

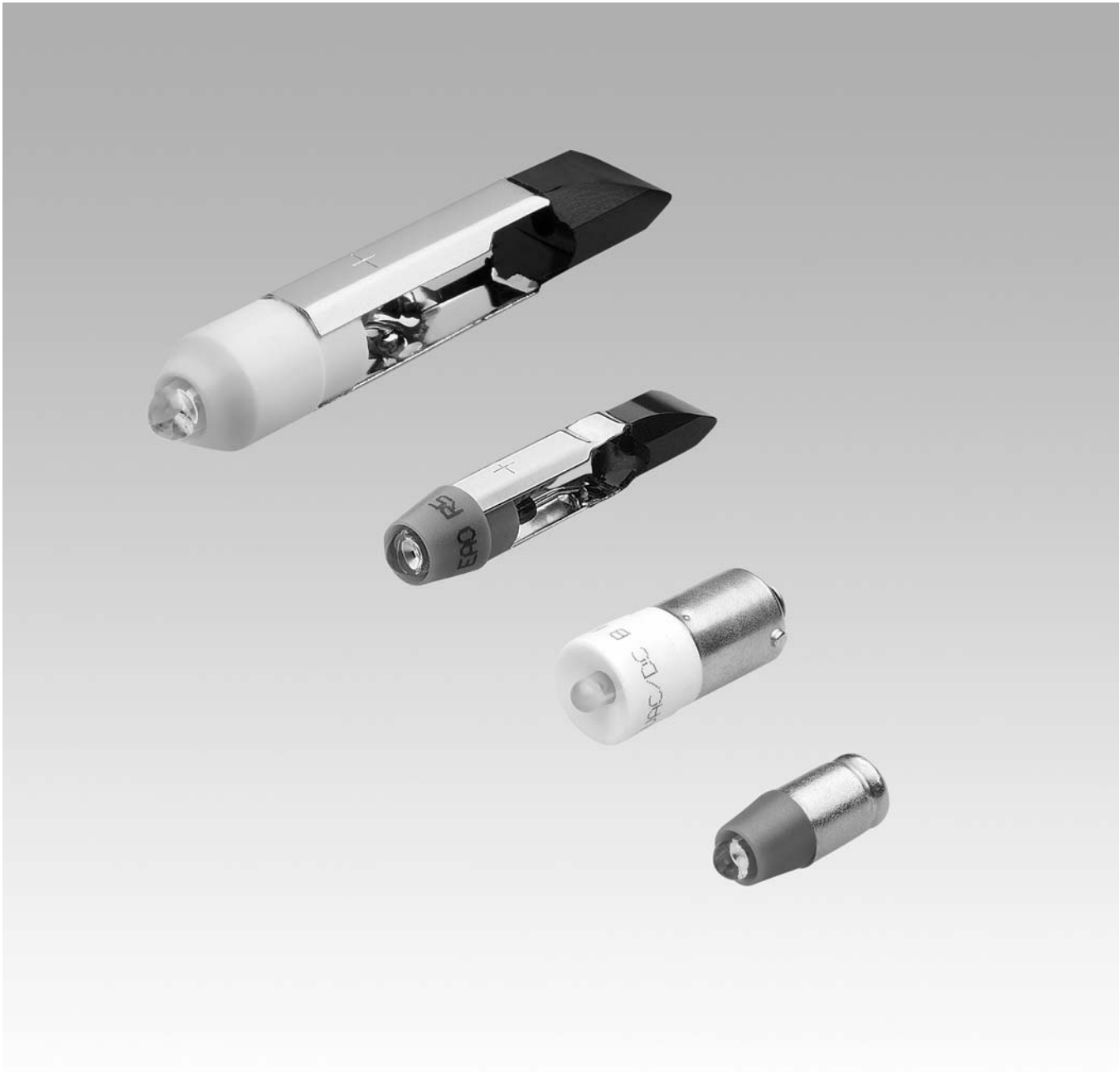
EAO – Your Expert Partner for  
**Human Machine Interfaces**



## EAO Product Information

Series 10 LED





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## Product Information

### General notes

The LEDs have decisive advantages:

1. Optimum of illumination
2. Low power consumption
3. Used on DC voltage and AC voltage
4. Low heat generation
5. Extrem long lifetime
6. Shock and vibration proof

### Design

The LEDs are built with an integrated resistor and they are available in three versions:

#### Without rectifier

Only for use on DC voltage. Please be aware of the polarity!

