



Module DLA G2 system data sheet

Engine DLA G2

Product description

- LED replacement for downlight with compact fluorescent lamps
- Complete ready2apply solution comprising module, driver, reflector and trim ring
- Ripple current $\pm 5\%$ and UGR19 (specific model only) makes office installation possible
- Approved emergency solution with EM converterLED
- Optional reflector solution with 60° and 90°
- Nominal lifetime 50,000 h (L70/B50)
- 5 years guarantee (conditions at www.tridonic.com)

Optical properties

- Colour temperatures 3,000 K and 4,000 K
- Typ. luminous flux category: 1,000 / 2,000 / 3,000 lm
- High colour rendering index CRI > 80
- Small colour tolerance MacAdam 4

Mechanical properties

- Fit for ceiling cutout 100, 150 and 200 mm
- Tool-free assembly, simple as push and rotate
- Spring clip pre-assembled

System solution

- High system efficacy up to 111 lm/W

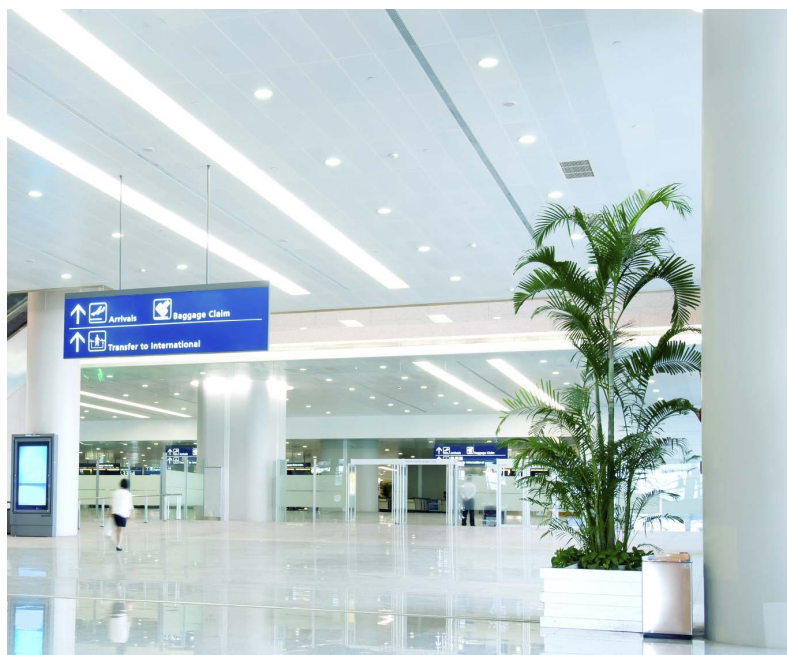


Standards, page 11 + 20

Colour temperatures and tolerances, page 15



DLA G2 100mm 1000lm 8xx SNC EM MOD +
DLA G2 100mm 1000lm 8x0 SNC EM ECG +
Reflector 90° +
Trim Ring





Module DLA G2 system data sheet

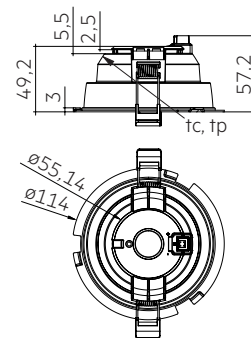
Engine DLA G2

Technical data

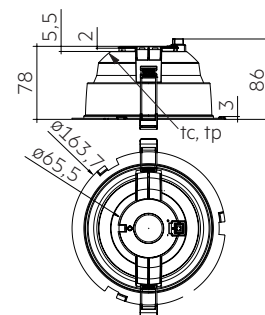
Beam characteristic	60° / 90° / 100°
Ambient temperature t_a	-20 ... +40 °C
tc temperature (100 mm, 1000lm) ^①	60 °C
tc temperature (150 mm, 1000lm) ^①	55 °C
tc temperature (150 mm, 2000lm) ^①	65 °C
tc temperature (200 mm, 2000lm) ^①	60 °C
tc temperature (200 mm, 3000lm) ^①	65 °C
ESD classification	severity level 2
Risk group (IEC 62471)	RG1
Type of protection	IP20
Lifetime	up to 50,000 h
Guarantee (conditions at www.tridonic.com)	5 years



