TRIDONIC

## Module SLA DC G2 50mm SNC

Module SLA essence

SLA DC G2 50mm 700lm SNC

SLA DC G2 50mm 1200lm SNC

**Product description**
_ Fits in most existing MR16 / GU10 halogen luminaires
_ Replacement of 50 W MR16 halogen lamps or 20 W HID lamp
_ Module with integrated heatsink and optics
_ Free choice of variable dimming and non-dimming LED drivers
_ Pre-wired for quick and easy installation
_ Eye-catching lens optic with mirrors halogen facettes
_ Long lifetime: L70B50 >50,000 h
_ 5 years guarantee (conditions at https://www.tridonic.com/en/int/services/manufacturer-guarantee-conditions)

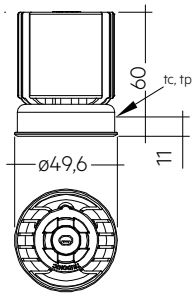
**Optical properties**
_ Colour temperatures 2,700, 3,000 and 4,000 K
_ Useful luminous flux 1,270 lm/W at Irated and tp = 75 °C
_ Efficacy of the LED module 104 lm/W at Irated and tp = 75 °C
_ Higher CRI, typical Ra = 92
_ Small colour tolerance (MacAdam 3)
_ Beam Angle: spot degree (12° / 24°) or downlight (36°)

**Mechanical properties**
_ Module dimension ø49.6 x 60 mm and ø49.6 x 70 mm
_ Mounting with mounting ring, see accessories

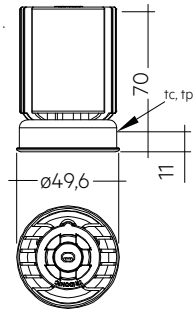
**Website**
http://www.tridonic.com/28001942

## Module SLA DC G2 50mm SNC

Module SLA essence




SLA DC G2 50mm 700lm SNC




SLA DC G2 50mm 1200lm SNC

### Ordering data

| Type | Article number | Colour temperature | Packaging | Weight per pc. |
|---|---|---|---|---|
| **SLA DC G2 50mm 700lm 927 24D SNC** | **28001942** | 2,700 K | 80 pc(s). | 0.090 kg |
| **SLA DC G2 50mm 700lm 927 36D SNC** | **28001943** | 2,700 K | 80 pc(s). | 0.090 kg |
| **SLA DC G2 50mm 700lm 930 24D SNC** | **28001944** | 3,000 K | 80 pc(s). | 0.090 kg |
| **SLA DC G2 50mm 700lm 930 36D SNC** | **28001945** | 3,000 K | 80 pc(s). | 0.090 kg |
| **SLA DC G2 50mm 700lm 940 24D SNC** | **28001946** | 4,000 K | 80 pc(s). | 0.090 kg |
| **SLA DC G2 50mm 700lm 940 36D SNC** | **28001947** | 4,000 K | 80 pc(s). | 0.090 kg |
| **SLA DC G2 50mm 1200lm 927 12D SNC** | **28002835** | 2,700 K | 80 pc(s). | 0.101 kg |
| **SLA DC G2 50mm 1200lm 927 24D SNC** | **28001950** | 2,700 K | 80 pc(s). | 0.101 kg |
| **SLA DC G2 50mm 1200lm 927 36D SNC** | **28001951** | 2,700 K | 80 pc(s). | 0.101 kg |
| **SLA DC G2 50mm 1200lm 930 12D SNC** | **28002836** | 3,000 K | 80 pc(s). | 0.101 kg |
| **SLA DC G2 50mm 1200lm 930 24D SNC** | **28001952** | 3,000 K | 80 pc(s). | 0.101 kg |
| **SLA DC G2 50mm 1200lm 930 36D SNC** | **28001953** | 3,000 K | 80 pc(s). | 0.101 kg |
| **SLA DC G2 50mm 1200lm 940 12D SNC** | **28002837** | 4,000 K | 80 pc(s). | 0.101 kg |
| **SLA DC G2 50mm 1200lm 940 24D SNC** | **28001954** | 4,000 K | 80 pc(s). | 0.101 kg |
| **SLA DC G2 50mm 1200lm 940 36D SNC** | **28001955** | 4,000 K | 80 pc(s). | 0.101 kg |