#### With half-wave rectifier

These LEDs are built with a protection diode in series with the resistor and the 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 round 25%.

#### With bridge rectifier

Can be used without any problems on a DC voltage and AC voltage with the same light output. Bipolarity on DC voltage!

### Illumination

Single-Chip LEDs in red, blue, green, yellow and white gives superb illumination and can be supplied in 6 VDC, 12, 24, 28, 48 VAC/DC, 130 VDC, 130 VAC and 230 VAC.

Due to production tolerances, colour temperature variations may be detected within individual consignments.

### Lamp remover

for T1 3/4 MG LED

Typ-Nr. 61-9740.0 (series 22, 31, 41, 51, 61, 71)

Typ-Nr. 300-0002-00 (series Swisstac)

for T5.5 LED

Typ-Nr. 02-906 (series 01, 14)

Typ-Nr. 300-0002-00 (series Swisstac)

for T6.8 LED

Typ-Nr. 03-996 (series 02, 03)

for T3 1/4 BA9s LED

Typ-Nr. 700.006.0 (series 04)

Typ-Nr. 44-935 (series 44)

### Used in series

T1 3/4 MG: 22, 31, 41, 51, 61, 71, Swisstac

T5.5: 01, 14, Swisstac

T6.8: 02, 03

T3 1/4 BA9s: 04, 44

*We reserve the right to modify technical data*

*All dimensions in mm*

## Single-LED T1 3/4 (6mm) MG



|                                   | Light colour       | Operating voltage/-current | Lumi. Intensity | Dom. Wavelength    | Version             | Typ-Nr.             | Component layout | Technical drawing |       |
|-----------------------------------|--------------------|----------------------------|-----------------|--------------------|---------------------|---------------------|------------------|-------------------|-------|
| <b>Single-LED T1 3/4 (6mm) MG</b> | blue               | 12 VAC/DC, 7/14 mA         | 650 mcd         | 470 nm             | HR                  | <b>10-2J09.1066</b> | 1                | 0.002             |       |
|                                   |                    | 24 VAC/DC, 7/14 mA         | 650 mcd         | 470 nm             | HR                  | <b>10-2J12.1066</b> | 1                | 0.002             |       |
|                                   |                    | 28 VAC/DC, 7/14 mA         | 650 mcd         | 470 nm             | HR                  | <b>10-2J13.1066</b> | 1                | 0.002             |       |
|                                   |                    | 48 VAC/DC, 4/8 mA          | 400 mcd         | 470 nm             | HR                  | <b>10-2J19.1046</b> | 1                | 0.002             |       |
|                                   |                    | 6 VDC, 15 mA               | 680 mcd         | 470 nm             | WR                  | <b>10-2J06.3146</b> | 1                | 0.002             |       |
|                                   | green              | 12 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm             | HR                  | <b>10-2J09.1065</b> | 1                | 0.002             |       |
|                                   |                    | 24 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm             | HR                  | <b>10-2J12.1065</b> | 1                | 0.002             |       |
|                                   |                    | 28 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm             | HR                  | <b>10-2J13.1065</b> | 1                | 0.002             |       |
|                                   |                    | 48 VAC/DC, 2/4 mA          | 600 mcd         | 525 nm             | HR                  | <b>10-2J19.1045</b> | 1                | 0.002             |       |
