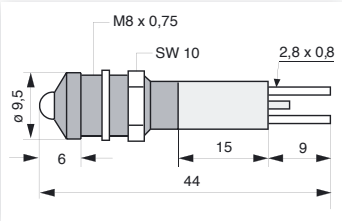
Außenreflektor ohne Vorwiderstand IP40 / *Prominent (exterior) bezel without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19040003	red	2,0V DC	–	80mcd at 20mA
19040001	green	2,2V DC	–	32mcd at 20mA
19040002	yellow	2,1V DC	–	32mcd at 20mA
19040007	blue	4,5V DC	–	60mcd at 20mcd
1904000W5D	white	3,2V DC	–	2000mcd at 20mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19041003	red	2,0V DC	–	80mcd at 20mA
19041001	green	2,2V DC	–	32mcd at 20mA
19041002	yellow	2,1V DC	–	32mcd at 20mA
19041007	blue	4,5V DC	–	60mcd at 20mcd
1904100W5D	white	3,2V DC	–	2000mcd at 20mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19042003	red	2,0V DC	–	80mcd at 20mA
19042001	green	2,2V DC	–	32mcd at 20mA
19042002	yellow	2,1V DC	–	32mcd at 20mA
19042007	blue	4,5V DC	–	60mcd at 20mcd
1904200W5D	white	3,2V DC	–	2000mcd at 20mcd

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*

Außenreflektor mit Vorwiderstand IP67 / *Prominent (exterior) bezel with resistor IP67*

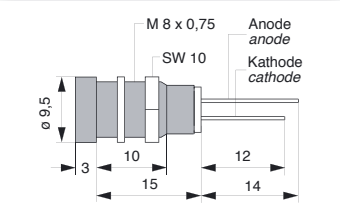


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19040253	red	12V DC	20mA DC	80mcd
19040251	green	12V DC	20mA DC	32mcd
19040252	yellow	12V DC	20mA DC	32mcd
19040257	blue	12V DC	20mA DC	60mcd
19040353	red	24V DC	20mA DC	80mcd
19040351	green	24V DC	20mA DC	32mcd
19040352	yellow	24V DC	20mA DC	32mcd
19040357	blue	24V DC	20mA DC	60mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19041253	red	12V DC	20mA DC	80mcd
19041251	green	12V DC	20mA DC	32mcd
19041252	yellow	12V DC	20mA DC	32mcd
19041257	blue	12V DC	20mA DC	60mcd
19041353	red	24V DC	20mA DC	80mcd
19041351	green	24V DC	20mA DC	32mcd
19041352	yellow	24V DC	20mA DC	32mcd
19041357	blue	24V DC	20mA DC	60mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19042253	red	12V DC	20mA DC	80mcd
19042251	green	12V DC	20mA DC	32mcd
19042252	yellow	12V DC	20mA DC	32mcd
19042257	blue	12V DC	20mA DC	60mcd
19042353	red	24V DC	20mA DC	80mcd
19042351	green	24V DC	20mA DC	32mcd
19042352	yellow	24V DC	20mA DC	32mcd
19042357	blue	24V DC	20mA DC	60mcd

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

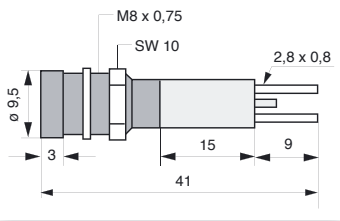
Innenreflektor ohne Vorwiderstand IP40 / *Recessed (interior) bezel without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19050003	red	2,0V DC	–	80mcd at 20mA
19050001	green	2,2V DC	–	32mcd at 20mA
19050002	yellow	2,1V DC	–	32mcd at 20mA
19050007	blue	4,5V DC	–	60mcd at 20mcd
1905000W5D	white	3,2V DC	–	2000mcd at 20mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19051003	red	2,0V DC	–	80mcd at 20mA
19051001	green	2,2V DC	–	32mcd at 20mA
19051002	yellow	2,1V DC	–	32mcd at 20mA
19051007	blue	4,5V DC	–	60mcd at 20mcd
1905100W5D	white	3,2V DC	–	2000mcd at 20mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19052003	red	2,0V DC	–	80mcd at 20mA
19052001	green	2,2V DC	–	32mcd at 20mA
19052002	yellow	2,1V DC	–	32mcd at 20mA
19052007	blue	4,5V DC	–	60mcd at 20mcd
1905200W5D	white	3,2V DC	–	2000mcd at 20mcd

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*

Innenreflektor mit Vorwiderstand IP67 / *Recessed (interior) bezel with resistor IP67*

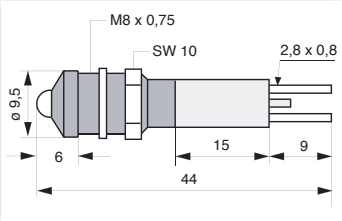


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19050253	red	12V DC	20mA DC	80mcd
19050251	green	12V DC	20mA DC	32mcd
19050252	yellow	12V DC	20mA DC	32mcd
19050257	blue	12V DC	20mA DC	60mcd
19050353	red	24V DC	20mA DC	80mcd
19050351	green	24V DC	20mA DC	32mcd
19050352	yellow	24V DC	20mA DC	32mcd
19050357	blue	24V DC	20mA DC	60mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19051253	red	12V DC	20mA DC	80mcd
19051251	green	12V DC	20mA DC	32mcd
19051252	yellow	12V DC	20mA DC	32mcd
19051257	blue	12V DC	20mA DC	60mcd
19051353	red	24V DC	20mA DC	80mcd
19051351	green	24V DC	20mA DC	32mcd
19051352	yellow	24V DC	20mA DC	32mcd
19051357	blue	24V DC	20mA DC	60mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19052253	red	12V DC	20mA DC	80mcd
19052251	green	12V DC	20mA DC	32mcd
19052252	yellow	12V DC	20mA DC	32mcd
19052257	blue	12V DC	20mA DC	60mcd
19052353	red	24V DC	20mA DC	80mcd
19052351	green	24V DC	20mA DC	32mcd
19052352	yellow	24V DC	20mA DC	32mcd
19052357	blue	24V DC	20mA DC	60mcd

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Außenreflektor Sonnenlicht tauglich mit Vorwiderstand und Einweggleichter IP67 / *Prominent (exterior) bezel sunlight visible with resistor and half-wave rectifier IP67*

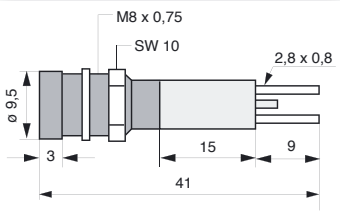


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19080250	red	12V AC/DC	9mA AC / 17mA DC	1200mcd
19080255	green	12V AC/DC	9mA AC / 17mA DC	1300mcd
19080252	yellow	12V AC/DC	9mA AC / 17mA DC	1100mcd
19080257	blue	12V AC/DC	9mA AC / 17mA DC	600mcd
1908025W	white	12V AC/DC	3mA AC / 6mA DC	1000mcd
19080350	red	24V AC/DC	9mA AC / 17mA DC	1200mcd
19080355	green	24V AC/DC	9mA AC / 17mA DC	1300mcd
19080352	yellow	24V AC/DC	9mA AC / 17mA DC	1100mcd
19080357	blue	24V AC/DC	9mA AC / 17mA DC	600mcd
1908035W	white	24V AC/DC	3mA AC / 6mA DC	1000mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19081250	red	12V AC/DC	9mA AC / 17mA DC	1200mcd
19081255	green	12V AC/DC	9mA AC / 17mA DC	1300mcd
19081252	yellow	12V AC/DC	9mA AC / 17mA DC	1100mcd
19081257	blue	12V AC/DC	9mA AC / 17mA DC	600mcd
1908125W	white	12V AC/DC	3mA AC / 6mA DC	1000mcd
19081350	red	24V AC/DC	9mA AC / 17mA DC	1200mcd
19081355	green	24V AC/DC	9mA AC / 17mA DC	1300mcd
19081352	yellow	24V AC/DC	9mA AC / 17mA DC	1100mcd
19081357	blue	24V AC/DC	9mA AC / 17mA DC	600mcd
1908135W	white	24V AC/DC	3mA AC / 6mA DC	1000mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19082250	red	12V AC/DC	9mA AC / 17mA DC	1200mcd
19082255	green	12V AC/DC	9mA AC / 17mA DC	1300mcd
19082252	yellow	12V AC/DC	9mA AC / 17mA DC	1100mcd
19082257	blue	12V AC/DC	9mA AC / 17mA DC	600mcd
1908225W	white	12V AC/DC	3mA AC / 6mA DC	1000mcd
19082350	red	24V AC/DC	9mA AC / 17mA DC	1200mcd
19082355	green	24V AC/DC	9mA AC / 17mA DC	1300mcd
19082352	yellow	24V AC/DC	9mA AC / 17mA DC	1100mcd
19082357	blue	24V AC/DC	9mA AC / 17mA DC	600mcd
1908235W	white	24V AC/DC	3mA AC / 6mA DC	1000mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

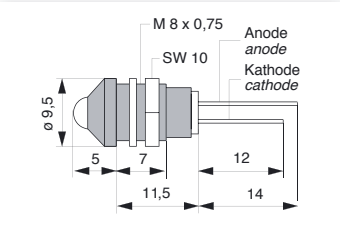
Innenreflektor Sonnenlicht tauglich mit Vorwiderstand und Einweggleichter IP67 / *Recessed (interior) bezel sunlight visible with resistor and half-wave rectifier IP67*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19090250	red	12V AC/DC	9mA AC / 17mA DC	1200mcd
19090255	green	12V AC/DC	9mA AC / 17mA DC	1300mcd
19090252	yellow	12V AC/DC	9mA AC / 17mA DC	1100mcd
19090257	blue	12V AC/DC	9mA AC / 17mA DC	600mcd
1909025W	white	12V AC/DC	3mA AC / 6mA DC	1000mcd
19090350	red	24V AC/DC	9mA AC / 17mA DC	1200mcd
19090355	green	24V AC/DC	9mA AC / 17mA DC	1300mcd
19090352	yellow	24V AC/DC	9mA AC / 17mA DC	1100mcd
19090357	blue	24V AC/DC	9mA AC / 17mA DC	600mcd
1909035W	white	24V AC/DC	3mA AC / 6mA DC	1000mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19091250	red	12V AC/DC	9mA AC / 17mA DC	1200mcd
19091255	green	12V AC/DC	9mA AC / 17mA DC	1300mcd
19091252	yellow	12V AC/DC	9mA AC / 17mA DC	1100mcd
19091257	blue	12V AC/DC	9mA AC / 17mA DC	600mcd
1909125W	white	12V AC/DC	3mA AC / 6mA DC	1000mcd
19091350	red	24V AC/DC	9mA AC / 17mA DC	1200mcd
19091355	green	24V AC/DC	9mA AC / 17mA DC	1300mcd
19091352	yellow	24V AC/DC	9mA AC / 17mA DC	1100mcd
19091357	blue	24V AC/DC	9mA AC / 17mA DC	600mcd
1909135W	white	24V AC/DC	3mA AC / 6mA DC	1000mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19092250	red	12V AC/DC	9mA AC / 17mA DC	1200mcd
19092255	green	12V AC/DC	9mA AC / 17mA DC	1300mcd
19092252	yellow	12V AC/DC	9mA AC / 17mA DC	1100mcd
19092257	blue	12V AC/DC	9mA AC / 17mA DC	600mcd
1909225W	white	12V AC/DC	3mA AC / 6mA DC	1000mcd
19092350	red	24V AC/DC	9mA AC / 17mA DC	1200mcd
19092355	green	24V AC/DC	9mA AC / 17mA DC	1300mcd
19092352	yellow	24V AC/DC	9mA AC / 17mA DC	1100mcd
19092357	blue	24V AC/DC	9mA AC / 17mA DC	600mcd
1909235W	white	24V AC/DC	3mA AC / 6mA DC	1000mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