## Technical data

| | |
|---|---|
| Ambient temperature ta | -20 … +40 °C |
| tp rated for SLA DC 700lm | 60 °C |
| tp rated for SLA DC 1200lm | 75 °C |
| tc for SLA DC 700lm | 75 °C |
| tc for SLA DC 1200lm | 90 °C |
| Irated for SLA DC 700lm | 250 mA |
| Irated for SLA DC 1200lm | 350 mA |
| Imax for SLA DC 700lm | 300 mA |
| Imax for SLA DC 1200lm | 380 mA |
| Max. perm. LF current ripple for SLA DC 700lm | 900 mA |
| Max. perm. LF current ripple for SLA DC 1200lm | 1,030 mA |
| Max. permissible peak current for SLA DC 700lm | 1,260 mA / max. 10 ms |
| Max. permissible peak current for SLA DC 1200lm | 1,450 mA / max. 10 ms |
| Max. working voltage for insulation | 60 V |
| Insulation test voltage | 0.5 kV |
| ESD classification of LED module | Severity level 2 |
| Colour tolerance | 3 SDCM |
| Risk group (IEC 62471) | RG1 |
| Type of protection | IP20 |
| Lumen maintenance L70B50 | 50,000 h |
| Guarantee (conditions at www.tridonic.com) | 5 Year(s) |

## Approval marks

RoHS

## Standards

EN 62031, EN 62471, EN 61547

## Specific technical data

| Type | Photometric code | Forward current | Usefull luminous flux at tp rated① | Peak luminous intensity② at tp rated | Beam characterist | Power consumption Pon at tp rated | Min. forward voltage at tc | Max. forward voltage at ta = -20 °C | Efficacy of the module at tp rated | Colour rendering index CRI |
|---|---|---|---|---|---|---|---|---|---|---|
| **SLA DC G2 50mm 700lm 927 24D SNC** | 927/359 | 250 mA | 770 lm | 2,920 cd | 24° | 8.8 W | 30.0 V | 40.0 V | 88 lm/W | > 90 |
| **SLA DC G2 50mm 700lm 927 36D SNC** | 927/359 | 250 mA | 770 lm | 1,540 cd | 36° | 8.8 W | 30.0 V | 40.0 V | 88 lm/W | > 90 |
| **SLA DC G2 50mm 700lm 930 24D SNC** | 930/359 | 250 mA | 840 lm | 3,192 cd | 24° | 8.8 W | 30.0 V | 40.0 V | 95 lm/W | > 90 |
| **SLA DC G2 50mm 700lm 930 36D SNC** | 930/359 | 250 mA | 840 lm | 1,680 cd | 36° | 8.8 W | 30.0 V | 40.0 V | 95 lm/W | > 90 |
| **SLA DC G2 50mm 700lm 940 24D SNC** | 940/359 | 250 mA | 890 lm | 3,382 cd | 24° | 8.8 W | 30.0 V | 40.0 V | 101 lm/W | > 90 |
| **SLA DC G2 50mm 700lm 940 36D SNC** | 940/359 | 250 mA | 890 lm | 1,780 cd | 36° | 8.8 W | 30.0 V | 40.0 V | 101 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 927 12D SNC** | 927/349 | 350 mA | 958 lm | 6,123 cd | 12° | 12.2 W | 32.4 V | 37.6 V | 79 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 927 24D SNC** | 927/349 | 350 mA | 1,140 lm | 4,300 cd | 24° | 12.2 W | 32.4 V | 37.6 V | 93 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 927 36D SNC** | 927/349 | 350 mA | 1,140 lm | 2,200 cd | 36° | 12.2 W | 32.4 V | 37.6 V | 93 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 930 12D SNC** | 930/349 | 350 mA | 962 lm | 5,885 cd | 12° | 12.2 W | 32.4 V | 37.6 V | 79 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 930 24D SNC** | 930/349 | 350 mA | 1,170 lm | 4,400 cd | 24° | 12.2 W | 32.4 V | 37.6 V | 96 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 930 36D SNC** | 930/349 | 350 mA | 1,170 lm | 2,300 cd | 36° | 12.2 W | 32.4 V | 37.6 V | 96 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 940 12D SNC** | 940/349 | 350 mA | 1,021 lm | 6,429 cd | 12° | 12.2 W | 32.4 V | 37.6 V | 84 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 940 24D SNC** | 940/349 | 350 mA | 1,270 lm | 4,000 cd | 24° | 12.2 W | 32.4 V | 37.6 V | 104 lm/W | > 90 |
| **SLA DC G2 50mm 1200lm 940 36D SNC** | 940/349 | 350 mA | 1,130 lm | 2,000 cd | 36° | 12.2 W | 32.4 V | 37.6 V | 93 lm/W | > 90 |