|                                   |                    | 6 VDC, 7 mA                | 1050 mcd        | 525 nm             | WR                  | <b>10-2J06.3145</b> | 1                | 0.002             |       |
|                                   | red                | 12 VAC/DC, 7/14 mA         | 330 mcd         | 630 nm             | HR                  | <b>10-2J09.1062</b> | 1                | 0.002             |       |
|                                   |                    | 24 VAC/DC, 7/14 mA         | 330 mcd         | 630 nm             | HR                  | <b>10-2J12.1062</b> | 1                | 0.002             |       |
|                                   |                    | 28 VAC/DC, 7/14 mA         | 330 mcd         | 630 nm             | HR                  | <b>10-2J13.1062</b> | 1                | 0.002             |       |
|                                   |                    | 48 VAC/DC, 4/8 mA          | 200 mcd         | 630 nm             | HR                  | <b>10-2J19.1042</b> | 1                | 0.002             |       |
|                                   |                    | 6 VDC, 15 mA               | 350 mcd         | 630 nm             | WR                  | <b>10-2J06.3142</b> | 1                | 0.002             |       |
|                                   | white diffuse      | 12 VAC/DC, 7/14 mA         | 700 mcd         | x=0.31 / y=0.32    | HR                  | <b>10-2J09.1069</b> | 1                | 1                 | 0.002 |
|                                   |                    | 24 VAC/DC, 7/14 mA         | 700 mcd         | x=0.31 / y=0.32    | HR                  | <b>10-2J12.1069</b> | 1                | 1                 | 0.002 |
|                                   |                    | 28 VAC/DC, 7/14 mA         | 700 mcd         | x=0.31 / y=0.32 nm | HR                  | <b>10-2J13.1069</b> | 1                | 1                 | 0.002 |
|                                   |                    | 48 VAC/DC, 4/8 mA          | 400 mcd         | x=0.31 / y=0.32    | HR                  | <b>10-2J19.1049</b> | 1                | 1                 | 0.002 |
|                                   |                    | 6 VDC, 15 mA               | 750 mcd         | x=0.31 / y=0.32    | WR                  | <b>10-2J06.3149</b> | 1                | 1                 | 0.002 |
| yellow                            | 12 VAC/DC, 7/14 mA | 280 mcd                    | 587 nm          | HR                 | <b>10-2J09.1064</b> | 1                   | 0.002            |                   |       |
|                                   | 24 VAC/DC, 7/14 mA | 280 mcd                    | 587 nm          | HR                 | <b>10-2J12.1064</b> | 1                   | 0.002            |                   |       |
|                                   | 28 VAC/DC, 7/14 mA | 280 mcd                    | 587 nm          | HR                 | <b>10-2J13.1064</b> | 1                   | 0.002            |                   |       |
|                                   | 48 VAC/DC, 4/8 mA  | 180 mcd                    | 587 nm          | HR                 | <b>10-2J19.1044</b> | 1                   | 0.002            |                   |       |
|                                   | 6 VDC, 15 mA       | 300 mcd                    | 587 nm          | WR                 | <b>10-2J06.3144</b> | 1                   | 0.002            |                   |       |