Außenreflektor blinkend IP40 / *Prominent (exterior) bezel flashing IP40*

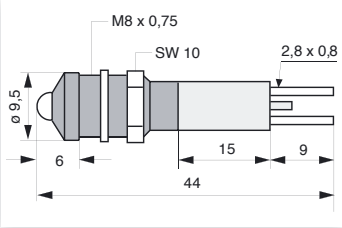


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19060003	red	3,5-13V DC	38-56mA DC	80mcd at 20mA
19060001	green	3,5-13V DC	38-56mA DC	32mcd at 20mA
19060002	yellow	3,5-13V DC	38-56mA DC	32mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19061003	red	3,5-13V DC	38-56mA DC	80mcd at 20mA
19061001	green	3,5-13V DC	38-56mA DC	32mcd at 20mA
19061002	yellow	3,5-13V DC	38-56mA DC	32mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19062003	red	3,5-13V DC	38-56mA DC	80mcd at 20mA
19062001	green	3,5-13V DC	38-56mA DC	32mcd at 20mA
19062002	yellow	3,5-13V DC	38-56mA DC	32mcd at 20mA

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*

LED Signalleuchten
LED Panel Mount Indicators

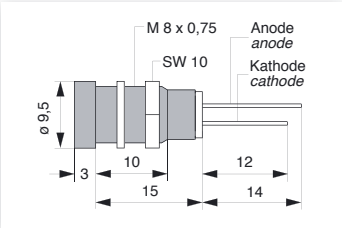
Außenreflektor blinkend IP67 / *Prominent (exterior) bezel flashing IP67*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19060353	red	24V DC	38-56mA DC	80mcd at 20mA
19060351	green	24V DC	38-56mA DC	32mcd at 20mA
19060352	yellow	24V DC	38-56mA DC	32mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19061353	red	24V DC	38-56mA DC	80mcd at 20mA
19061351	green	24V DC	38-56mA DC	32mcd at 20mA
19061352	yellow	24V DC	38-56mA DC	32mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19062353	red	24V DC	38-56mA DC	80mcd at 20mA
19062351	green	24V DC	38-56mA DC	32mcd at 20mA
19062352	yellow	24V DC	38-56mA DC	32mcd at 20mA

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*

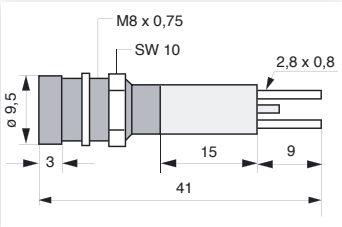
Innenreflektor blinkend IP40 / *Recessed (interior) bezel flashing IP40*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19070003	red	3,5-13V DC	38-56mA DC	80mcd at 20mA
19070001	green	3,5-13V DC	38-56mA DC	32mcd at 20mA
19070002	yellow	3,5-13V DC	38-56mA DC	32mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19071003	red	3,5-13V DC	38-56mA DC	80mcd at 20mA
19071001	green	3,5-13V DC	38-56mA DC	32mcd at 20mA
19071002	yellow	3,5-13V DC	38-56mA DC	32mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19072003	red	3,5-13V DC	38-56mA DC	80mcd at 20mA
19072001	green	3,5-13V DC	38-56mA DC	32mcd at 20mA
19072002	yellow	3,5-13V DC	38-56mA DC	32mcd at 20mA

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*

Innenreflektor blinkend IP67 / *Recessed (interior) bezel flashing IP67*

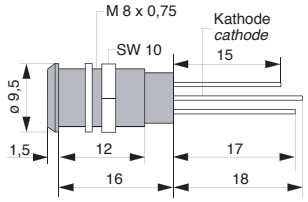


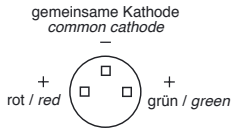
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / Satin chrome bezel				
19070353	red	24V DC	38-56mA DC	80mcd at 20mA
19070351	green	24V DC	38-56mA DC	32mcd at 20mA
19070352	yellow	24V DC	38-56mA DC	32mcd at 20mA
Schwarzverchromter Metallreflektor / Black chrome bezel				
19071353	red	24V DC	38-56mA DC	80mcd at 20mA
19071351	green	24V DC	38-56mA DC	32mcd at 20mA
19071352	yellow	24V DC	38-56mA DC	32mcd at 20mA
Mattverchromter Metallreflektor / Matt chrome bezel				
19072353	red	24V DC	38-56mA DC	80mcd at 20mA
19072351	green	24V DC	38-56mA DC	32mcd at 20mA
19072352	yellow	24V DC	38-56mA DC	32mcd at 20mA

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*

LED Signalleuchten
LED Panel Mount Indicators

Superflacher Reflektor dreifarbig ohne Vorwiderstand IP40 / *Superflat bezel tri-colour without resistor IP40*





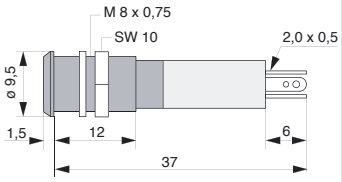
Schaltungsmöglichkeiten:
Rot, grün oder gelb – Beide Dioden ergeben gelb als Farbmischung

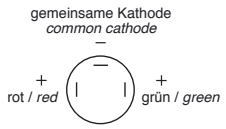
Operation modes:
Red, green or yellow – Both diodes produce yellow as a mixed colour

Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19100004	red/green/yellow	2,1/2,2/2,2V DC	–	3/3/6mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19101004	red/green/yellow	2,1/2,2/2,2V DC	–	3/3/6mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19102004	red/green/yellow	2,1/2,2/2,2V DC	–	3/3/6mcd at 20mA

Maximale Frontplattenstärke 10mm / *Maximum panel thickness 10mm*

Superflacher Reflektor dreifarbig mit Vorwiderstand IP67 / *Superflat bezel tri-colour with resistor IP67*





Schaltungsmöglichkeiten:
Rot, grün oder gelb – Beide Dioden ergeben gelb als Farbmischung

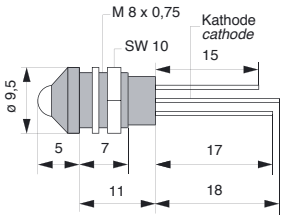
Operation modes:
Red, green or yellow – Both diodes produce yellow as a mixed colour

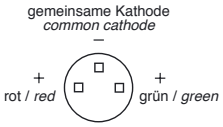
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19100254	red/green/yellow	12V DC	15/15/30mA DC	3/3/6mcd
19100354	red/green/yellow	24V DC	15/15/30mA DC	3/3/6mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19101254	red/green/yellow	12V DC	15/15/30mA DC	3/3/6mcd
19101354	red/green/yellow	24V DC	15/15/30mA DC	3/3/6mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19102254	red/green/yellow	12V DC	15/15/30mA DC	3/3/6mcd
19102354	red/green/yellow	24V DC	15/15/30mA DC	3/3/6mcd

Maximale Frontplattenstärke 10mm / *Maximum panel thickness 10mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Außenreflektor dreifarbig ohne Vorwiderstand IP40 /
Prominent (exterior) bezel tri-colour without resistor IP40





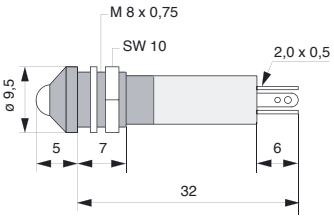
Schaltungsmöglichkeiten:
Rot, grün oder gelb – Beide Dioden ergeben gelb als Farbmischung

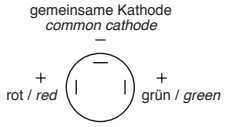
Operation modes:
Red, green or yellow – Both diodes produce yellow as a mixed colour

Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19120004	red/green/yellow	2,1/2,2/2,2V DC	–	10/20/30mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19121004	red/green/yellow	2,1/2,2/2,2V DC	–	10/20/30mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19122004	red/green/yellow	2,1/2,2/2,2V DC	–	10/20/30mcd at 20mA

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*

Außenreflektor dreifarbig mit Vorwiderstand IP67 /
Prominent (exterior) bezel tri-colour with resistor IP67





Schaltungsmöglichkeiten:
Rot, grün oder gelb – Beide Dioden ergeben gelb als Farbmischung

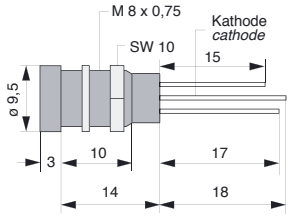
Operation modes:
Red, green or yellow – Both diodes produce yellow as a mixed colour

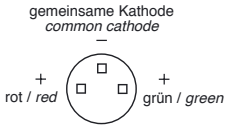
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19TR0A12	red/green/yellow	12V DC	20/20/40mA DC	10/20/30mcd
19TR0A24	red/green/yellow	24V DC	15/15/30mA DC	8/15/23mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19TR1A12	red/green/yellow	12V DC	20/20/40mA DC	10/20/30mcd
19TR1A24	red/green/yellow	24V DC	15/15/30mA DC	8/15/23mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19TR2A12	red/green/yellow	12V DC	20/20/40mA DC	10/20/30mcd
19TR2A24	red/green/yellow	24V DC	15/15/30mA DC	8/15/23mcd

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Innenreflektor dreifarbig ohne Vorwiderstand IP40 / *Recessed (interior) bezel tri-colour without resistor IP40*





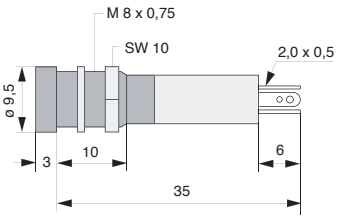
Schaltungsmöglichkeiten:
Rot, grün oder gelb – Beide Dioden ergeben gelb als Farbmischung

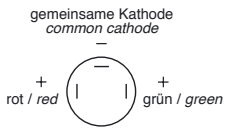
Operation modes:
Red, green or yellow – Both diodes produce yellow as a mixed colour

Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19130004	red/green/yellow	2,1/2,2/2,2V DC	–	10/20/30mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19131004	red/green/yellow	2,1/2,2/2,2V DC	–	10/20/30mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19132004	red/green/yellow	2,1/2,2/2,2V DC	–	10/20/30mcd at 20mA

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*

Innenreflektor dreifarbig mit Vorwiderstand IP67 / *Recessed (interior) bezel tri-colour with resistor IP67*





Schaltungsmöglichkeiten:
Rot, grün oder gelb – Beide Dioden ergeben gelb als Farbmischung

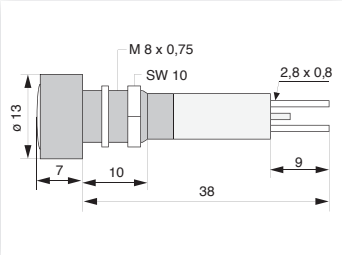
Operation modes:
Red, green or yellow – Both diodes produce yellow as a mixed colour

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19TR0I12	red/green/yellow	12V DC	20/20/40mA DC	10/20/30mcd
19TR0I24	red/green/yellow	24V DC	15/15/30mA DC	8/15/23mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19TR1I12	red/green/yellow	12V DC	20/20/40mA DC	10/20/30mcd
19TR1I24	red/green/yellow	24V DC	15/15/30mA DC	8/15/23mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19TR2I12	red/green/yellow	12V DC	20/20/40mA DC	10/20/30mcd
19TR2I24	red/green/yellow	24V DC	15/15/30mA DC	8/15/23mcd

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

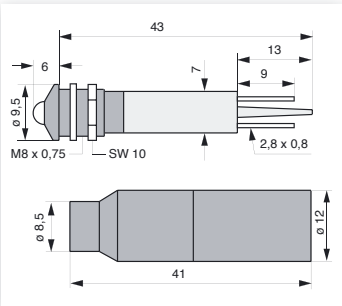
Extrahelle LED mit Optik mit Vorwiderstand IP67 /
Super bright LED with optic with resistor IP67



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
19180350A	red	24V DC	22mA DC	8800mcd
19180351A	green	24V DC	21mA DC	20000mcd
19180352A	yellow	24V DC	22mA DC	6600mcd
19180357A	blue	24V DC	21mA DC	4400mcd
1918035WA	white	24V DC	21mA DC	7350mcd

Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

Außenreflektor 130/230V AC mit Berührungsschutzhülse IP67 /
Prominent (exterior) bezel 130/230V AC with protection tube IP67

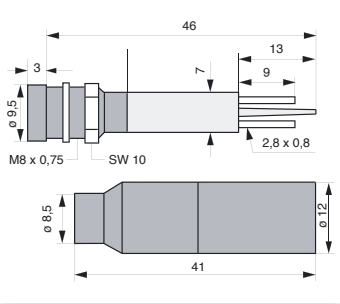


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19510330	red	130V AC	5mA AC	36mcd
19510331	green	130V AC	5mA AC	10mcd
19510332	yellow	130V AC	5mA AC	15mcd
19510337	blue	130V AC	5mA AC	125mcd
1951033W	white	130V AC	5mA AC	300mcd
19510430	red	230V AC	3mA AC	22mcd
19510431	green	230V AC	3mA AC	5mcd
19510432	yellow	230V AC	3mA AC	7mcd
19510437	blue	230V AC	3mA AC	75mcd
1951043W	white	230V AC	3mA AC	180mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19511330	red	130V AC	5mA AC	36mcd
19511331	green	130V AC	5mA AC	10mcd
19511332	yellow	130V AC	5mA AC	15mcd
19511337	blue	130V AC	5mA AC	125mcd
1951133W	white	130V AC	5mA AC	300mcd
19511430	red	230V AC	3mA AC	22mcd
19511431	green	230V AC	3mA AC	5mcd
19511432	yellow	230V AC	3mA AC	7mcd
19511437	blue	230V AC	3mA AC	75mcd
1951143W	white	230V AC	3mA AC	180mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19512330	red	130V AC	5mA AC	36mcd
19512331	green	130V AC	5mA AC	10mcd
19512332	yellow	130V AC	5mA AC	15mcd
19512337	blue	130V AC	5mA AC	125mcd
1951233W	white	130V AC	5mA AC	300mcd
19512430	red	230V AC	3mA AC	22mcd
19512431	green	230V AC	3mA AC	5mcd
19512432	yellow	230V AC	3mA AC	7mcd
19512437	blue	230V AC	3mA AC	75mcd
1951243W	white	230V AC	3mA AC	180mcd

Maximale Frontplattenstärke 5,5mm / *Maximum panel thickness 5.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Innenreflektor 130/230V AC mit Berührungsschutzhülse IP67 / *Recessed (interior) bezel 130/230V AC with protection tube IP67*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19500330	red	130V AC	5mA AC	36mcd
19500331	green	130V AC	5mA AC	10mcd
19500332	yellow	130V AC	5mA AC	15mcd
19500337	blue	130V AC	5mA AC	125mcd
1950033W	white	130V AC	5mA AC	300mcd
19500430	red	230V AC	3mA AC	22mcd
19500431	green	230V AC	3mA AC	5mcd
19500432	yellow	230V AC	3mA AC	7mcd
19500437	blue	230V AC	3mA AC	75mcd
1950043W	white	230V AC	3mA AC	180mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19501330	red	130V AC	5mA AC	36mcd
19501331	green	130V AC	5mA AC	10mcd
19501332	yellow	130V AC	5mA AC	15mcd
19501337	blue	130V AC	5mA AC	125mcd
1950133W	white	130V AC	5mA AC	300mcd
19501430	red	230V AC	3mA AC	22mcd
19501431	green	230V AC	3mA AC	5mcd
19501432	yellow	230V AC	3mA AC	7mcd
19501437	blue	230V AC	3mA AC	75mcd
1950143W	white	230V AC	3mA AC	180mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19502330	red	130V AC	5mA AC	36mcd
19502331	green	130V AC	5mA AC	10mcd
19502332	yellow	130V AC	5mA AC	15mcd
19502337	blue	130V AC	5mA AC	125mcd
1950233W	white	130V AC	5mA AC	300mcd
19502430	red	230V AC	3mA AC	22mcd
19502431	green	230V AC	3mA AC	5mcd
19502432	yellow	230V AC	3mA AC	7mcd
19502437	blue	230V AC	3mA AC	75mcd
1950243W	white	230V AC	3mA AC	180mcd

Maximale Frontplattenstärke 8mm / *Maximum panel thickness 8mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

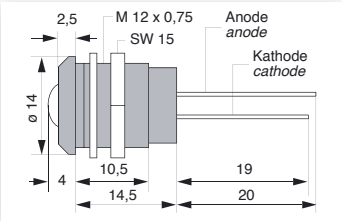
LED Signalleuchten für den Einbaudurchmesser von 12mm (+0,2mm) sind mit hellen, verschiedenfarbigen, diffusen 8mm LEDs bzw. Linsen bestückt. Sie sind mit hochglanzverchromten, schwarzverchromten oder mattverchromten Messingreflektoren lieferbar. Der Anschluss erfolgt in der Regel über Flachstecker 2,8 x 0,8mm. Die entsprechenden Flachsteckhülsen finden Sie auf der Zubehör-Seite. Die Montage der LED Signalleuchten erfolgt mittels der mitgelieferten Sprengringe und Muttern.

Messingflachstecker = Anode (+)
verzinnter Flachstecker = Kathode (-)

LED panel mount indicators for a 12mm (+0.2mm) mounting hole are manufactured with high brightness coloured diffused 8mm LEDs or lenses. These LEDs or lenses are fitted in high quality satin chrome, black chrome or matt chrome metal bezels, supplied with fixing nut and washer. Connection is usually by faston tab terminals 2.8 x 0.8mm. Suitable crimp connectors can be found on the page for accessories.

Brass terminals = anode (+)
Tinned terminals = cathode (-)

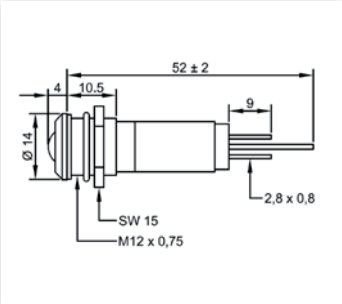
Standardreflektor ohne Vorwiderstand IP40 / *Standard bezel without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
192D0000	red	2,0V DC	–	60mcd at 20mA
192D0001	green	2,2V DC	–	40mcd at 20mA
192D0002	yellow	2,1V DC	–	40mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
192D1000	red	2,0V DC	–	60mcd at 20mA
192D1001	green	2,2V DC	–	40mcd at 20mA
192D1002	yellow	2,1V DC	–	40mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
192D2000	red	2,0V DC	–	60mcd at 20mA
192D2001	green	2,2V DC	–	40mcd at 20mA
192D2002	yellow	2,1V DC	–	40mcd at 20mA

Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*

Standardreflektor Sonnenlicht tauglich mit Vorwiderstand und Einweggleichrichter IP67 / *Standard bezel sunlight visible with resistor and half-wave rectifier IP67*

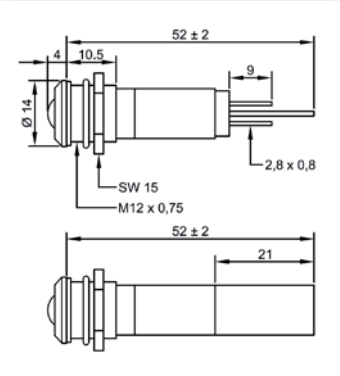


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
192D0250	red	12V AC/DC	9mA AC / 17mA DC	400mcd
192D0251	green	12V AC/DC	9mA AC / 17mA DC	1200mcd
192D0252	yellow	12V AC/DC	9mA AC / 17mA DC	350mcd
192D0257	blue	12V AC/DC	9mA AC / 17mA DC	450mcd
192D025W	white	12V AC/DC	9mA AC / 17mA DC	850mcd
192D0350	red	24V AC/DC	9mA AC / 17mA DC	400mcd
192D0351	green	24V AC/DC	9mA AC / 17mA DC	1200mcd
192D0352	yellow	24V AC/DC	9mA AC / 17mA DC	350mcd
192D0357	blue	24V AC/DC	9mA AC / 17mA DC	450mcd
192D035W	white	24V AC/DC	9mA AC / 17mA DC	850mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
192D1250	red	12V AC/DC	9mA AC / 17mA DC	400mcd
192D1251	green	12V AC/DC	9mA AC / 17mA DC	1200mcd
192D1252	yellow	12V AC/DC	9mA AC / 17mA DC	350mcd
192D1257	blue	12V AC/DC	9mA AC / 17mA DC	450mcd
192D125W	white	12V AC/DC	9mA AC / 17mA DC	850mcd
192D1350	red	24V AC/DC	9mA AC / 17mA DC	400mcd
192D1351	green	24V AC/DC	9mA AC / 17mA DC	1200mcd
192D1352	yellow	24V AC/DC	9mA AC / 17mA DC	350mcd
192D1357	blue	24V AC/DC	9mA AC / 17mA DC	450mcd
192D135W	white	24V AC/DC	9mA AC / 17mA DC	850mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
192D2250	red	12V AC/DC	9mA AC / 17mA DC	400mcd
192D2251	green	12V AC/DC	9mA AC / 17mA DC	1200mcd
192D2252	yellow	12V AC/DC	9mA AC / 17mA DC	350mcd
192D2257	blue	12V AC/DC	9mA AC / 17mA DC	450mcd
192D225W	white	12V AC/DC	9mA AC / 17mA DC	850mcd
192D2350	red	24V AC/DC	9mA AC / 17mA DC	400mcd
192D2351	green	24V AC/DC	9mA AC / 17mA DC	1200mcd
192D2352	yellow	24V AC/DC	9mA AC / 17mA DC	350mcd
192D2357	blue	24V AC/DC	9mA AC / 17mA DC	450mcd
192D235W	white	24V AC/DC	9mA AC / 17mA DC	850mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor 130/230V AC mit Berührungsschutzhülse IP67 /
Standard bezel 130/230V AC with protection tube IP67



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
192D0130	red	130V AC	6mA AC	140mcd
192D0131	green	130V AC	6mA AC	400mcd
192D0132	yellow	130V AC	6mA AC	120mcd
192D0137	blue	130V AC	6mA AC	160mcd
192D013W	white	130V AC	6mA AC	300mcd
192D0230	red	230V AC	3mA AC	70mcd
192D0231	green	230V AC	3mA AC	200mcd
192D0232	yellow	230V AC	3mA AC	60mcd
192D0237	blue	230V AC	3mA AC	80mcd
192D023W	white	230V AC	3mA AC	150mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
192D1130	red	130V AC	6mA AC	140mcd
192D1131	green	130V AC	6mA AC	400mcd
192D1132	yellow	130V AC	6mA AC	120mcd
192D1137	blue	130V AC	6mA AC	160mcd
192D113W	white	130V AC	6mA AC	300mcd
192D1230	red	230V AC	3mA AC	70mcd
192D1231	green	230V AC	3mA AC	200mcd
192D1232	yellow	230V AC	3mA AC	60mcd
192D1237	blue	230V AC	3mA AC	80mcd
192D123W	white	230V AC	3mA AC	150mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
192D2130	red	130V AC	6mA AC	140mcd
192D2131	green	130V AC	6mA AC	400mcd
192D2132	yellow	130V AC	6mA AC	120mcd
192D2137	blue	130V AC	6mA AC	160mcd
192D213W	white	130V AC	6mA AC	300mcd
192D2230	red	230V AC	3mA AC	70mcd
192D2231	green	230V AC	3mA AC	200mcd
192D2232	yellow	230V AC	3mA AC	60mcd
192D2237	blue	230V AC	3mA AC	80mcd
192D223W	white	230V AC	3mA AC	150mcd

Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

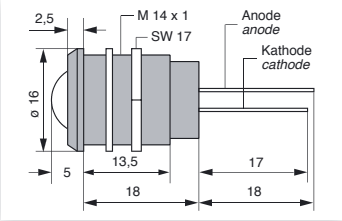
LED Signalleuchten für den Einbaudurchmesser von 14mm (+0,2mm) sind mit hellen, verschiedenfarbigen, diffusen 10mm LEDs bzw. Linsen bestückt. Sie sind mit hochglanzverchromten, schwarzverchromten oder mattverchromten Messingreflektoren lieferbar. Der Anschluss erfolgt in der Regel über Flachstecker 2,8 x 0,8mm. Die entsprechenden Flachsteckhülsen finden Sie auf der Zubehör-Seite. Die Montage der LED Signalleuchten erfolgt mittels der mitgelieferten Sprengringe und Muttern.