① Tolerance of useful light flux - 0 % / + 15 %. Measurement uncertainty ± 10 %.
② Tolerance of peak luminous intensitiy - 0 % / + 15 %. Measurement uncertainty ± 10 %.

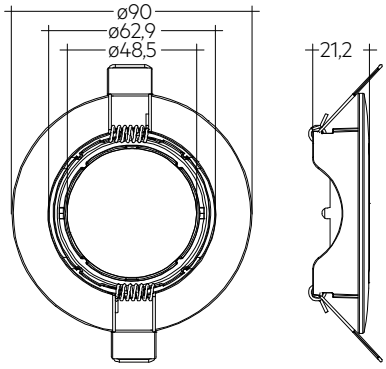
## ACS TRIM RING

Accessory

**Product description**

- Up to 30° swivel mounting rings for ceiling cutouts 68 mm and 75 mm
- Matt white / matt black / brushed nickel finishing
- Version 75 mm with anti-glare guard
- Spring clip pre-assembled

**Website**
http://www.tridonic.com/28002184




**Ordering data**

| Type | Article number | Colour | Ceiling cutout | Packaging, carton | Weight per pc. |
|---|---|---|---|---|---|
| **ACS TRIM RING SWIVEL 68mm WH 30°** | **28002184** | White | ø 68 mm | 90 pc(s). | 0.064 kg |
| **ACS TRIM RING SWIVEL 68mm BK 30°** | **28002185** | Black | ø 68 mm | 90 pc(s). | 0.064 kg |
| **ACS TRIM RING SWIVEL 68mm BN 30°** | **28002186** | Chrome | ø 68 mm | 90 pc(s). | 0.064 kg |
| **ACS TRIM RING SWIVEL 75mm WH 30°** | **28002187** | White | ø 75 mm | 90 pc(s). | 0.100 kg |
| **ACS TRIM RING SWIVEL 75mm BK 30°** | **28002188** | Black | ø 75 mm | 90 pc(s). | 0.100 kg |

## 1. Standards

EN 62031
EN 62471
EN 61547

### 1.1 Photometric code

Key for photometric code, e. g. 930 / 349

| 1st digit | | 2nd + 3rd digit | 4th digit | 5th digit | 6th digit | |
|---|---|---|---|---|---|---|
| Code | CRI | Colour temperature in Kelvin x 100 | MacAdam initial | MacAdam after 25% of the lifetime (max.6000h) | Luminous flux after 25% of the lifetime (max.6000h) | |
| | | | | | Code | Luminous flux |
| 7 | 70 – 79 | | | | 7 | ≥ 70 % |
| 8 | 80 – 89 | | | | 8 | ≥ 80 % |
| 9 | ≥90 | | | | 9 | ≥ 90 % |