Electrical and optical data are measured at 25°C.

Luminous intensity data of the LEDs on direct voltage.

The specified versions are built with a protection diode in series and the LED.

A suitable lamp remover Part No. 61-9740.0 (Series Swisstac Part No. 300-0002-00).

Version: HR = With half-wave rectifier, WR = Without rectifier

Component layout from page 10, Technical drawing from page 10

## Single-LED T5.5



|                        | Light colour  | Operating voltage/-current | Lumi. Intensity | Dom. Wavelength | Version | Typ-Nr.             | Component layout | Technical drawing | 3D    |
|------------------------|---------------|----------------------------|-----------------|-----------------|---------|---------------------|------------------|-------------------|-------|
| <b>Single-LED T5.5</b> | blue          | 12 VAC/DC, 7/14 mA         | 650 mcd         | 470 nm          | HR      | <b>10-2109.1066</b> | 2                | 2                 | 0.001 |
|                        |               | 24 VAC/DC, 7/14 mA         | 650 mcd         | 470 nm          | HR      | <b>10-2112.1066</b> | 2                | 2                 | 0.001 |
|                        |               | 28 VAC/DC, 7/14 mA         | 650 mcd         | 470 nm          | HR      | <b>10-2113.1066</b> | 2                | 2                 | 0.001 |
|                        |               | 48 VAC/DC, 4/8 mA          | 400 mcd         | 470 nm          | HR      | <b>10-2119.1046</b> | 2                | 2                 | 0.001 |
|                        |               | 6 VDC, 15 mA               | 680 mcd         | 470 nm          | WR      | <b>10-2106.3146</b> | 2                | 2                 | 0.001 |
|                        | green         | 12 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm          | HR      | <b>10-2109.1065</b> | 2                | 2                 | 0.001 |
|                        |               | 24 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm          | HR      | <b>10-2112.1065</b> | 2                | 2                 | 0.001 |
|                        |               | 28 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm          | HR      | <b>10-2113.1065</b> | 2                | 2                 | 0.001 |
|                        |               | 48 VAC/DC, 2/4 mA          | 600 mcd         | 525 nm          | HR      | <b>10-2119.1045</b> | 2                | 2                 | 0.001 |
|                        |               | 6 VDC, 7 mA                | 1050 mcd        | 525 nm          | WR      | <b>10-2106.3145</b> | 2                | 2                 | 0.001 |
|                        | red           | 12 VAC/DC, 7/14 mA         | 330 mcd         | 630 nm          | HR      | <b>10-2109.1062</b> | 2                | 2                 | 0.001 |
|                        |               | 24 VAC/DC, 7/14 mA         | 330 mcd         | 630 nm          | HR      | <b>10-2112.1062</b> | 2                | 2                 | 0.001 |
|                        |               | 28 VAC/DC, 7/14 mA         | 330 mcd         | 630 nm          | HR      | <b>10-2113.1062</b> | 2                | 2                 | 0.001 |
|                        |               | 48 VAC/DC, 4/8 mA          | 200 mcd         | 630 nm          | HR      | <b>10-2119.1042</b> | 2                | 2                 | 0.001 |
|                        |               | 6 VDC, 15 mA               | 350 mcd         | 630 nm          | WR      | <b>10-2106.3142</b> | 2                | 2                 | 0.001 |
|                        | white diffuse | 12 VAC/DC, 7/14 mA         | 700 mcd         | x=0.31 / y=0.32 | HR      | <b>10-2109.1069</b> | 1                | 2                 | 0.001 |
|                        |               | 24 VAC/DC, 7/14 mA         | 700 mcd         | x=0.31 / y=0.32 | HR      | <b>10-2112.1069</b> | 1                | 2                 | 0.001 |
|                        |               | 28 VAC/DC, 7/14 mA         | 700 mcd         | x=0.31 / y=0.32 | HR      | <b>10-2113.1069</b> | 1                | 2                 | 0.001 |
|                        |               | 48 VAC/DC, 4/8 mA          | 400 mcd         | x=0.31 / y=0.32 | HR      | <b>10-2119.1049</b> | 1                | 2                 | 0.001 |
|                        |               | 6 VDC, 15 mA               | 750 mcd         | x=0.31 / y=0.32 | WR      | <b>10-2106.3149</b> | 1                | 2                 | 0.001 |
|                        | yellow        | 12 VAC/DC, 7/14 mA         | 280 mcd         | 587 nm          | HR      | <b>10-2109.1064</b> | 2                | 2                 | 0.001 |
|                        |               | 24 VAC/DC, 7/14 mA         | 280 mcd         | 587 nm          | HR      | <b>10-2112.1064</b> | 2                | 2                 | 0.001 |
|                        |               | 28 VAC/DC, 7/14 mA         | 280 mcd         | 587 nm          | HR      | <b>10-2113.1064</b> | 2                | 2                 | 0.001 |
|                        |               | 48 VAC/DC, 4/8 mA          | 180 mcd         | 587 nm          | HR      | <b>10-2119.1044</b> | 2                | 2                 | 0.001 |
|                        |               | 6 VDC, 15 mA               | 300 mcd         | 587 nm          | WR      | <b>10-2106.3144</b> | 2                | 2                 | 0.001 |

Electrical and optical data are measured at 25°C.

Luminous intensity data of the LEDs on direct voltage.

The specified versions are built with a protection diode in series and the LED.

A suitable lamp remover Part No. 02-906 (Series Swisstac Part No. 300-0002-00).