Messingflachstecker = Anode (+)
verzinnter Flachstecker = Kathode (-)

LED panel mount indicators for a 14mm (+0.2mm) mounting hole are manufactured with high brightness coloured diffused 10mm LEDs or lenses. These LEDs or lenses are fitted in high quality satin chrome, black chrome or matt chrome metal bezels, supplied with fixing nut and washer. Connection is usually by faston tab terminals 2.8 x 0.8mm. Suitable crimp connectors can be found on the page for accessories.

Brass terminals = anode (+)
Tinned terminals = cathode (-)

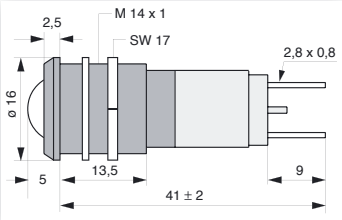
Standardreflektor ohne Vorwiderstand IP40 / *Standard bezel without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19210000	red	2,0V DC	–	150mcd at 20mA
19210001	green	2,2V DC	–	70mcd at 20mA
19210002	yellow	2,1V DC	–	70mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19211000	red	2,0V DC	–	150mcd at 20mA
19211001	green	2,2V DC	–	70mcd at 20mA
19211002	yellow	2,1V DC	–	70mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19212000	red	2,0V DC	–	150mcd at 20mA
19212001	green	2,2V DC	–	70mcd at 20mA
19212002	yellow	2,1V DC	–	70mcd at 20mA

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*

Standardreflektor mit Vorwiderstand IP67 / *Standard bezel with resistor IP67*

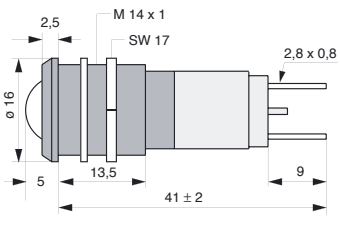


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19210250	red	12V DC	20mA DC	150mcd
19210251	green	12V DC	20mA DC	70mcd
19210252	yellow	12V DC	20mA DC	70mcd
19210350	red	24V DC	20mA DC	150mcd
19210351	green	24V DC	20mA DC	70mcd
19210352	yellow	24V DC	20mA DC	70mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19211250	red	12V DC	20mA DC	150mcd
19211251	green	12V DC	20mA DC	70mcd
19211252	yellow	12V DC	20mA DC	70mcd
19211350	red	24V DC	20mA DC	150mcd
19211351	green	24V DC	20mA DC	70mcd
19211352	yellow	24V DC	20mA DC	70mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19212250	red	12V DC	20mA DC	150mcd
19212251	green	12V DC	20mA DC	70mcd
19212252	yellow	12V DC	20mA DC	70mcd
19212350	red	24V DC	20mA DC	150mcd
19212351	green	24V DC	20mA DC	70mcd
19212352	yellow	24V DC	20mA DC	70mcd

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

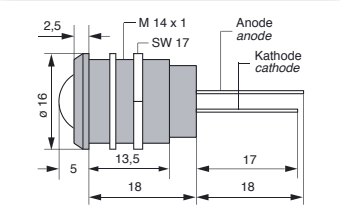
Standardreflektor Sonnenlicht tauglich mit Vorwiderstand und Einweggleichrichter IP67 / *Standard bezel sunlight visibible with resistor and half-wave rectifier IP67*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
192A0250	red	12V AC/DC	9mA AC / 17mA DC	700mcd
192A0255	green	12V AC/DC	9mA AC / 17mA DC	1250mcd
192A0252	yellow	12V AC/DC	9mA AC / 17mA DC	1000mcd
192A0257	blue	12V AC/DC	9mA AC / 17mA DC	500mcd
192A025W	white	12V AC/DC	4mA AC / 8mA DC	1400mcd
192A0350	red	24V AC/DC	9mA AC / 17mA DC	700mcd
192A0355	green	24V AC/DC	9mA AC / 17mA DC	1250mcd
192A0352	yellow	24V AC/DC	9mA AC / 17mA DC	1000mcd
192A0357	blue	24V AC/DC	9mA AC / 17mA DC	500mcd
192A035W	white	24V AC/DC	4mA AC / 8mA DC	1400mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
192A1250	red	12V AC/DC	9mA AC / 17mA DC	700mcd
192A1255	green	12V AC/DC	9mA AC / 17mA DC	1250mcd
192A1252	yellow	12V AC/DC	9mA AC / 17mA DC	1000mcd
192A1257	blue	12V AC/DC	9mA AC / 17mA DC	500mcd
192A125W	white	12V AC/DC	4mA AC / 8mA DC	1400mcd
192A1350	red	24V AC/DC	9mA AC / 17mA DC	700mcd
192A1355	green	24V AC/DC	9mA AC / 17mA DC	1250mcd
192A1352	yellow	24V AC/DC	9mA AC / 17mA DC	1000mcd
192A1357	blue	24V AC/DC	9mA AC / 17mA DC	500mcd
192A135W	white	24V AC/DC	4mA AC / 8mA DC	1400mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
192A2250	red	12V AC/DC	9mA AC / 17mA DC	700mcd
192A2255	green	12V AC/DC	9mA AC / 17mA DC	1250mcd
192A2252	yellow	12V AC/DC	9mA AC / 17mA DC	1000mcd
192A2257	blue	12V AC/DC	9mA AC / 17mA DC	500mcd
192A225W	white	12V AC/DC	4mA AC / 8mA DC	1400mcd
192A2350	red	24V AC/DC	9mA AC / 17mA DC	700mcd
192A2355	green	24V AC/DC	9mA AC / 17mA DC	1250mcd
192A2352	yellow	24V AC/DC	9mA AC / 17mA DC	1000mcd
192A2357	blue	24V AC/DC	9mA AC / 17mA DC	500mcd
192A235W	white	24V AC/DC	4mA AC / 8mA DC	1400mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

Standardreflektor blinkend IP40 / *Standard bezel flashing IP40*

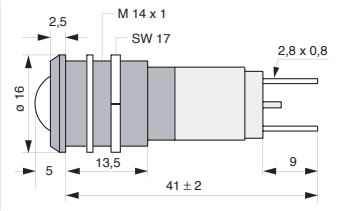


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19220000	red	3,5-13V DC	38-56mA DC	100mcd at 20mA
19220001	green	3,5-13V DC	38-56mA DC	70mcd at 20mA
19220002	yellow	3,5-13V DC	38-56mA DC	70mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19221000	red	3,5-13V DC	38-56mA DC	100mcd at 20mA
19221001	green	3,5-13V DC	38-56mA DC	70mcd at 20mA
19221002	yellow	3,5-13V DC	38-56mA DC	70mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19222000	red	3,5-13V DC	38-56mA DC	100mcd at 20mA
19222001	green	3,5-13V DC	38-56mA DC	70mcd at 20mA
19222002	yellow	3,5-13V DC	38-56mA DC	70mcd at 20mA

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*

LED Signalleuchten
LED Panel Mount Indicators

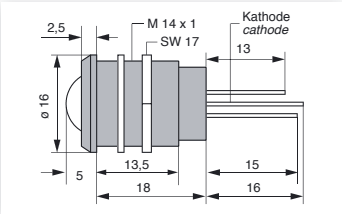
Standardreflektor blinkend IP67 / *Standard bezel flashing IP67*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19220350	red	24V DC	38-56mA DC	100mcd at 20mA
19220351	green	24V DC	38-56mA DC	70mcd at 20mA
19220352	yellow	24V DC	38-56mA DC	70mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19221350	red	24V DC	38-56mA DC	100mcd at 20mA
19221351	green	24V DC	38-56mA DC	70mcd at 20mA
19221352	yellow	24V DC	38-56mA DC	70mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19222350	red	24V DC	38-56mA DC	100mcd at 20mA
19222351	green	24V DC	38-56mA DC	70mcd at 20mA
19222352	yellow	24V DC	38-56mA DC	70mcd at 20mA

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*

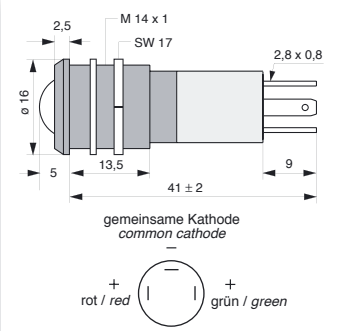
Standardreflektor dreifarbig ohne Vorwiderstand IP40 / *Standard bezel tri-colour without resistor IP40*



Part Number	Colour	Typ. Forward Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19240004	red/green/yellow	2,1/2,2/2,2V DC	–	90/60/150mcd at 20mA
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19241004	red/green/yellow	2,1/2,2/2,2V DC	–	90/60/150mcd at 20mA
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19242004	red/green/yellow	2,1/2,2/2,2V DC	–	90/60/150mcd at 20mA

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*

Standardreflektor dreifarbig mit Vorwiderstand IP67 / *Standard bezel tri-colour with resistor IP67*



Schaltungsmöglichkeiten:
Rot, grün oder gelb – Beide Dioden ergeben gelb als Farbmischung

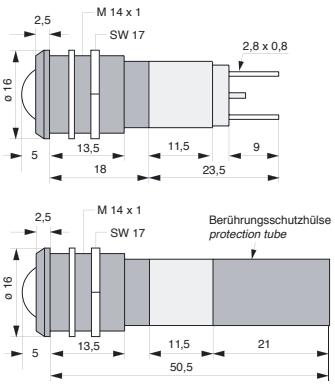
Operation modes:
Red, green or yellow – Both diodes produce yellow as a mixed colour

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19240254	red/green/yellow	12V DC	20/20/40mA DC	90/60/150mcd
19240354	red/green/yellow	24V DC	20/20/40mA DC	90/60/150mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19241254	red/green/yellow	12V DC	20/20/40mA DC	90/60/150mcd
19241354	red/green/yellow	24V DC	20/20/40mA DC	90/60/150mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19242254	red/green/yellow	12V DC	20/20/40mA DC	90/60/150mcd
19242354	red/green/yellow	24V DC	20/20/40mA DC	90/60/150mcd

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor 130/230V AC mit Berührungsschutzhülse IP67 /
Standard bezel 130/230V AC with protection tube IP67



Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

In general we supply the 130VAC and 230VAC versions with a protection tube.

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19350130	red	130V AC	6mA AC	47mcd
19350131	green	130V AC	6mA AC	34mcd
19350133	yellow	130V AC	6mA AC	27mcd
19350135	ultra-green	130V AC	6mA AC	660mcd
19350137	blue	130V AC	6mA AC	196mcd
1935013W	white	130V AC	4mA AC	700mcd
19350230	red	230V AC	3mA AC	18mcd
19350231	green	230V AC	3mA AC	11mcd
19350233	yellow	230V AC	3mA AC	8mcd
19350235	ultra-green	230V AC	3mA AC	330mcd
19350237	blue	230V AC	3mA AC	98mcd
1935023W	white	230V AC	2,5mA AC	440mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19351130	red	130V AC	6mA AC	47mcd
19351131	green	130V AC	6mA AC	34mcd
19351133	yellow	130V AC	6mA AC	27mcd
19351135	ultra-green	130V AC	6mA AC	660mcd
19351137	blue	130V AC	6mA AC	196mcd
1935113W	white	130V AC	4mA AC	700mcd
19351230	red	230V AC	3mA AC	18mcd
19351231	green	230V AC	3mA AC	11mcd
19351233	yellow	230V AC	3mA AC	8mcd
19351235	ultra-green	230V AC	3mA AC	330mcd
19351237	blue	230V AC	3mA AC	98mcd
1935123W	white	230V AC	2,5mA AC	440mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19352130	red	130V AC	6mA AC	47mcd
19352131	green	130V AC	6mA AC	34mcd
19352133	yellow	130V AC	6mA AC	27mcd
19352135	ultra-green	130V AC	6mA AC	660mcd
19352137	blue	130V AC	6mA AC	196mcd
1935213W	white	130V AC	4mA AC	700mcd
19352230	red	230V AC	3mA AC	18mcd
19352231	green	230V AC	3mA AC	11mcd
19352233	yellow	230V AC	3mA AC	8mcd
19352235	ultra-green	230V AC	3mA AC	330mcd
19352237	blue	230V AC	3mA AC	98mcd
1935223W	white	230V AC	2,5mA AC	440mcd

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

LED Signalleuchten für den Einbaudurchmesser von 16mm (+0,4mm) sind mit hellen, verschiedenfarbigen, diffusen 10mm LEDs bzw. Linsen bestückt.