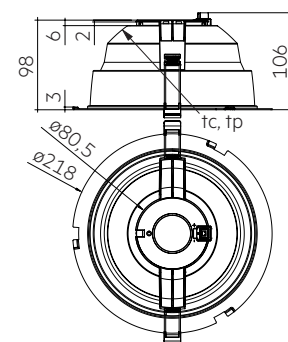
DLA G2 100mm 1000lm 8xx SNC



DLA G2 150mm 1000/2000lm 8xx SNC



DLA G2 200mm 2000/3000lm 8xx SNC



Ordering data

Type	Article number	Colour temperature	Packaging	Weight per pc.
DLA G2 100mm 1000lm 830 SNC EM MOD	28002241	3,000 K	42 pc(s).	0.107 kg
DLA G2 100mm 1000lm 840 SNC EM MOD	28002242	4,000 K	42 pc(s).	0.107 kg
DLA G2 150mm 1000/2000lm 830 SNC EM MOD	28002243	3,000 K	42 pc(s).	0.201 kg
DLA G2 150mm 1000/2000lm 840 SNC EM MOD	28002244	4,000 K	42 pc(s).	0.201 kg
DLA G2 200mm 2000/3000lm 830 SNC EM MOD	28002245	3,000 K	42 pc(s).	0.317 kg
DLA G2 200mm 2000/3000lm 840 SNC EM MOD	28002270	4,000 K	42 pc(s).	0.317 kg

Specific technical data

Combination	Photometric code	Typ. tp temperature	Useful luminous flux at tp = 50 °C ^②	Expected luminous flux at tp rated ^③	Typ. power at tp rated ^④	Luminous efficacy at tp	Beam angle	UGR	Colour rendering index CRI
Without reflector									
Module: DLA G2 100mm 1000lm 830 SNC EM MOD + Driver: DLA G2 100mm 1000lm 8x0 SNC EM ECG	830/4xx	45 °C	–	980 lm	10.2 W	96 lm/W	100°	25	80
Module: DLA G2 100mm 1000lm 840 SNC EM MOD + Driver: DLA G2 100mm 1000lm 8x0 SNC EM ECG	840/4xx	45 °C	–	1,030 lm	10.2 W	101 lm/W	100°	25	80
Module: DLA G2 150mm 1000/2000lm 830 SNC EM MOD + Driver: DLA G2 150mm 1000lm 8x0 ADV EM ECG	830/4xx	40 °C	–	1,000 lm	10.1 W	99 lm/W	100°	23	80
Module: DLA G2 150mm 1000/2000lm 830 SNC EM MOD + Driver: DLA G2 150mm 2000lm 8x0 SNC EM ECG	830/4xx	50 °C	–	1,970 lm	20.2 W	97 lm/W	100°	25	80
Module: DLA G2 150mm 1000/2000lm 840 SNC EM MOD + Driver: DLA G2 150mm 1000lm 8x0 ADV EM ECG	840/4xx	40 °C	–	1,020 lm	10.1 W	101 lm/W	100°	23	80
Module: DLA G2 150mm 1000/2000lm 840 SNC EM MOD + Driver: DLA G2 150mm 2000lm 8x0 SNC EM ECG	840/4xx	50 °C	–	2,050 lm	20.2 W	101 lm/W	100°	25	80
Module: DLA G2 200mm 2000/3000lm 830 SNC EM MOD + Driver: DLA G2 200mm 2000lm 8x0 ADV EM ECG	830/4xx	45 °C	–	2,080 lm	20.4 W	102 lm/W	100°	23	80