Version: HR = With half-wave rectifier, WR = Without rectifier

Component layout from page 10, Technical drawing from page 10

## Single-LED T6.8



|                        | Light colour       | Operating voltage/-current | Lumi. Intensity | Dom. Wavelength | Version             | Typ-Nr.             | Component layout | Technical drawing |       |
|------------------------|--------------------|----------------------------|-----------------|-----------------|---------------------|---------------------|------------------|-------------------|-------|
| <b>Single-LED T6.8</b> | blue               | 12 VAC/DC, 9/17 mA         | 780 mcd         | 470 nm          | HR                  | <b>10-2K09.1076</b> | 3                | 0.002             |       |
|                        |                    | 24 VAC/DC, 9/17 mA         | 780 mcd         | 470 nm          | HR                  | <b>10-2K12.1076</b> | 3                | 0.002             |       |
|                        |                    | 28 VAC/DC, 9/17 mA         | 780 mcd         | 470 nm          | HR                  | <b>10-2K13.1076</b> | 3                | 0.002             |       |
|                        |                    | 48 VAC/DC, 4/8 mA          | 400 mcd         | 470 nm          | HR                  | <b>10-2K19.1056</b> | 3                | 0.002             |       |
|                        |                    | 6 VDC, 17 mA               | 780 mcd         | 470 nm          | WR                  | <b>10-2K06.3156</b> | 3                | 0.002             |       |
|                        | green              | 12 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm          | HR                  | <b>10-2K09.1075</b> | 3                | 0.002             |       |
|                        |                    | 24 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm          | HR                  | <b>10-2K12.1075</b> | 3                | 0.002             |       |
|                        |                    | 28 VAC/DC, 4/7 mA          | 1050 mcd        | 525 nm          | HR                  | <b>10-2K13.1075</b> | 3                | 0.002             |       |
|                        |                    | 48 VAC/DC, 2/4 mA          | 600 mcd         | 525 nm          | HR                  | <b>10-2K19.1055</b> | 3                | 0.002             |       |
|                        |                    | 6 VDC, 7 mA                | 1050 mcd        | 525 nm          | WR                  | <b>10-2K06.3155</b> | 3                | 0.002             |       |
|                        | red                | 12 VAC/DC, 9/17 mA         | 400 mcd         | 630 nm          | HR                  | <b>10-2K09.1072</b> | 3                | 0.002             |       |
|                        |                    | 24 VAC/DC, 9/17 mA         | 400 mcd         | 630 nm          | HR                  | <b>10-2K12.1072</b> | 3                | 0.002             |       |
|                        |                    | 28 VAC/DC, 9/17 mA         | 400 mcd         | 630 nm          | HR                  | <b>10-2K13.1072</b> | 3                | 0.002             |       |
|                        |                    | 48 VAC/DC, 4/8 mA          | 200 mcd         | 630 nm          | HR                  | <b>10-2K19.1052</b> | 3                | 0.002             |       |
|                        |                    | 6 VDC, 17 mA               | 400 mcd         | 630 nm          | WR                  | <b>10-2K06.3152</b> | 3                | 0.002             |       |
|                        | white diffuse      | 12 VAC/DC, 9/17 mA         | 850 mcd         | x=0.31 / y=0.32 | HR                  | <b>10-2K09.1079</b> | 1                | 3                 | 0.002 |
|                        |                    | 24 VAC/DC, 9/17 mA         | 850 mcd         | x=0.31 / y=0.32 | HR                  | <b>10-2K12.1079</b> | 1                | 3                 | 0.002 |
|                        |                    | 28 VAC/DC, 9/17 mA         | 850 mcd         | x=0.31 / y=0.32 | HR                  | <b>10-2K13.1079</b> | 1                | 3                 | 0.002 |
|                        |                    | 48 VAC/DC, 4/8 mA          | 400 mcd         | x=0.31 / y=0.32 | HR                  | <b>10-2K19.1059</b> | 1                | 3                 | 0.002 |
|                        |                    | 6 VDC, 17 mA               | 850 mcd         | x=0.31 / y=0.32 | WR                  | <b>10-2K06.3159</b> | 1                | 3                 | 0.002 |
| yellow                 | 12 VAC/DC, 9/17 mA | 340 mcd                    | 340 nm          | HR              | <b>10-2K09.1074</b> | 3                   | 0.002            |                   |       |
|                        | 24 VAC/DC, 9/17 mA | 340 mcd                    | 340 nm          | HR              | <b>10-2K12.1074</b> | 3                   | 0.002            |                   |       |
|                        | 28 VAC/DC, 9/17 mA | 340 mcd                    | 340 nm          | HR              | <b>10-2K13.1074</b> | 3                   | 0.002            |                   |       |
|                        | 48 VAC/DC, 4/8 mA  | 180 mcd                    | 340 nm          | HR              | <b>10-2K19.1054</b> | 3                   | 0.002            |                   |       |
|                        | 6 VDC, 17 mA       | 340 mcd                    | 340 nm          | WR              | <b>10-2K06.3154</b> | 3                   | 0.002            |                   |       |

Electrical and optical data are measured at 25°C.