### 1.2 Energy classification

| Type | Colour tempera-ture | Forward current | Energy classifi-cation | Energy consumption |
|---|---|---|---|---|
| **SLA DC G2 50mm 700lm** | | | | |
| SLA DC G2 50mm 700lm 927 24D SNC | 2,700 K | 250 mA | G | 9 kWh / 1,000 h |
| SLA DC G2 50mm 700lm 927 36D SNC | 2,700 K | 250 mA | G | 9 kWh / 1,000 h |
| SLA DC G2 50mm 700lm 930 24D SNC | 3,000 K | 250 mA | F | 9 kWh / 1,000 h |
| SLA DC G2 50mm 700lm 930 36D SNC | 3,000 K | 250 mA | F | 9 kWh / 1,000 h |
| SLA DC G2 50mm 700lm 940 24D SNC | 4,000 K | 250 mA | F | 9 kWh / 1,000 h |
| SLA DC G2 50mm 700lm 940 36D SNC | 4,000 K | 250 mA | F | 9 kWh / 1,000 h |
| **SLA DC G2 50mm 1200lm** | | | | |
| SLA DC G2 50mm 1200lm 927 12D SNC | 2,700 K | 350 mA | G | 13 kWh / 1,000 h |
| SLA DC G2 50mm 1200lm 927 24D SNC | 2,700 K | 350 mA | F | 13 kWh / 1,000 h |
| SLA DC G2 50mm 1200lm 927 36D SNC | 2,700 K | 350 mA | F | 13 kWh / 1,000 h |
| SLA DC G2 50mm 1200lm 930 12D SNC | 3,000 K | 350 mA | G | 13 kWh / 1,000 h |
| SLA DC G2 50mm 1200lm 930 24D SNC | 3,000 K | 350 mA | F | 13 kWh / 1,000 h |
| SLA DC G2 50mm 1200lm 930 36D SNC | 3,000 K | 350 mA | F | 13 kWh / 1,000 h |
| SLA DC G2 50mm 1200lm 940 12D SNC | 4,000 K | 350 mA | G | 13 kWh / 1,000 h |
| SLA DC G2 50mm 1200lm 940 24D SNC | 4,000 K | 350 mA | F | 13 kWh / 1,000 h |
| SLA DC G2 50mm 1200lm 940 36D SNC | 4,000 K | 350 mA | F | 13 kWh / 1,000 h |

Energy label and further information at www.tridonic.com in the certificates tab of the corresponding product page and at the EPREL data base https://eprel.ec.europa.eu/

## 2. Thermal details

### 2.1 tp point, ambient temperature and lifetime

The temperature at tp reference point is crucial for the light output and lifetime of a LED product.

For SLA DC G2 700lm a tp temperature of 60 °C and for SLA DC G2 1200lm a tp temperature of 75 °C has to be complied in order to achieve an optimum between light output and lifetime.

Compliance with the maximum permissible reference temperature at the tc point must be checked under operating conditions in a thermally stable state. The maximum value must be determined under worst-case conditions for the relevant application.

The tc and tp temperature of LED modules from Tridonic are measured at the same reference point.

### 2.2 Storage and humidity

| | |
|---|---|
| storage temperature | -30 ... +80 °C |

Operation only in non condensing environment.
Humidity during processing of the module should be < 85 %.

### 2.3 Thermal design and heat sink

The rated life of LED products depends to a large extent on the temperature. If the permissible temperature limits are exceeded, the life of the SLA will be greatly reduced or the SLA may be destroyed.

## 3. Installation / wiring

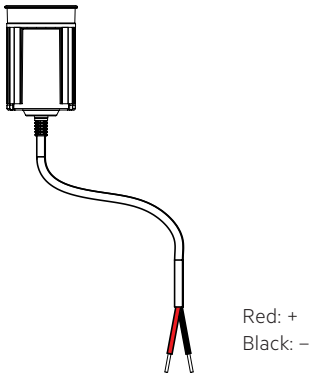
### 3.1 Electrical supply/choice of LED driver

SLA modules from Tridonic are not protected against overvoltages, overcurrents, overloads or short-circuit currents. Safe and reliable operation can only be guaranteed in conjunction with a LED driver which complies with the relevant standards. The use of LED drivers from Tridonic in combination with SLA modules guarantees the necessary protection for safe and reliable operation.