Zur Auswahl stehen drei Linsenformen:
- runde Linse
- flache Linse
- konische Linse

Sie sind mit hochglanzverchromten, schwarzverchromten oder mattverchromten Messingreflektoren sowie schwarzen Kunststoffreflektoren lieferbar. Der Anschluss erfolgt in der Regel über Flachstecker 2,8 x 0,8mm. Die entsprechenden Flachsteckhülsen finden Sie auf der Zubehör-Seite. Die Montage der LED Signalleuchten erfolgt mittels der mitgelieferten Sprengringe und Muttern.

Messingflachstecker = Anode (+)
verzinnter Flachstecker = Kathode (-)

LED panel mount indicators for a 16mm (+0.4mm) mounting hole are manufactured with high brightness coloured diffused 10mm LEDs or lenses.

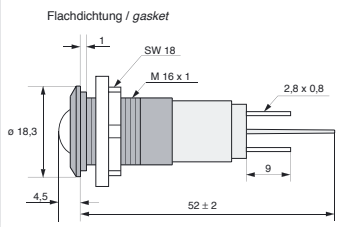
These indicators can be delivered with three different lens shapes:
- *round lens*
- *flat lens*
- *conical lens*

These LEDs or lenses are fitted in high quality satin chrome, black chrome or matt chrome metal bezels or in black plastic bezels, supplied with fixing nut and washer. Connection is usually by faston tab terminals 2.8 x 0.8mm. Suitable crimp connectors can be found on the page for accessories.

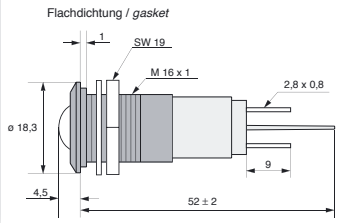
Brass terminals = anode (+)
Tinned terminals = cathode (-)

Standardreflektor runde Linse mit Vorwiderstand und Einweggleichrichter IP67 / *Standard bezel round lens with resistor and half-wave rectifier IP67*

Kunststoffausführung / *version with black plastic bezel*



Metallausführung / *version with metal bezel*



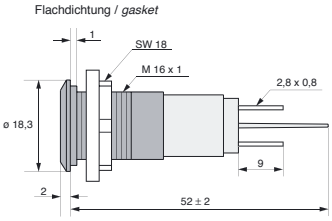
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
19371250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19371255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19371252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19371257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1937125W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19371350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19371355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19371352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19371357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1937135W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19370250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19370255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19370252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19370257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1937025WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19370350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19370355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19370352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19370357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1937035WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19371250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19371255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19371252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19371257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1937125WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19371350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19371355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19371352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19371357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1937135WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19372250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19372255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19372252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19372257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1937225WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19372350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19372355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19372352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19372357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1937235WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

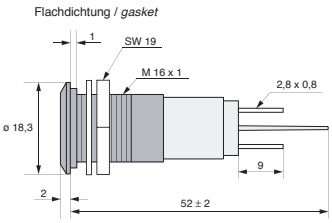
LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor flache Linse mit Vorwiderstand und Einweggleichrichter IP67 / *Standard bezel flat lens with resistor and half-wave rectifier IP67*

Kunststoffausführung / *version with black plastic bezel*



Metallausführung / *version with metal bezel*



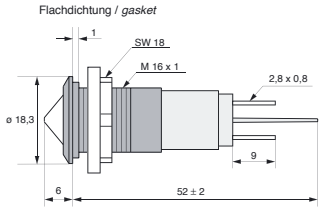
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
19381250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19381255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19381252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19381257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1938125W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19381350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19381355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19381352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19381357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1938135W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19380250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19380255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19380252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19380257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1938025WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19380350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19380355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19380352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19380357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1938035WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19381250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19381255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19381252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19381257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1938125WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19381350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19381355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19381352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19381357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1938135WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19382250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19382255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19382252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19382257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1938225WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19382350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19382355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19382352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19382357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1938235WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

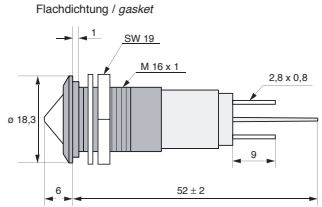
LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor konische Linse mit Vorwiderstand und Einweggleichrichter IP67 / *Standard bezel conical lens with resistor and half-wave rectifier IP67*

Kunststoffausführung / *version with black plastic bezel*



Metallausführung / *version with metal bezel*



Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
19391250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19391255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19391252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19391257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1939125W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19391350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19391355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19391352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19391357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1939135W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19390250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19390255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19390252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19390257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1939025WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19390350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19390355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19390352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19390357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1939035WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19391250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19391255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19391252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19391257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1939125WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19391350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19391355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19391352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19391357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1939135WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19392250M	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19392255M	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19392252M	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19392257M	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1939225WM	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19392350M	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19392355M	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19392352M	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19392357M	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1939235WM	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd

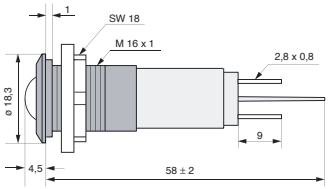
Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

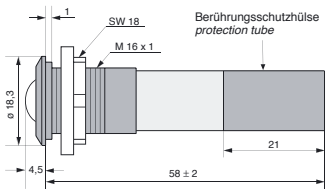
Standardreflektor runde Linse 130/230V AC mit Berührungsschutzhülse IP67 / *Standard bezel round lens 130/230V AC with protection tube IP67*

Kunststoffausführung / *version with black plastic bezel*

Flachdichtung / *gasket*



Flachdichtung / *gasket*

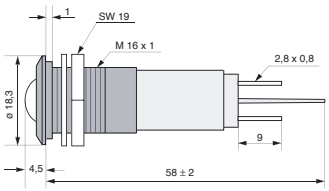


Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

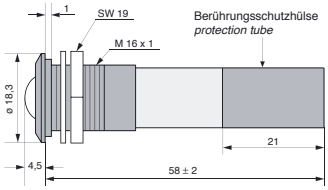
In general we supply the 130VAC and 230VAC versions with a protection tube.

Metallausführung / *version with metal bezel*

Flachdichtung / *gasket*



Flachdichtung / *gasket*



Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

In general we supply the 130VAC and 230VAC versions with a protection tube.

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
19401130	red	130V AC	6mA AC	600mcd
19401135	green	130V AC	6mA AC	510mcd
19401132	yellow	130V AC	6mA AC	400mcd
19401137	blue	130V AC	6mA AC	150mcd
1940113W	white	130V AC	3mA AC	450mcd
19401230	red	230V AC	3mA AC	300mcd
19401235	green	230V AC	3mA AC	255mcd
19401232	yellow	230V AC	3mA AC	200mcd
19401237	blue	230V AC	3mA AC	75mcd
1940123W	white	230V AC	1,5mA AC	225mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19400130M	red	130V AC	6mA AC	600mcd
19400135M	green	130V AC	6mA AC	510mcd
19400132M	yellow	130V AC	6mA AC	400mcd
19400137M	blue	130V AC	6mA AC	150mcd
1940013WM	white	130V AC	3mA AC	450mcd
19400230M	red	230V AC	3mA AC	300mcd
19400235M	green	230V AC	3mA AC	255mcd
19400232M	yellow	230V AC	3mA AC	200mcd
19400237M	blue	230V AC	3mA AC	75mcd
1940023WM	white	230V AC	1,5mA AC	225mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19401130M	red	130V AC	6mA AC	600mcd
19401135M	green	130V AC	6mA AC	510mcd
19401132M	yellow	130V AC	6mA AC	400mcd
19401137M	blue	130V AC	6mA AC	150mcd
1940113WM	white	130V AC	3mA AC	450mcd
19401230M	red	230V AC	3mA AC	300mcd
19401235M	green	230V AC	3mA AC	255mcd
19401232M	yellow	230V AC	3mA AC	200mcd
19401237M	blue	230V AC	3mA AC	75mcd
1940123WM	white	230V AC	1,5mA AC	225mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19402130M	red	130V AC	6mA AC	600mcd
19402135M	green	130V AC	6mA AC	510mcd
19402132M	yellow	130V AC	6mA AC	400mcd
19402137M	blue	130V AC	6mA AC	150mcd
1940213WM	white	130V AC	3mA AC	450mcd
19402230M	red	230V AC	3mA AC	300mcd
19402235M	green	230V AC	3mA AC	255mcd
19402232M	yellow	230V AC	3mA AC	200mcd
19402237M	blue	230V AC	3mA AC	75mcd
1940223WM	white	230V AC	1,5mA AC	225mcd

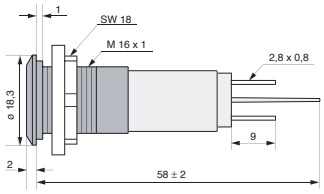
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

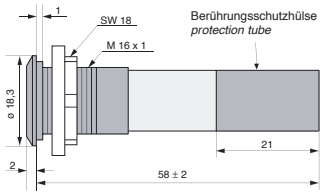
Standardreflektor flache Linse 130/230V AC mit Berührungsschutzhülse IP67 /
Standard bezel flat lens 130/230V AC with protection tube IP67

Kunststoffausführung / *version with black plastic bezel*

Flachdichtung / *gasket*



Flachdichtung / *gasket*

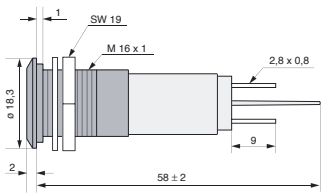


Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

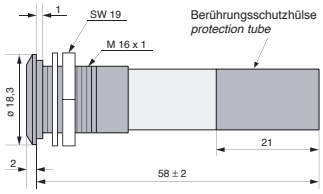
In general we supply the 130VAC and 230VAC versions with a protection tube.

Metallausführung / *version with metal bezel*

Flachdichtung / *gasket*



Flachdichtung / *gasket*



Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

In general we supply the 130VAC and 230VAC versions with a protection tube.