Luminous intensity data of the LEDs on direct voltage.

The specified versions are built with a protection diode in series and the LED.

A suitable lamp remover Part No. 03-996.

Version: HR = With half-wave rectifier, WR = Without rectifier

Component layout from page 10, Technical drawing from page 10



## Single-LED T3 1/4 (10x25mm) BA9s



|   | Light colour  | Operating voltage/-current | Lumi. Intensity | Dom. Wavelength | Version             | Typ-Nr.             | Comp. layout | Techn. drawing | Fig.  |
|---|---------------|----------------------------|-----------------|-----------------|---------------------|---------------------|--------------|----------------|-------|
| <b>Single-LED T3 1/4 (10x25mm) BA9s</b> | blue          | 12 VAC/DC, 16 mA           | 720 mcd         | 470 nm          | BR                  | <b>10-2509.1146</b> | 4            | 0.002          |       |
|   |               | 130 VAC, 5 mA              | 230 mcd         | 470 nm          | BR                  | <b>10-2H24.2056</b> | 4            | 0.002          |       |
|   |               | 130 VDC, 3 mA              | 200 mcd         | 470 nm          | BR                  | <b>10-2524.3046</b> | 4            | 0.002          |       |
|   |               | 230 VAC, 3 mA              | 200 mcd         | 470 nm          | BR                  | <b>10-2H25.2046</b> | 4            | 0.002          |       |
|   |               | 24 VAC/DC, 15 mA           | 680 mcd         | 470 nm          | BR                  | <b>10-2512.1146</b> | 4            | 0.002          |       |
|   |               | 28 VAC/DC, 13 mA           | 590 mcd         | 470 nm          | BR                  | <b>10-2513.1146</b> | 4            | 0.002          |       |
|   |               | 48 VAC/DC, 8 mA            | 400 mcd         | 470 nm          | BR                  | <b>10-2519.1056</b> | 4            | 0.002          |       |
|   |               | 6 VDC, 17 mA               | 780 mcd         | 470 nm          | WR                  | <b>10-2506.1086</b> | 4            | 0.002          |       |
|   | green         | 12 VAC/DC, 7 mA            | 1050 mcd        | 525 nm          | BR                  | <b>10-2509.1145</b> | 4            | 0.002          |       |
|   |               | 130 VAC, 3 mA              | 450 mcd         | 525 nm          | BR                  | <b>10-2H24.2055</b> | 4            | 0.002          |       |
|   |               | 130 VDC, 2 mA              | 300 mcd         | 525 nm          | BR                  | <b>10-2524.3045</b> | 4            | 0.002          |       |
|   |               | 230 VAC, 2 mA              | 300 mcd         | 525 nm          | BR                  | <b>10-2H25.2045</b> | 4            | 0.002          |       |
|   |               | 24 VAC/DC, 7 mA            | 1050 mcd        | 525 nm          | BR                  | <b>10-2512.1145</b> | 4            | 0.002          |       |
|   |               | 28 VAC/DC, 7 mA            | 1050 mcd        | 525 nm          | BR                  | <b>10-2513.1145</b> | 4            | 0.002          |       |
|   |               | 48 VAC/DC, 4 mA            | 600 mcd         | 525 nm          | BR                  | <b>10-2519.1055</b> | 4            | 0.002          |       |
|   |               | 6 VDC, 7 mA                | 1050 mcd        | 525 nm          | WR                  | <b>10-2506.1085</b> | 4            | 0.002          |       |
|   | red           | 12 VAC/DC, 16 mA           | 390 mcd         | 630 nm          | BR                  | <b>10-2509.1142</b> | 4            | 0.002          |       |
|   |               | 130 VAC, 5 mA              | 180 mcd         | 630 nm          | BR                  | <b>10-2H24.2052</b> | 4            | 0.002          |       |