If a LED driver other than Tridonic is used, it must provide the following protection:
- Short-circuit protection
- Overload protection
- Overtemperature protection

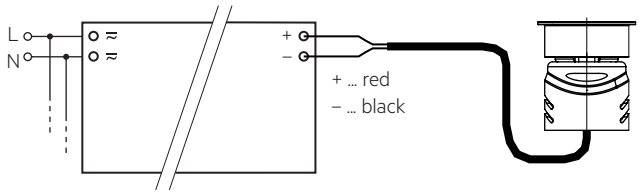
SLA modules must be supplied by a constant current LED driver. Operation with a constant voltage LED driver will lead to an irreversible damage of the module.
Wrong polarity can damage the SLA.

### 3.2 wiring



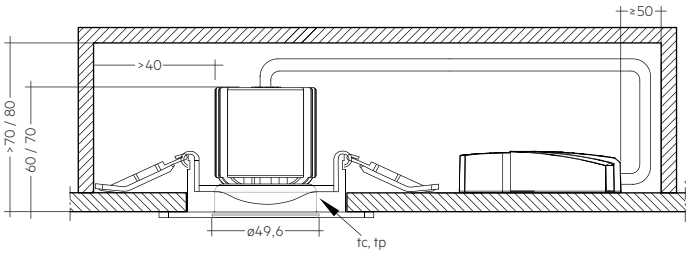

### 3.3 Wiring type and cross section

Cable type: VDE HO3VVH2-F 0.5 mm²
Cable length: 460 mm
Stripping length: 8 mm, pre-tinned




**LED Driver**

### 3.4 Mounting instruction




For mounting the SLA products it is necessary to have a assemble ring which is not provided.

Chemical substance may harm the LED module. Chemical reactions could lead to colour shift, reduced luminous flux or a total failure of the module caused by corrosion of electrical connections.

### 3.5 EOS/ESD safety guidelines

The device / module contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken. No special measures need be taken for devices/modules with enclosed casings (contact with the pc board not possible), just normal installation practice.
For further information for EOS/ESD safety guidlines and the ESD classification please refer to the brochure entitled http://www.tridonic.com/esd-protection.

## 4. Lifetime

### 4.1 Lifetime, lumen maintenance and failure rate

The light output of an LED module decreases over the lifetime, this is characterized with the L value. L70 means that the LED module will give 70 % of its initial luminous flux. This value is always related to the number of operation hours and therefore defines the lifetime of an LED module.

As the L value is a statistical value and the lumen maintenance may vary over the delivered LED modules. The B value defines the amount of modules which are below the specific L value, e.g. L70B10 means 10 % of the LED modules are below 70 % of the initial luminous flux, respectively 90 % will be above 70 % of the initial value.
n addition the percentage of failed modules (fatal failure) is characterized by the C value.

The F value is the combination of the B and C value. That means for F degradation and complete failures are considered, e.g. L70F10 means 10 % of the LED modules may fail or be below 70 % of the initial luminous flux.

### 4.2 Lumen maintenance

SLA DC 700lm:

| Forward current | tp temperature | L90B10 | L90B50 | L80B10 | L80B50 | L70B10 | L70B50 |
|---|---|---|---|---|---|---|---|
| 180 mA | 50 °C | 8,000 h | 14,000 h | 25,000 h | 31,000 h | 42,000 h | >50,000 h |
| | 65 °C | 8,000 h | 14,000 h | 25,000 h | 31,000 h | 42,000 h | >50,000 h |
| 250 mA | 60 °C | 8,000 h | 14,000 h | 25,000 h | 31,000 h | 42,000 h | >50,000 h |
| | 75 °C | 8,000 h | 13,000 h | 25,000 h | 31,000 h | 42,000 h | >50,000 h |

SLA DC 1200lm:

| Forward current | tp temperature | L90B10 | L90B50 | L80B10 | L80B50 | L70B10 | L70B50 |
|---|---|---|---|---|---|---|---|
| 250 mA | 55 °C | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| | 70 °C | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| 350 mA | 75 °C | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |
| | 90 °C | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h | >50,000 h |