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
19411130	red	130V AC	6mA AC	600mcd
19411135	green	130V AC	6mA AC	510mcd
19411132	yellow	130V AC	6mA AC	400mcd
19411137	blue	130V AC	6mA AC	150mcd
1941113W	white	130V AC	3mA AC	450mcd
19411230	red	230V AC	3mA AC	300mcd
19411235	green	230V AC	3mA AC	255mcd
19411232	yellow	230V AC	3mA AC	200mcd
19411237	blue	230V AC	3mA AC	75mcd
1941123W	white	230V AC	1,5mA AC	225mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19410130M	red	130V AC	6mA AC	600mcd
19410135M	green	130V AC	6mA AC	510mcd
19410132M	yellow	130V AC	6mA AC	400mcd
19410137M	blue	130V AC	6mA AC	150mcd
1941013WM	white	130V AC	3mA AC	450mcd
19410230M	red	230V AC	3mA AC	300mcd
19410235M	green	230V AC	3mA AC	255mcd
19410232M	yellow	230V AC	3mA AC	200mcd
19410237M	blue	230V AC	3mA AC	75mcd
1941023WM	white	230V AC	1,5mA AC	225mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19411130M	red	130V AC	6mA AC	600mcd
19411135M	green	130V AC	6mA AC	510mcd
19411132M	yellow	130V AC	6mA AC	400mcd
19411137M	blue	130V AC	6mA AC	150mcd
1941113WM	white	130V AC	3mA AC	450mcd
19411230M	red	230V AC	3mA AC	300mcd
19411235M	green	230V AC	3mA AC	255mcd
19411232M	yellow	230V AC	3mA AC	200mcd
19411237M	blue	230V AC	3mA AC	75mcd
1941123WM	white	230V AC	1,5mA AC	225mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19412130M	red	130V AC	6mA AC	600mcd
19412135M	green	130V AC	6mA AC	510mcd
19412132M	yellow	130V AC	6mA AC	400mcd
19412137M	blue	130V AC	6mA AC	150mcd
1941213WM	white	130V AC	3mA AC	450mcd
19412230M	red	230V AC	3mA AC	300mcd
19412235M	green	230V AC	3mA AC	255mcd
19412232M	yellow	230V AC	3mA AC	200mcd
19412237M	blue	230V AC	3mA AC	75mcd
1941223WM	white	230V AC	1,5mA AC	225mcd

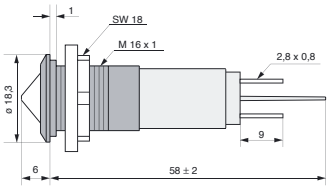
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

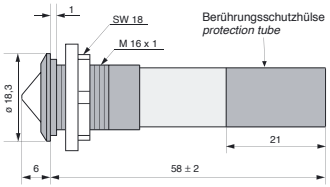
Standardreflektor konische Linse 130/230V AC mit Berührungsschutzhülse IP67 / *Standard bezel conical lens 130/230V AC with protection tube IP67*

Kunststoffausführung / *version with black plastic bezel*

Flachdichtung / *gasket*



Flachdichtung / *gasket*

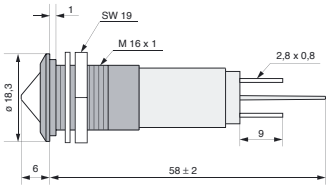


Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

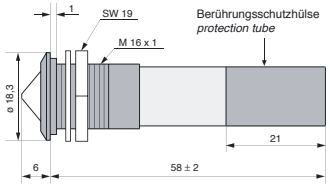
In general we supply the 130VAC and 230VAC versions with a protection tube.

Metallausführung / *version with metal bezel*

Flachdichtung / *gasket*



Flachdichtung / *gasket*



Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

In general we supply the 130VAC and 230VAC versions with a protection tube.

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
19421130	red	130V AC	6mA AC	600mcd
19421135	green	130V AC	6mA AC	510mcd
19421132	yellow	130V AC	6mA AC	400mcd
19421137	blue	130V AC	6mA AC	150mcd
1942113W	white	130V AC	3mA AC	450mcd
19421230	red	230V AC	3mA AC	300mcd
19421235	green	230V AC	3mA AC	255mcd
19421232	yellow	230V AC	3mA AC	200mcd
19421237	blue	230V AC	3mA AC	75mcd
1942123W	white	230V AC	1,5mA AC	225mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19420130M	red	130V AC	6mA AC	600mcd
19420135M	green	130V AC	6mA AC	510mcd
19420132M	yellow	130V AC	6mA AC	400mcd
19420137M	blue	130V AC	6mA AC	150mcd
1942013WM	white	130V AC	3mA AC	450mcd
19420230M	red	230V AC	3mA AC	300mcd
19420235M	green	230V AC	3mA AC	255mcd
19420232M	yellow	230V AC	3mA AC	200mcd
19420237M	blue	230V AC	3mA AC	75mcd
1942023WM	white	230V AC	1,5mA AC	225mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19421130M	red	130V AC	6mA AC	600mcd
19421135M	green	130V AC	6mA AC	510mcd
19421132M	yellow	130V AC	6mA AC	400mcd
19421137M	blue	130V AC	6mA AC	150mcd
1942113WM	white	130V AC	3mA AC	450mcd
19421230M	red	230V AC	3mA AC	300mcd
19421235M	green	230V AC	3mA AC	255mcd
19421232M	yellow	230V AC	3mA AC	200mcd
19421237M	blue	230V AC	3mA AC	75mcd
1942123WM	white	230V AC	1,5mA AC	225mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19422130M	red	130V AC	6mA AC	600mcd
19422135M	green	130V AC	6mA AC	510mcd
19422132M	yellow	130V AC	6mA AC	400mcd
19422137M	blue	130V AC	6mA AC	150mcd
1942213WM	white	130V AC	3mA AC	450mcd
19422230M	red	230V AC	3mA AC	300mcd
19422235M	green	230V AC	3mA AC	255mcd
19422232M	yellow	230V AC	3mA AC	200mcd
19422237M	blue	230V AC	3mA AC	75mcd
1942223WM	white	230V AC	1,5mA AC	225mcd

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

LED Signalleuchten für den Einbaudurchmesser von 19mm (+0,4mm) sind mit hellen, verschiedenfarbigen, diffusen 10mm LEDs bzw. Linsen bestückt.

Zur Auswahl stehen drei Linsenformen:
- runde Linse
- flache Linse
- konische Linse

Sie sind mit hochglanzverchromten, schwarzverchromten oder mattverchromten Messingreflektoren lieferbar. Der Anschluss erfolgt in der Regel über Flachstecker 2,8 x 0,8mm. Die entsprechenden Flachsteckhülsen finden Sie auf der Zubehör-Seite. Die Montage der LED Signalleuchten erfolgt mittels der mitgelieferten Sprengringe und Muttern.

Messingflachstecker = Anode (+)
verzinnter Flachstecker = Kathode (-)

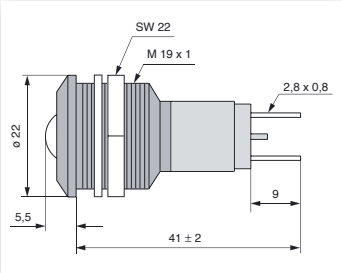
LED panel mount indicators for a 19mm (+0.4mm) mounting hole are manufactured with high brightness coloured diffused 10mm LEDs or lenses.

These indicators can be delivered with three different lens shapes:
- *round lens*
- *flat lens*
- *conical lens*

These LEDs or lenses are fitted in high quality satin chrome, black chrome or matt chrome metal bezels, supplied with fixing nut and washer. Connection is usually by faston tab terminals 2.8 x 0.8mm. Suitable crimp connectors can be found on the page for accessories.

Brass terminals = anode (+)
Tinned terminals = cathode (-)

Standardreflektor runde Linse mit Vorwiderstand und Einweggleichrichter IP67 / *Standard bezel round lens with resistor and half-wave rectifier IP67*

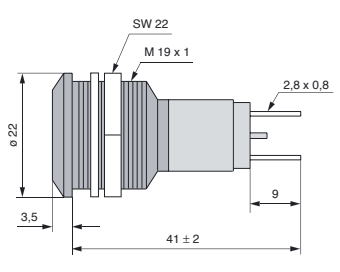


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19700250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19700255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19700252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19700257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1970025W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19700350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19700355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19700352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19700357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1970035W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19701250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19701255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19701252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19701257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1970125W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19701350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19701355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19701352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19701357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1970135W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19702250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19702255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19702252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19702257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1970225W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19702350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19702355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19702352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19702357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1970235W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor flache Linse mit Vorwiderstand und Einweggleichrichter IP67 / *Standard bezel flat lens with resistor and half-wave rectifier IP67*

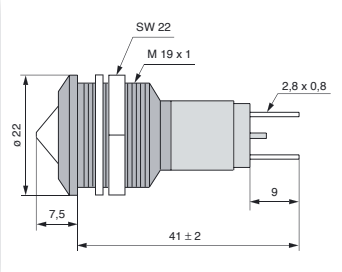


Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19710250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19710255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19710252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19710257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1971025W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19710350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19710355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19710352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19710357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1971035W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19711250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19711255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19711252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19711257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1971125W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19711350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19711355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19711352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19711357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1971135W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19712250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19712255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19712252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19712257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1971225W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19712350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19712355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19712352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19712357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1971235W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor konische Linse mit Vorwiderstand und Einweggleichrichter IP67 / *Standard bezel conical lens with resistor and half-wave rectifier IP67*

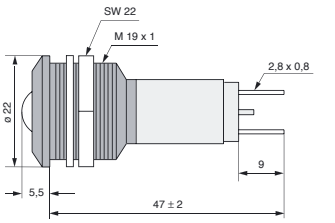


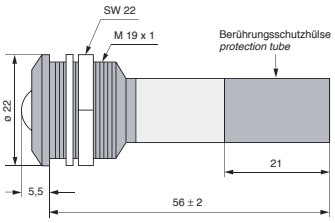
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19720250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19720255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19720252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19720257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1972025W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19720350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19720355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19720352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19720357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1972035W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19721250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19721255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19721252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19721257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1972125W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19721350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19721355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19721352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19721357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1972135W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19722250	red	12V AC/DC	8mA AC / 16mA DC	1500mcd
19722255	green	12V AC/DC	7mA AC / 14mA DC	1200mcd
19722252	yellow	12V AC/DC	8mA AC / 16mA DC	1000mcd
19722257	blue	12V AC/DC	7mA AC / 14mA DC	350mcd
1972225W	white	12V AC/DC	2,5mA AC / 5mA DC	750mcd
19722350	red	24V AC/DC	8mA AC / 16mA DC	1500mcd
19722355	green	24V AC/DC	7mA AC / 14mA DC	1200mcd
19722352	yellow	24V AC/DC	8mA AC / 16mA DC	1000mcd
19722357	blue	24V AC/DC	7mA AC / 14mA DC	350mcd
1972235W	white	24V AC/DC	2,5mA AC / 5mA DC	750mcd

Lichtstärkedaten der verwendeten LED bei DC-Betrieb / *Luminous intensity data of the LED on direct voltage*
Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor runde Linse 130/230V AC mit Berührungsschutzhülse IP67 / *Standard bezel round lens 130/230V AC with protection tube IP67*





Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

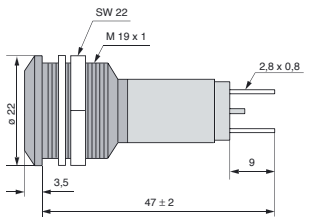
In general we supply the 130VAC and 230VAC versions with a protection tube.

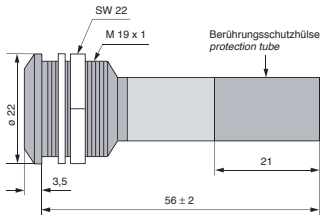
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19730130	red	130V AC	6mA AC	600mcd
19730135	green	130V AC	6mA AC	510mcd
19730132	yellow	130V AC	6mA AC	400mcd
19730137	blue	130V AC	6mA AC	150mcd
1973013W	white	130V AC	3mA AC	450mcd
19730230	red	230V AC	3mA AC	300mcd
19730235	green	230V AC	3mA AC	255mcd
19730232	yellow	230V AC	3mA AC	200mcd
19730237	blue	230V AC	3mA AC	75mcd
1973023W	white	230V AC	1,5mA AC	225mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19731130	red	130V AC	6mA AC	600mcd
19731135	green	130V AC	6mA AC	510mcd
19731132	yellow	130V AC	6mA AC	400mcd
19731137	blue	130V AC	6mA AC	150mcd
1973113W	white	130V AC	3mA AC	450mcd
19731230	red	230V AC	3mA AC	300mcd
19731235	green	230V AC	3mA AC	255mcd
19731232	yellow	230V AC	3mA AC	200mcd
19731237	blue	230V AC	3mA AC	75mcd
1973123W	white	230V AC	1,5mA AC	225mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19732130	red	130V AC	6mA AC	600mcd
19732135	green	130V AC	6mA AC	510mcd
19732132	yellow	130V AC	6mA AC	400mcd
19732137	blue	130V AC	6mA AC	150mcd
1973213W	white	130V AC	3mA AC	450mcd
19732230	red	230V AC	3mA AC	300mcd
19732235	green	230V AC	3mA AC	255mcd
19732232	yellow	230V AC	3mA AC	200mcd
19732237	blue	230V AC	3mA AC	75mcd
1973223W	white	230V AC	1,5mA AC	225mcd

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor flache Linse 130/230V AC mit Berührungsschutzhülse IP67 /
Standard bezel flat lens 130/230V AC with protection tube IP67





Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

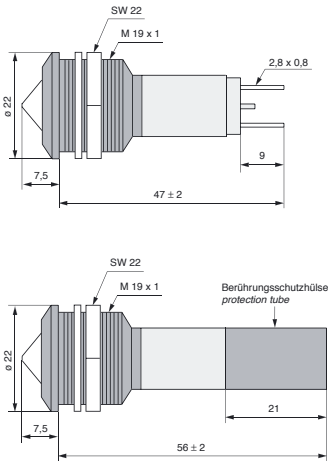
In general we supply the 130VAC and 230VAC versions with a protection tube.