Module: DLA G2 200mm 2000/3000lm 830 SNC EM MOD + Driver: DLA G2 200mm 3000lm 8x0 SNC EM ECG	830/4xx	50 °C	–	2,900 lm	29.8 W	97 lm/W	100°	25	80
Module: DLA G2 200mm 2000/3000lm 840 SNC EM MOD + Driver: DLA G2 200mm 2000lm 8x0 ADV EM ECG	840/4xx	45 °C	–	2,120 lm	20.4 W	104 lm/W	100°	23	80
Module: DLA G2 200mm 2000/3000lm 840 SNC EM MOD + Driver: DLA G2 200mm 3000lm 8x0 SNC EM ECG	840/4xx	50 °C	–	3,000 lm	29.8 W	101 lm/W	100°	25	80
With 60° reflector									
Module: DLA G2 100mm 1000lm 830 SNC EM MOD + Driver: DLA G2 100mm 1000lm 8x0 SNC EM ECG	830/4xx	45 °C	–	1,060 lm	10.2 W	104 lm/W	60°	20	80
Module: DLA G2 100mm 1000lm 840 SNC EM MOD + Driver: DLA G2 100mm 1000lm 8x0 SNC EM ECG	840/4xx	45 °C	–	1,110 lm	10.2 W	109 lm/W	60°	20	80
Module: DLA G2 150mm 1000/2000lm 830 SNC EM MOD + Driver: DLA G2 150mm 1000lm 8x0 ADV EM ECG	830/4xx	40 °C	–	1,100 lm	10.1 W	109 lm/W	60°	16	80
Module: DLA G2 150mm 1000/2000lm 830 SNC EM MOD + Driver: DLA G2 150mm 2000lm 8x0 SNC EM ECG	830/4xx	50 °C	–	2,130 lm	20.2 W	105 lm/W	60°	19	80
Module: DLA G2 150mm 1000/2000lm 840 SNC EM MOD + Driver: DLA G2 150mm 1000lm 8x0 ADV EM ECG	840/4xx	40 °C	–	1,120 lm	10.1 W	111 lm/W	60°	16	80
Module: DLA G2 150mm 1000/2000lm 840 SNC EM MOD + Driver: DLA G2 150mm 2000lm 8x0 SNC EM ECG	840/4xx	50 °C	–	2,210 lm	20.2 W	109 lm/W	60°	19	80
Module: DLA G2 200mm 2000/3000lm 830 SNC EM MOD + Driver: DLA G2 200mm 2000lm 8x0 ADV EM ECG	830/4xx	45 °C	–	2,200 lm	20.4 W	108 lm/W	60°	17	80
Module: DLA G2 200mm 2000/3000lm 830 SNC EM MOD + Driver: DLA G2 200mm 3000lm 8x0 SNC EM ECG	830/4xx	50 °C	–	3,070 lm	29.8 W	103 lm/W	60°	18	80
Module: DLA G2 200mm 2000/3000lm 840 SNC EM MOD + Driver: DLA G2 200mm 2000lm 8x0 ADV EM ECG	840/4xx	45 °C	–	2,250 lm	20.4 W	110 lm/W	60°	17	80
Module: DLA G2 200mm 2000/3000lm 840 SNC EM MOD + Driver: DLA G2 200mm 3000lm 8x0 SNC EM ECG	840/4xx	50 °C	–	3,180 lm	29.8 W	107 lm/W	60°	18	80