## 5. Photometric characteristics

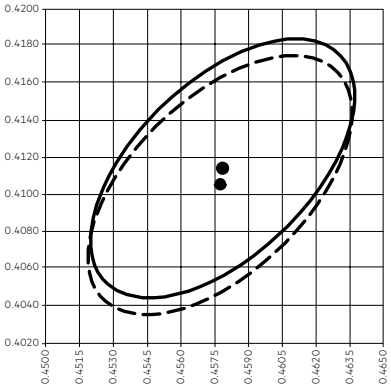
### 5.1 Coordinates and tolerances according to CIE 1931

The specified colour coordinates are measured integral in thermal saturated stage at tp rated.
The ambient temperature of the measurement is ta = 25 °C.
The measurement tolerance of the colour coordinates are ± 0.01.

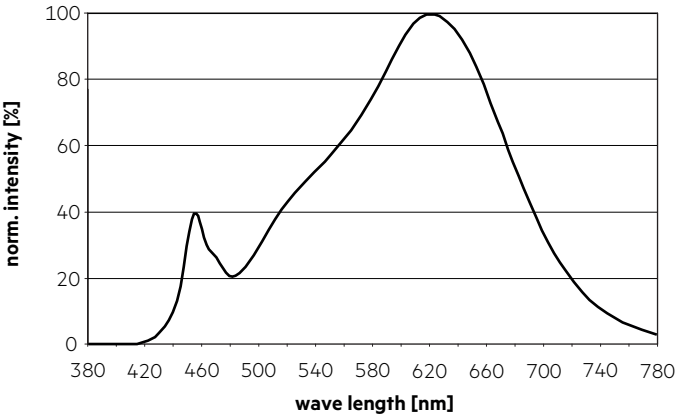
| Module type | Current impulse | tp rated |
|---|---|---|
| SLA DC G2 700lm | 250 mA | 60 °C |
| SLA DC G2 1200lm | 350 mA | 75 °C |

**2,700 K**

| | x0 | y0 | |
|---|---|---|---|
| Centre SLA DC G2 700lm | 0.4579 | 0.4114 | ——— |
| Centre SLA DC G2 1200lm | 0.4578 | 0.4105 | - - - - - - - - |

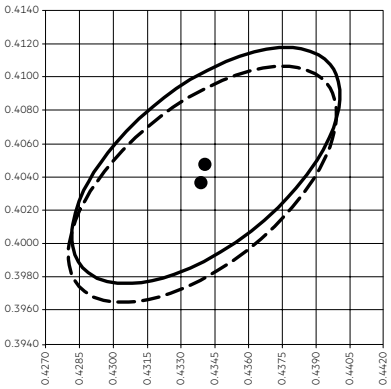



MacAdam ellipse: 3SDCM

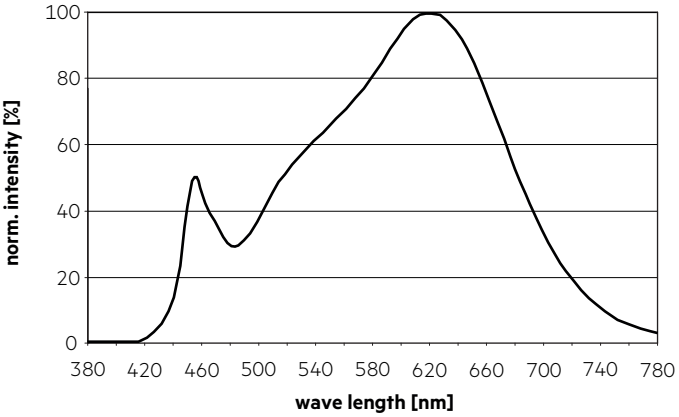



**3,000 K**

| | x0 | y0 | |
|---|---|---|---|
| Centre SLA DC G2 700lm | 0.4341 | 0.4047 | ——— |
| Centre SLA DC G2 1200lm | 0.4339 | 0.4036 | - - - - - - - - |