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19740130	red	130V AC	6mA AC	600mcd
19740135	green	130V AC	6mA AC	510mcd
19740132	yellow	130V AC	6mA AC	400mcd
19740137	blue	130V AC	6mA AC	150mcd
1974013W	white	130V AC	3mA AC	450mcd
19740230	red	230V AC	3mA AC	300mcd
19740235	green	230V AC	3mA AC	255mcd
19740232	yellow	230V AC	3mA AC	200mcd
19740237	blue	230V AC	3mA AC	75mcd
1974023W	white	230V AC	1,5mA AC	225mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19741130	red	130V AC	6mA AC	600mcd
19741135	green	130V AC	6mA AC	510mcd
19741132	yellow	130V AC	6mA AC	400mcd
19741137	blue	130V AC	6mA AC	150mcd
1974113W	white	130V AC	3mA AC	450mcd
19741230	red	230V AC	3mA AC	300mcd
19741235	green	230V AC	3mA AC	255mcd
19741232	yellow	230V AC	3mA AC	200mcd
19741237	blue	230V AC	3mA AC	75mcd
1974123W	white	230V AC	1,5mA AC	225mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19742130	red	130V AC	6mA AC	600mcd
19742135	green	130V AC	6mA AC	510mcd
19742132	yellow	130V AC	6mA AC	400mcd
19742137	blue	130V AC	6mA AC	150mcd
1974213W	white	130V AC	3mA AC	450mcd
19742230	red	230V AC	3mA AC	300mcd
19742235	green	230V AC	3mA AC	255mcd
19742232	yellow	230V AC	3mA AC	200mcd
19742237	blue	230V AC	3mA AC	75mcd
1974223W	white	230V AC	1,5mA AC	225mcd

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor konische Linse 130/230V AC mit Berührungsschutzhülse IP67 / *Standard bezel conical lens 130/230V AC with protection tube IP67*



Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

In general we supply the 130VAC and 230VAC versions with a protection tube.

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
19750130	red	130V AC	6mA AC	600mcd
19750135	green	130V AC	6mA AC	510mcd
19750132	yellow	130V AC	6mA AC	400mcd
19750137	blue	130V AC	6mA AC	150mcd
1975013W	white	130V AC	3mA AC	450mcd
19750230	red	230V AC	3mA AC	300mcd
19750235	green	230V AC	3mA AC	255mcd
19750232	yellow	230V AC	3mA AC	200mcd
19750237	blue	230V AC	3mA AC	75mcd
1975023W	white	230V AC	1,5mA AC	225mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
19751130	red	130V AC	6mA AC	600mcd
19751135	green	130V AC	6mA AC	510mcd
19751132	yellow	130V AC	6mA AC	400mcd
19751137	blue	130V AC	6mA AC	150mcd
1975113W	white	130V AC	3mA AC	450mcd
19751230	red	230V AC	3mA AC	300mcd
19751235	green	230V AC	3mA AC	255mcd
19751232	yellow	230V AC	3mA AC	200mcd
19751237	blue	230V AC	3mA AC	75mcd
1975123W	white	230V AC	1,5mA AC	225mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
19752130	red	130V AC	6mA AC	600mcd
19752135	green	130V AC	6mA AC	510mcd
19752132	yellow	130V AC	6mA AC	400mcd
19752137	blue	130V AC	6mA AC	150mcd
1975213W	white	130V AC	3mA AC	450mcd
19752230	red	230V AC	3mA AC	300mcd
19752235	green	230V AC	3mA AC	255mcd
19752232	yellow	230V AC	3mA AC	200mcd
19752237	blue	230V AC	3mA AC	75mcd
1975223W	white	230V AC	1,5mA AC	225mcd

Maximale Frontplattenstärke 11mm / *Maximum panel thickness 11mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

LED Signalleuchten für den Einbaudurchmesser von 22mm (+0,5mm) sind mit verschiedenfarbigen, diffusen 16mm Linsen bestückt.

Zur Auswahl stehen zwei Linsenformen:
- runde Linse
- flache Linse

Sie sind mit hochglanzverchromten, schwarzverchromten oder mattverchromten Messingreflektoren sowie schwarzen Kunststoffreflektoren lieferbar. Der Anschluss erfolgt in der Regel über Flachstecker 2,8 x 0,8mm. Die entsprechenden Flachsteckhülsen finden Sie auf der Zubehör-Seite. Die Montage der LED Signalleuchten erfolgt mittels der mitgelieferten Sprengringe und Muttern.

Messingflachstecker = Anode (+)
verzinnter Flachstecker = Kathode (-)

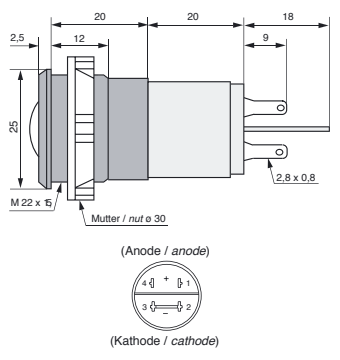
LED panel mount indicators for a 22mm (+0.5mm) mounting hole are manufactured with coloured diffused 16mm lenses.

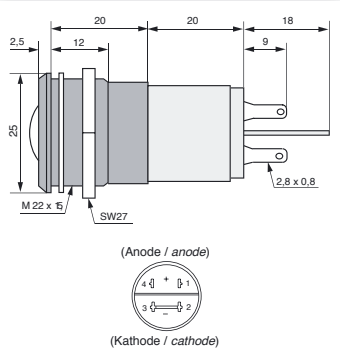
These indicators can be delivered with two different lens shapes:
- *round lens*
- *flat lens*

These lenses are fitted in high quality satin chrome, black chrome or matt chrome metal bezels or in black plastic bezels, supplied with fixing nut and washer. Connection is usually by faston tab terminals 2.8 x 0.8mm. Suitable crimp connectors can be found on the page for accessories.

Brass terminals = anode (+)
Tinned terminals = cathode (-)

Standardreflektor runde Linse mit Vorwiderstand und Brückengleichrichter IP67 / *Standard bezel round lens with resistor and bridge rectifier IP67*





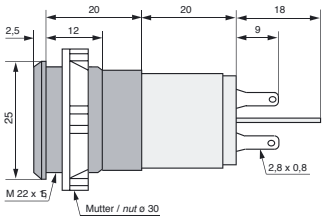
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
195A1250UC	red	12V AC/DC	16mA AC/DC	160mcd
195A1251UC	green	12V AC/DC	16mA AC/DC	400mcd
195A1252UC	yellow	12V AC/DC	16mA AC/DC	350mcd
195A1257UC	blue	12V AC/DC	16mA AC/DC	280mcd
195A125WUC	white	12V AC/DC	7mA AC/DC	1050mcd
195A1350UC	red	24V AC/DC	16mA AC/DC	160mcd
195A1351UC	green	24V AC/DC	16mA AC/DC	400mcd
195A1352UC	yellow	24V AC/DC	16mA AC/DC	350mcd
195A1357UC	blue	24V AC/DC	16mA AC/DC	280mcd
195A135WUC	white	24V AC/DC	8mA AC/DC	1200mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
195A0250MUC	red	12V AC/DC	16mA AC/DC	160mcd
195A0251MUC	green	12V AC/DC	16mA AC/DC	400mcd
195A0252MUC	yellow	12V AC/DC	16mA AC/DC	350mcd
195A0257MUC	blue	12V AC/DC	16mA AC/DC	280mcd
195A025WMUC	white	12V AC/DC	7mA AC/DC	1050mcd
195A0350MUC	red	24V AC/DC	16mA AC/DC	160mcd
195A0351MUC	green	24V AC/DC	16mA AC/DC	400mcd
195A0352MUC	yellow	24V AC/DC	16mA AC/DC	350mcd
195A0357MUC	blue	24V AC/DC	16mA AC/DC	280mcd
195A035WMUC	white	24V AC/DC	8mA AC/DC	1200mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
195A1250MUC	red	12V AC/DC	16mA AC/DC	160mcd
195A1251MUC	green	12V AC/DC	16mA AC/DC	400mcd
195A1252MUC	yellow	12V AC/DC	16mA AC/DC	350mcd
195A1257MUC	blue	12V AC/DC	16mA AC/DC	280mcd
195A125WMUC	white	12V AC/DC	7mA AC/DC	1050mcd
195A1350MUC	red	24V AC/DC	16mA AC/DC	160mcd
195A1351MUC	green	24V AC/DC	16mA AC/DC	400mcd
195A1352MUC	yellow	24V AC/DC	16mA AC/DC	350mcd
195A1357MUC	blue	24V AC/DC	16mA AC/DC	280mcd
195A135WMUC	white	24V AC/DC	8mA AC/DC	1200mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
195A2250MUC	red	12V AC/DC	16mA AC/DC	160mcd
195A2251MUC	green	12V AC/DC	16mA AC/DC	400mcd
195A2252MUC	yellow	12V AC/DC	16mA AC/DC	350mcd
195A2257MUC	blue	12V AC/DC	16mA AC/DC	280mcd
195A225WMUC	white	12V AC/DC	7mA AC/DC	1050mcd
195A2350MUC	red	24V AC/DC	16mA AC/DC	160mcd
195A2351MUC	green	24V AC/DC	16mA AC/DC	400mcd
195A2352MUC	yellow	24V AC/DC	16mA AC/DC	350mcd
195A2357MUC	blue	24V AC/DC	16mA AC/DC	280mcd
195A235WMUC	white	24V AC/DC	8mA AC/DC	1200mcd

Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor flache Linse mit Vorwiderstand und Brückengleichrichter IP67 / *Standard bezel flat lens with resistor and bridge rectifier IP67*

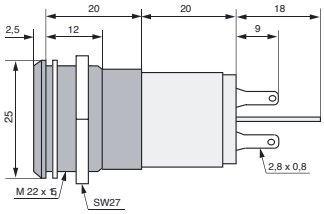
Kunststoffausführung / *version with black plastic bezel*



(Anode / *anode*)

(Kathode / *cathode*)

Metallausführung / *version with metal bezel*



(Anode / *anode*)

(Kathode / *cathode*)