① If the max. temperature limits are exceeded, the life of the system will be greatly reduced or the system may be damaged.
The temperature of the LED engine at the tp-point is to be measured in the thermally stable state with a temperature sensor or or temperature-sensitive sticker as per EN 60598-1. For the precise position of the tp point see the drawing on page 4.

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

③ Tolerance of expected light flux - 0 % / + 15 %. Measurement uncertainty ± 10 %. Based on calculation.

④ Tolerance of power consumption ± 10 %. Measurement uncertainty ± 5 %.

Specific technical data

Combination	Photometric code	Typ. tp temperature	Useful luminous flux at tp = 50 °C ^②	Expected luminous flux at tp rated ^③	Typ. power at tp rated ^④	Luminous efficacy at tp	Beam angle	UGR	Colour rendering index CRI
With 90° reflector									
Module: DLA G2 100mm 1000lm 830 SNC EM MOD + Driver: DLA G2 100mm 1000lm 8x0 SNC EM ECG	830/4xx	45 °C	667 lm	1,060 lm	10.2 W	104 lm/W	90°	23	80
Module: DLA G2 100mm 1000lm 840 SNC EM MOD + Driver: DLA G2 100mm 1000lm 8x0 SNC EM ECG	840/4xx	45 °C	723 lm	1,110 lm	10.2 W	109 lm/W	90°	23	80
Module: DLA G2 150mm 1000/2000lm 830 SNC EM MOD + Driver: DLA G2 150mm 1000lm 8x0 ADV EM ECG	830/4xx	40 °C	–	1,100 lm	10.1 W	109 lm/W	90°	20	80
Module: DLA G2 150mm 1000/2000lm 830 SNC EM MOD + Driver: DLA G2 150mm 2000lm 8x0 SNC EM ECG	830/4xx	50 °C	1,365 lm	2,130 lm	20.2 W	105 lm/W	90°	22	80
Module: DLA G2 150mm 1000/2000lm 840 SNC EM MOD + Driver: DLA G2 150mm 1000lm 8x0 ADV EM ECG	840/4xx	40 °C	–	1,120 lm	10.1 W	111 lm/W	90°	20	80
Module: DLA G2 150mm 1000/2000lm 840 SNC EM MOD + Driver: DLA G2 150mm 2000lm 8x0 SNC EM ECG	840/4xx	50 °C	1,419 lm	2,210 lm	20.2 W	109 lm/W	90°	22	80
Module: DLA G2 200mm 2000/3000lm 830 SNC EM MOD + Driver: DLA G2 200mm 2000lm 8x0 ADV EM ECG	830/4xx	45 °C	–	2,200 lm	20.4 W	108 lm/W	90°	20	80
Module: DLA G2 200mm 2000/3000lm 830 SNC EM MOD + Driver: DLA G2 200mm 3000lm 8x0 SNC EM ECG	830/4xx	50 °C	2,088 lm	3,070 lm	29.8 W	103 lm/W	90°	21	80
Module: DLA G2 200mm 2000/3000lm 840 SNC EM MOD + Driver: DLA G2 200mm 2000lm 8x0 ADV EM ECG	840/4xx	45 °C	–	2,250 lm	20.4 W	110 lm/W	90°	20	80
Module: DLA G2 200mm 2000/3000lm 840 SNC EM MOD + Driver: DLA G2 200mm 3000lm 8x0 SNC EM ECG	840/4xx	50 °C	2,154 lm	3,180 lm	29.8 W	107 lm/W	90°	21	80

① If the max. temperature limits are exceeded, the life of the system will be greatly reduced or the system may be damaged.

The temperature of the LED engine at the tp-point is to be measured in the thermally stable state with a temperature sensor or or temperature-sensitive sticker as per EN 60598-1. For the precise position of the tp point see the drawing on page 4.

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

③ Tolerance of expected light flux - 0 % / + 15 %. Measurement uncertainty ± 10 %. Based on calculation.

④ Tolerance of power consumption ± 10 %. Measurement uncertainty ± 5 %.

IP20 SELV      

Driver DLA G2 SNC

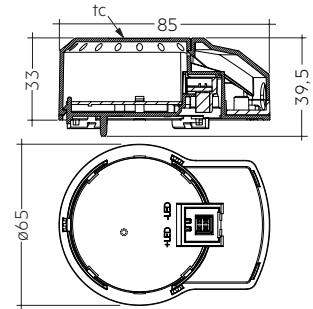
Engine DLA G2

Technical data

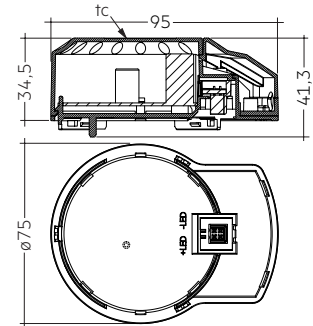
Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Mains frequency	50 / 60 Hz
Overvoltage protection	320 V AC, 1 h
Leakage current (at 230 V, 50 Hz, full load)	< 0.5 mA
THD (at 230 V, 50 Hz, full load)	< 15 %
Output current tolerance [®]	± 5 %
Typ. current ripple (at 230 V, 50 Hz, full load)	< 20 %
Starting time (at 230 V, 50 Hz, full load)	≤ 0.5 s
Hold on time at power failure (output)	0 s
Ambient temperature ta	-20 ... +40 °C
Ambient temperature ta (at lifetime 50,000 h)	40 °C
Storage temperature ts	-30 ... +80 °C



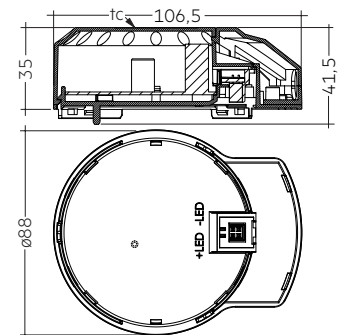
DLA G2 100mm 1000lm 8x0 SNC EM ECG



DLA G2 150mm 2000lm 8x0 SNC EM ECG



DLA G2 200mm 3000lm 8x0 SNC EM ECG



Ordering data

Type	Article number	Packaging, carton	Packaging, pallet	Weight per pc.
DLA G2 100mm 1000lm 8x0 SNC EM ECG	28002236	84 pc(s).	1,512 pc(s).	0.086 kg
DLA G2 150mm 2000lm 8x0 SNC EM ECG	28002238	84 pc(s).	1,260 pc(s).	0.120 kg
DLA G2 200mm 3000lm 8x0 SNC EM ECG	28002240	84 pc(s).	1,008 pc(s).	0.163 kg