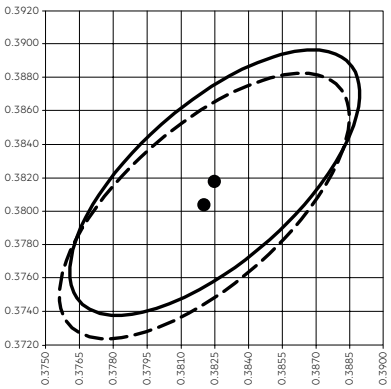



MacAdam ellipse: 3SDCM

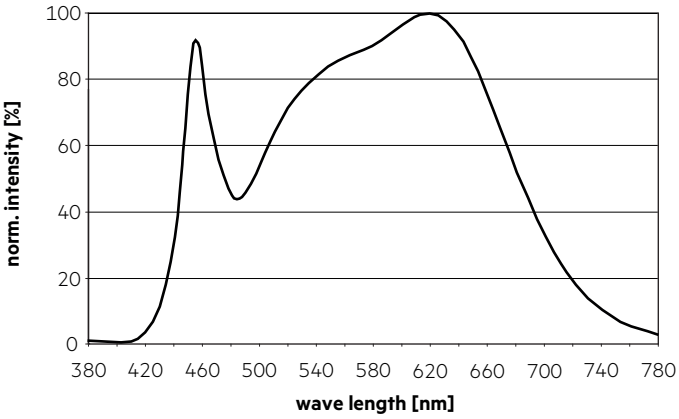


**4,000 K**

| | x0 | y0 | |
|---|---|---|---|
| Centre SLA DC G2 700lm | 0.3825 | 0.3817 | ——— |
| Centre SLA DC G2 1200lm | 0.3820 | 0.3804 | - - - - - |