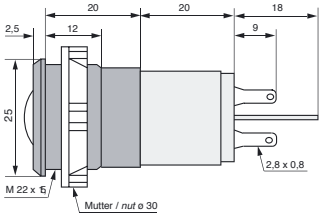
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
195B1250UC	red	12V AC/DC	16mA AC/DC	160mcd
195B1251UC	green	12V AC/DC	16mA AC/DC	400mcd
195B1252UC	yellow	12V AC/DC	16mA AC/DC	350mcd
195B1257UC	blue	12V AC/DC	16mA AC/DC	280mcd
195B125WUC	white	12V AC/DC	7mA AC/DC	1050mcd
195B1350UC	red	24V AC/DC	16mA AC/DC	160mcd
195B1351UC	green	24V AC/DC	16mA AC/DC	400mcd
195B1352UC	yellow	24V AC/DC	16mA AC/DC	350mcd
195B1357UC	blue	24V AC/DC	16mA AC/DC	280mcd
195B135WUC	white	24V AC/DC	8mA AC/DC	1200mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
195B0250MUC	red	12V AC/DC	16mA AC/DC	160mcd
195B0251MUC	green	12V AC/DC	16mA AC/DC	400mcd
195B0252MUC	yellow	12V AC/DC	16mA AC/DC	350mcd
195B0257MUC	blue	12V AC/DC	16mA AC/DC	280mcd
195B025WMUC	white	12V AC/DC	7mA AC/DC	1050mcd
195B0350MUC	red	24V AC/DC	16mA AC/DC	160mcd
195B0351MUC	green	24V AC/DC	16mA AC/DC	400mcd
195B0352MUC	yellow	24V AC/DC	16mA AC/DC	350mcd
195B0357MUC	blue	24V AC/DC	16mA AC/DC	280mcd
195B035WMUC	white	24V AC/DC	8mA AC/DC	1200mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
195B1250MUC	red	12V AC/DC	16mA AC/DC	160mcd
195B1251MUC	green	12V AC/DC	16mA AC/DC	400mcd
195B1252MUC	yellow	12V AC/DC	16mA AC/DC	350mcd
195B1257MUC	blue	12V AC/DC	16mA AC/DC	280mcd
195B125WMUC	white	12V AC/DC	7mA AC/DC	1050mcd
195B1350MUC	red	24V AC/DC	16mA AC/DC	160mcd
195B1351MUC	green	24V AC/DC	16mA AC/DC	400mcd
195B1352MUC	yellow	24V AC/DC	16mA AC/DC	350mcd
195B1357MUC	blue	24V AC/DC	16mA AC/DC	280mcd
195B135WMUC	white	24V AC/DC	8mA AC/DC	1200mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
195B2250MUC	red	12V AC/DC	16mA AC/DC	160mcd
195B2251MUC	green	12V AC/DC	16mA AC/DC	400mcd
195B2252MUC	yellow	12V AC/DC	16mA AC/DC	350mcd
195B2257MUC	blue	12V AC/DC	16mA AC/DC	280mcd
195B225WMUC	white	12V AC/DC	7mA AC/DC	1050mcd
195B2350MUC	red	24V AC/DC	16mA AC/DC	160mcd
195B2351MUC	green	24V AC/DC	16mA AC/DC	400mcd
195B2352MUC	yellow	24V AC/DC	16mA AC/DC	350mcd
195B2357MUC	blue	24V AC/DC	16mA AC/DC	280mcd
195B235WMUC	white	24V AC/DC	8mA AC/DC	1200mcd

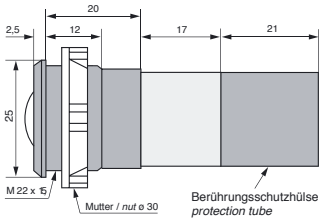
Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

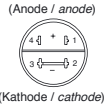
Standardreflektor runde Linse 130/230V AC mit Berührungsschutzhülse IP67 / *Standard bezel round lens 130/230V AC with protection tube IP67*

Kunststoffausführung / *version with black plastic bezel*





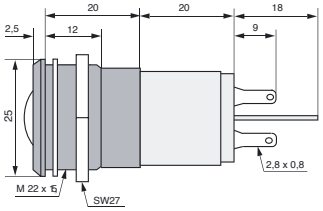
(Anode / *anode*)

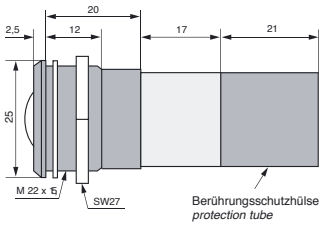


(Kathode / *cathode*)

Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.
In general we supply the 130VAC and 230VAC versions with a protection tube.

Metallausführung / *version with metal bezel*





(Anode / *anode*)

(Kathode / *cathode*)

Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.
In general we supply the 130VAC and 230VAC versions with a protection tube.

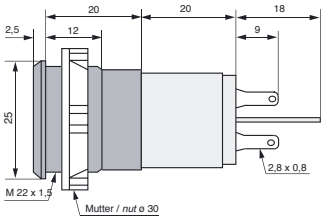
Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
195E1130	red	130V AC	6mA AC	60mcd
195E1131	green	130V AC	6mA AC	150mcd
195E1132	yellow	130V AC	6mA AC	130mcd
195E1137	blue	130V AC	6mA AC	100mcd
195E113W	white	130V AC	3mA AC	450mcd
195E1230	red	230V AC	4mA AC	40mcd
195E1231	green	230V AC	4mA AC	100mcd
195E1232	yellow	230V AC	4mA AC	85mcd
195E1237	blue	230V AC	4mA AC	70mcd
195E123W	white	230V AC	2mA AC	300mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
195E0130M	red	130V AC	6mA AC	60mcd
195E0131M	green	130V AC	6mA AC	150mcd
195E0132M	yellow	130V AC	6mA AC	130mcd
195E0137M	blue	130V AC	6mA AC	100mcd
195E013WM	white	130V AC	3mA AC	450mcd
195E0230M	red	230V AC	4mA AC	40mcd
195E0231M	green	230V AC	4mA AC	100mcd
195E0232M	yellow	230V AC	4mA AC	85mcd
195E0237M	blue	230V AC	4mA AC	70mcd
195E023WM	white	230V AC	2mA AC	300mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
195E1130M	red	130V AC	6mA AC	60mcd
195E1131M	green	130V AC	6mA AC	150mcd
195E1132M	yellow	130V AC	6mA AC	130mcd
195E1137M	blue	130V AC	6mA AC	100mcd
195E113WM	white	130V AC	3mA AC	450mcd
195E1230M	red	230V AC	4mA AC	40mcd
195E1231M	green	230V AC	4mA AC	100mcd
195E1232M	yellow	230V AC	4mA AC	85mcd
195E1237M	blue	230V AC	4mA AC	70mcd
195E123WM	white	230V AC	2mA AC	300mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
195E2130M	red	130V AC	6mA AC	60mcd
195E2131M	green	130V AC	6mA AC	150mcd
195E2132M	yellow	130V AC	6mA AC	130mcd
195E2137M	blue	130V AC	6mA AC	100mcd
195E213WM	white	130V AC	3mA AC	450mcd
195E2230M	red	230V AC	4mA AC	40mcd
195E2231M	green	230V AC	4mA AC	100mcd
195E2232M	yellow	230V AC	4mA AC	85mcd
195E2237M	blue	230V AC	4mA AC	70mcd
195E223WM	white	230V AC	2mA AC	300mcd

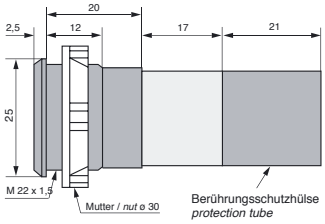
Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Standardreflektor flache Linse 130/230V AC mit Berührungsschutzhülse IP67 / *Standard bezel flat lens 130/230V AC with protection tube IP67*

Kunststoffausführung / *version with black plastic bezel*





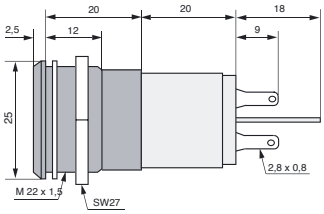
(Anode / *anode*)

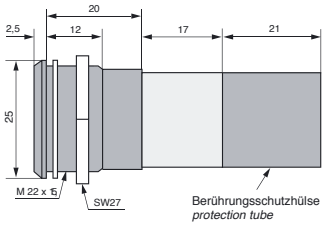
(Kathode / *cathode*)

Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

In general we supply the 130VAC and 230VAC versions with a protection tube.

Metallausführung / *version with metal bezel*





(Anode / *anode*)

(Kathode / *cathode*)

Die 130VAC und 230VAC Versionen werden grundsätzlich mit Berührungsschutzhülse geliefert.

In general we supply the 130VAC and 230VAC versions with a protection tube.

Part Number	Colour	Voltage	Typ. Current	Typ. Lumi. Intensity
Schwarzer Kunststoffreflektor / *Black plastic bezel*				
195F1130	red	130V AC	6mA AC	60mcd
195F1131	green	130V AC	6mA AC	150mcd
195F1132	yellow	130V AC	6mA AC	130mcd
195F1137	blue	130V AC	6mA AC	100mcd
195F113W	white	130V AC	3mA AC	450mcd
195F1230	red	230V AC	4mA AC	40mcd
195F1231	green	230V AC	4mA AC	100mcd
195F1232	yellow	230V AC	4mA AC	85mcd
195F1237	blue	230V AC	4mA AC	70mcd
195F123W	white	230V AC	2mA AC	300mcd
Hochglanzverchromter Metallreflektor / *Satin chrome bezel*				
195F0130M	red	130V AC	6mA AC	60mcd
195F0131M	green	130V AC	6mA AC	150mcd
195F0132M	yellow	130V AC	6mA AC	130mcd
195F0137M	blue	130V AC	6mA AC	100mcd
195F013WM	white	130V AC	3mA AC	450mcd
195F0230M	red	230V AC	4mA AC	40mcd
195F0231M	green	230V AC	4mA AC	100mcd
195F0232M	yellow	230V AC	4mA AC	85mcd
195F0237M	blue	230V AC	4mA AC	70mcd
195F023WM	white	230V AC	2mA AC	300mcd
Schwarzverchromter Metallreflektor / *Black chrome bezel*				
195F1130M	red	130V AC	6mA AC	60mcd
195F1131M	green	130V AC	6mA AC	150mcd
195F1132M	yellow	130V AC	6mA AC	130mcd
195F1137M	blue	130V AC	6mA AC	100mcd
195F113WM	white	130V AC	3mA AC	450mcd
195F1230M	red	230V AC	4mA AC	40mcd
195F1231M	green	230V AC	4mA AC	100mcd
195F1232M	yellow	230V AC	4mA AC	85mcd
195F1237M	blue	230V AC	4mA AC	70mcd
195F123WM	white	230V AC	2mA AC	300mcd
Mattverchromter Metallreflektor / *Matt chrome bezel*				
195F2130M	red	130V AC	6mA AC	60mcd
195F2131M	green	130V AC	6mA AC	150mcd
195F2132M	yellow	130V AC	6mA AC	130mcd
195F2137M	blue	130V AC	6mA AC	100mcd
195F213WM	white	130V AC	3mA AC	450mcd
195F2230M	red	230V AC	4mA AC	40mcd
195F2231M	green	230V AC	4mA AC	100mcd
195F2232M	yellow	230V AC	4mA AC	85mcd
195F2237M	blue	230V AC	4mA AC	70mcd
195F223WM	white	230V AC	2mA AC	300mcd

Maximale Frontplattenstärke 8,5mm / *Maximum panel thickness 8.5mm*
Andere Spannungen auf Anfrage / *Other voltages on request*

LED Signalleuchten
LED Panel Mount Indicators

Flachsteckhülse 2,0 x 0,5mm für Drahtquerschnitt 0,2mm² - 0,5mm² /
Push-on connector 2.0 x 0.5mm for a wire size of 0.2mm² - 0.5mm²

Part Number				
40220040				

Flachsteckhülse 2,8 x 0,8mm für Drahtquerschnitt 0,2mm² - 0,5mm² /
Push-on connector 2.8 x 0.8mm for a wire size of 0.2mm² - 0.5mm²

Part Number				
40220044				

Isolierte Flachsteckhülse 2,0 x 0,5mm mit einer 300mm langen PVC-Anschlussleitung 0,5mm² /
Insulated push-on connector 2.0 x 0.5mm with 300mm long pvc insulated wire 0.5mm²

Part Number	Colour			
33103001	red			
33103002	black			

Isolierte Flachsteckhülse 2,8 x 0,8mm mit einer 300mm langen PVC-Anschlussleitung 0,5mm² /
Insulated push-on connector 2.8 x 0.8mm with 300mm long pvc insulated wire 0.5mm²

Part Number	Colour			
33203001	red			
33203002	black			

Trennsteg für 14mm und 19mm LED Signalleuchten /
Isolating spacer for 14mm and 19mm LED panel mount indicators

Part Number				
51003050				

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