|   |               | 130 VDC, 3 mA              | 120 mcd         | 630 nm          | BR                  | <b>10-2524.3042</b> | 4            | 0.002          |       |
|   |               | 230 VAC, 3 mA              | 120 mcd         | 630 nm          | BR                  | <b>10-2H25.2042</b> | 4            | 0.002          |       |
|   |               | 24 VAC/DC, 15 mA           | 350 mcd         | 630 nm          | BR                  | <b>10-2512.1142</b> | 4            | 0.002          |       |
|   |               | 28 VAC/DC, 13 mA           | 300 mcd         | 630 nm          | BR                  | <b>10-2513.1142</b> | 4            | 0.002          |       |
|   |               | 48 VAC/DC, 8 mA            | 200 mcd         | 630 nm          | BR                  | <b>10-2519.1052</b> | 4            | 0.002          |       |
|   |               | 6 VDC, 17 mA               | 400 mcd         | 630 nm          | WR                  | <b>10-2506.1082</b> | 4            | 0.002          |       |
|   | white diffuse | 12 VAC/DC, 16 mA           | 800 mcd         | x=0.31 / y=0.32 | BR                  | <b>10-2509.1149</b> | 1            | 4              | 0.002 |
|   |               | 130 VAC, 5 mA              | 250 mcd         | x=0.31 / y=0.32 | BR                  | <b>10-2H24.2059</b> | 1            | 4              | 0.002 |
|   |               | 130 VDC, 3 mA              | 150 mcd         | x=0.31 / y=0.32 | BR                  | <b>10-2524.3049</b> | 1            | 4              | 0.002 |
|   |               | 230 VAC, 3 mA              | 150 mcd         | x=0.31 / y=0.32 | BR                  | <b>10-2H25.2049</b> | 1            | 4              | 0.002 |
|   |               | 24 VAC/DC, 15 mA           | 750 mcd         | x=0.31 / y=0.32 | BR                  | <b>10-2512.1149</b> | 1            | 4              | 0.002 |
|   |               | 28 VAC/DC, 13 mA           | 650 mcd         | x=0.31 / y=0.32 | BR                  | <b>10-2513.1149</b> | 1            | 4              | 0.002 |
|   |               | 48 VAC/DC, 8 mA            | 400 mcd         | x=0.31 / y=0.32 | BR                  | <b>10-2519.1059</b> | 1            | 4              | 0.002 |
|   |               | 6 VDC, 17 mA               | 850 mcd         | x=0.31 / y=0.32 | WR                  | <b>10-2506.1089</b> | 1            | 4              | 0.002 |
|   | yellow        | 12 VAC/DC, 16 mA           | 340 mcd         | 587 nm          | BR                  | <b>10-2509.1144</b> | 4            | 0.002          |       |
|   |               | 130 VAC, 5 mA              | 160 mcd         | 587 nm          | BR                  | <b>10-2H24.2054</b> | 4            | 0.002          |       |
|   |               | 130 VDC, 3 mA              | 110 mcd         | 587 nm          | BR                  | <b>10-2524.3044</b> | 4            | 0.002          |       |
|   |               | 230 VAC, 3 mA              | 110 mcd         | 587 nm          | BR                  | <b>10-2H25.2044</b> | 4            | 0.002          |       |
| 24 VAC/DC, 15 mA                        |               | 300 mcd                    | 587 nm          | BR              | <b>10-2512.1144</b> | 4                   | 0.002        |                |       |
| 28 VAC/DC, 13 mA                        |               | 270 mcd                    | 587 nm          | BR              | <b>10-2513.1144</b> | 4                   | 0.002        |                |       |
| 48 VAC/DC, 8 mA                         |               | 180 mcd                    | 587 nm          | BR              | <b>10-2519.1054</b> | 4                   | 0.002        |                |       |
| 6 VDC, 17 mA                            |               | 340 mcd                    | 587 nm          | WR              | <b>10-2506.1084</b> | 4                   | 0.002        |                |       |