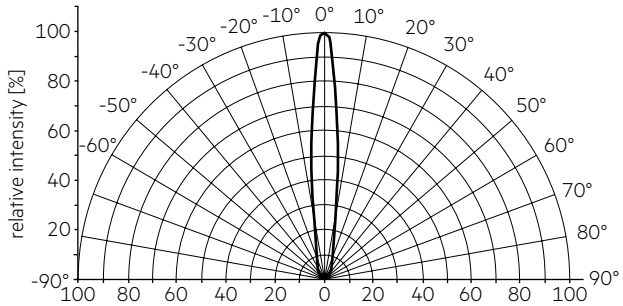



MacAdam ellipse: 3SDCM

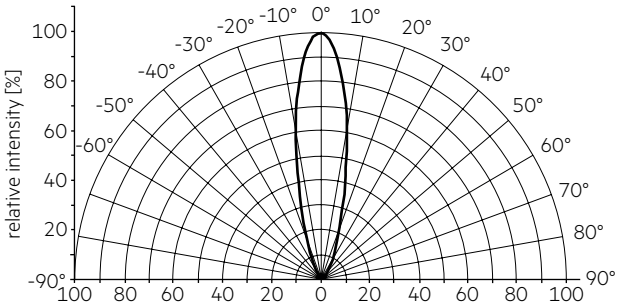



**5.2 Light distribution**

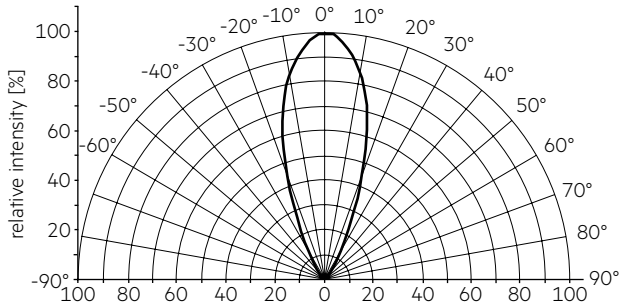
Light distribution for 12D




Light distribution for 24D

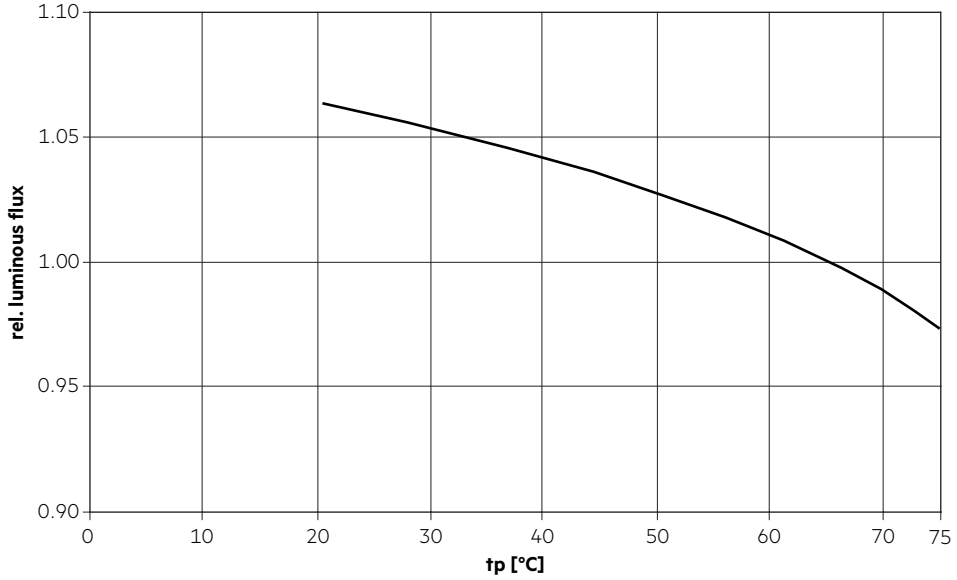



Light distribution for 36D

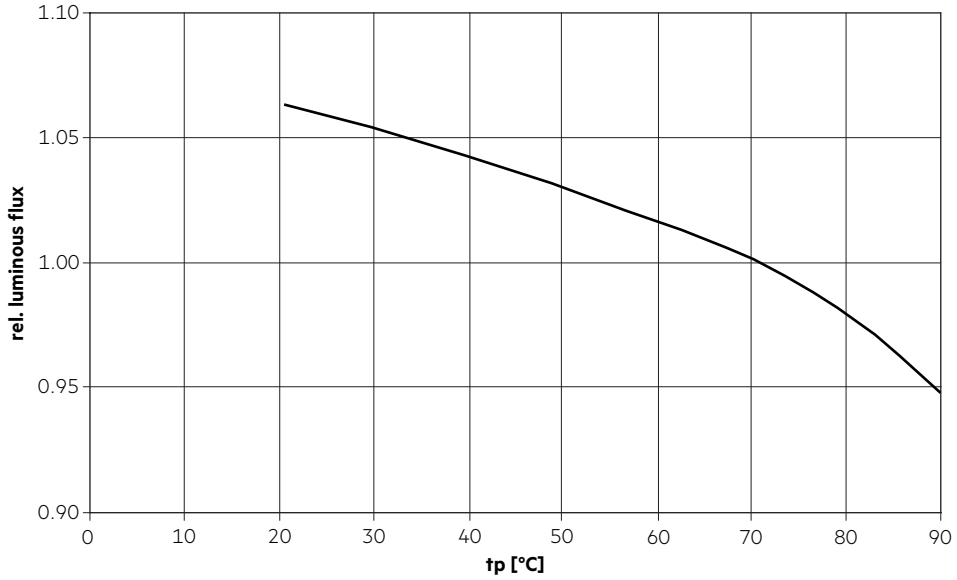


### 5.3 Relative luminous flux vs. tp temperature

SLA DC G2 50mm 700lm 9xx SNC




SLA DC G2 50mm 1200lm 9xx SNC




## 6. Miscellaneous

### 6.1 Additional information

Additional technical information at www.tridonic.com → Technical Data

Guarantee conditions at www.tridonic.com → Services

Lifetime declarations are informative and represent no warranty claim.