Specific technical data

Type	Output current [®]	Input current (at 230 V, 50 Hz, full load)	Max. input power	Typ. power consumption (at 230 V, 50 Hz, full load)	Output power range	λ at full load [®]	Efficiency at full load [®]	λ at min. load [®]	Efficiency at min. load [®]	Max. output voltage	Max. output peak current at full load [®]	Max. output peak current at min. load [®]	Max. casing temperature tc
DLA G2 100mm 1000lm 8x0 SNC EM ECG	255 mA	0.047 A	11.0 W	10.2 W	8.0 – 9.3 W	0.95	85 %	0.90C	83 %	50 V	320 mA	320 mA	60 °C
DLA G2 150mm 2000lm 8x0 SNC EM ECG	530 mA	0.094 A	21.7 W	20.2 W	16.5 – 19.3 W	0.95	89 %	0.90C	87 %	50 V	667 mA	667 mA	60 °C
DLA G2 200mm 3000lm 8x0 SNC EM ECG	790 mA	0.136 A	32.0 W	29.8 W	24.6 – 28.8 W	0.95	90 %	0.90C	88 %	50 V	995 mA	995 mA	65 °C

[®] Test result at 230 V, 50 Hz.

[®] The trend between min. and full load is linear.

[®] Output current is mean value.

IP20 SELV        

Driver DLA G2 ADV

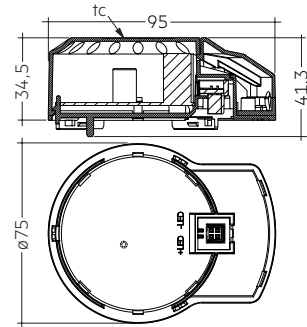
Engine DLA G2

Technical data

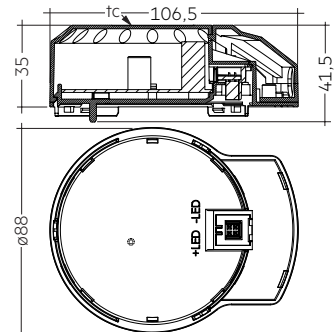
Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Mains frequency	50 / 60 Hz
Overvoltage protection	320 V AC, 1 h
Leakage current (at 230 V, 50 Hz, full load)	< 0.5 mA
THD (at 230 V, 50 Hz, full load)	< 15 %
Output current tolerance [®]	± 5 %
Typ. current ripple (at 230 V, 50 Hz, full load)	< 5 %
Output P_{StLM} (at full load)	≤ 1
Output SVM (at full load)	≤ 0.4
Starting time (at 230 V, 50 Hz, full load)	≤ 0.5 s
Hold on time at power failure (output)	0 s
Ambient temperature t_a	-20 ... +40 °C
Ambient temperature t_a (at lifetime 50,000 h)	40 °C
Storage temperature t_s	-30 ... +80 °C



DLA G2 150mm 1000lm 8x0 ADV EM ECG



DLA G2 200mm 2000lm 8x0 ADV EM ECG



Ordering data

Type	Article number	Packaging, carton	Packaging, palett	Weight per pc.
DLA G2 150mm 1000lm 8x0 ADV EM ECG	28002237	84 pc(s).	1,260 pc(s).	0.100 kg
DLA G2 200mm 2000lm 8x0 ADV EM ECG	28002239	84 pc(s).	1,008 pc(s).	0.135 kg

Specific technical data

Type	Output current [®]	Input current (at 230 V, 50 Hz, full load)	Max. input power	Typ. power consumption (at 230 V, 50 Hz, full load)	Output power range	λ at full load [®]	Efficiency at full load [®]	λ at min. load [®]	Efficiency at min. load [®]	Max. output voltage	Max. output peak current at full load [®]	Max. output peak current at min. load [®]	Max. casing temperature t_c
DLA G2 150mm 1000lm 8x0 ADV EM ECG	255 mA	0.046 A	10.5 W	10.1 W	7.3 – 8.7 W	0.95	83 %	0.90C	81 %	50 V	268 mA	268 mA	60 °C
DLA G2 200mm 2000lm 8x0 ADV EM ECG	530 mA	0.093 A	21.3 W	20.4 W	15.6 – 18.5 W	0.95	87 %	0.90C	85 %	50 V	557 mA	557 mA	60 °C

[®] Test result at 230 V, 50 Hz.