Electrical and optical data are measured at 25°C.

Luminous intensity data of the LEDs on direct voltage.

The specified 6 VDC, 130 VAC, 130 DC und 230 VAC versions are built with a protection diode.

The specified 12, 24, 28, 48 VAC/DC versions are built with a bridge rectifier.

The specified 130 VAC types are developed to run on a supply voltage of 130 VAC only. An operation at a higher supply voltage using commercial lampholders with integrated resistors, is not approved.


A suitable lamp remover Part No. 700.006.0 (Series 44 Part No. 44-935).

Version: BR = With bridge rectifier, WR = Without rectifier

Component layout from page 10, Technical drawing from page 10

## Illumination

### Lamp remover for T1 3/4 MG LED


|                                | For series             | Typ-Nr.            |  kg |
|--------------------------------|------------------------|--------------------|--|
| Lamp remover for T1 3/4 MG LED | 22, 31, 41, 51, 61, 71 | <b>61-9740.0</b>   | 0.003  |
|                                | Swisstac               | <b>300-0002-00</b> | 0.003  |



#### CAUTION

A switching process might be released when replacing the LED!

### Lamp remover for T5.5 LED


|                           | For series | Typ-Nr.       |  kg |
|---------------------------|------------|---------------|--|
| Lamp remover for T5.5 LED | 01, 14     | <b>02-906</b> | 0.002  |



#### CAUTION

A switching process might be released when replacing the LED!

### Lamp remover for T6.8 LED


|                           | For series | Typ-Nr.       |  kg |
|---------------------------|------------|---------------|--|
| Lamp remover for T6.8 LED | 02, 03     | <b>03-996</b> | 0.027  |



#### CAUTION

A switching process might be released when replacing the LED!

### Lamp remover for T3 1/4 BA9s LED

|                                  | For series | Typ-Nr.          |  kg |
|----------------------------------|------------|------------------|--|
| Lamp remover for T3 1/4 BA9s LED | 04         | <b>700.006.0</b> | 0.003  |
|                                  | 44         | <b>44-935</b>    | 0.037  |



#### CAUTION

A switching process might be released when replacing the LED!

## Technical Data

### Electrical characteristics

**Voltage tolerance**  
+10 %

### Mechanical characteristics

#### Standards

Lamp base

|           |                       |
|-----------|-----------------------|
| Base      | Standard              |
| T1 3/4 MG | DIN EN 60061-1: S5,7s |
| T5.5      | DIN 49601             |
| T6.8      | DIN 49601             |
| BA9s      | DIN EN 60061-1: BA9s  |

### Environmental conditions

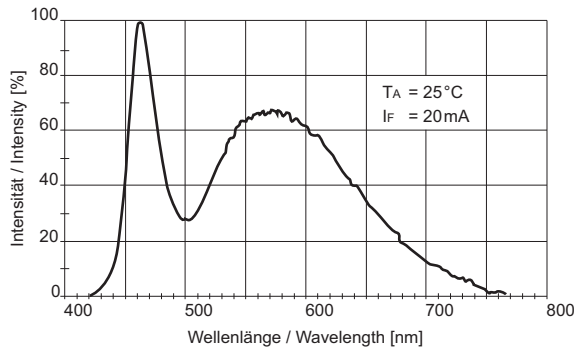
**Storage temperature**  
-25 °C ... +80 °C

**Service temperature**  
-20 °C ... +60 °C

## Component layout

1 Single-LED T1 3/4 (6mm) MG page 4 | Single-LED T5.5 page 5 | Single-LED T6.8 page 6 | Single-LED T3 1/4 (10x25mm) BA9s page 7

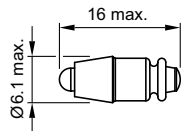
Typical luminous spectrum  
for white LED



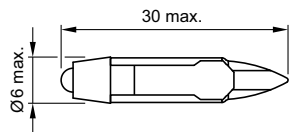
Colour coordinates  $I_F = 20\text{mA}$ ;  $T_A = 25^\circ\text{C}$   
 $x = 0.31 \pm 0.06$      $y = 0.32 \pm 0.08$

## Technical drawing

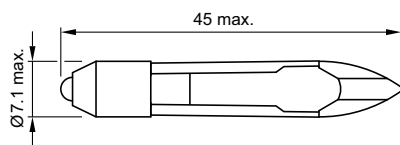
1 Single-LED T1 3/4 (6mm) MG page 4



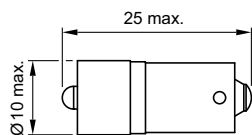
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| 10-2106.3146 | 5    | 10-2J06.3144 | 4    |         |      |
| 10-2106.3149 | 5    | 10-2J06.3145 | 4    |         |      |
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| 10-2109.1064 | 5    | 10-2J06.3149 | 4    |         |      |
| 10-2109.1065 | 5    | 10-2J09.1062 | 4    |         |      |
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| 10-2113.1066 | 5    | 10-2J13.1064 | 4    |         |      |
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|                |   |
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