[®] The trend between min. and full load is linear.

[®] Output current is mean value.

ACD REFLECTOR G2

Product description

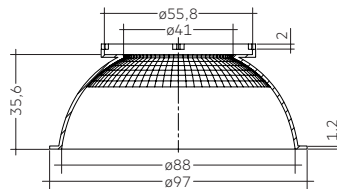
- Reflector for DLA G2 modules with 60° or 90°



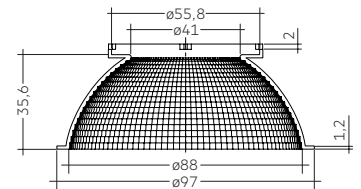
ACD REFLECTOR G2 150mm 60D



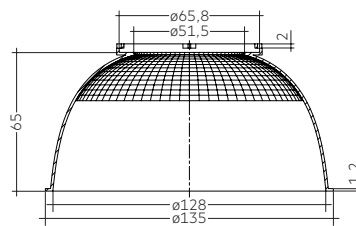
ACD REFLECTOR G2 150mm 90D



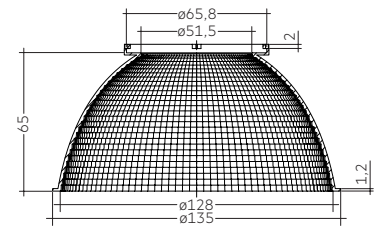
ACD REFLECTOR G2 100mm 60D



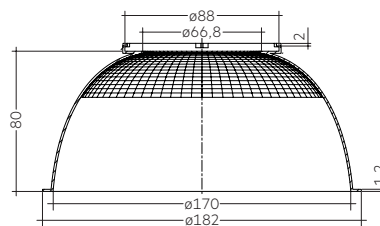
ACD REFLECTOR G2 100mm 90D



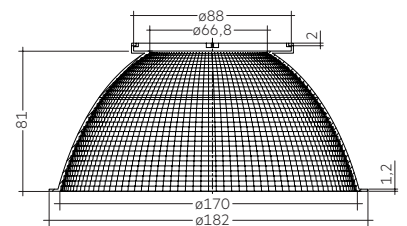
ACD REFLECTOR G2 150mm 60D



ACD REFLECTOR G2 150mm 90D



ACD REFLECTOR G2 200mm 60D



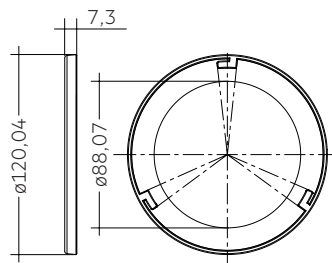
ACD REFLECTOR G2 200mm 90D

Ordering data

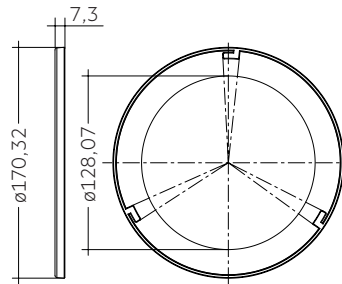
Type	Article number	Diameter	Packaging	Weight per pc.
ACD REFLECTOR G2 100mm 60D	28002190	100 mm	42 pc(s).	0.067 kg
ACD REFLECTOR G2 100mm 90D	28002191	100 mm	42 pc(s).	0.068 kg
ACD REFLECTOR G2 150mm 60D	28002192	150 mm	42 pc(s).	0.137 kg
ACD REFLECTOR G2 150mm 90D	28002193	150 mm	42 pc(s).	0.137 kg
ACD REFLECTOR G2 200mm 60D	28002194	200 mm	42 pc(s).	0.237 kg
ACD REFLECTOR G2 200mm 90D	28002195	200 mm	42 pc(s).	0.237 kg

Product description

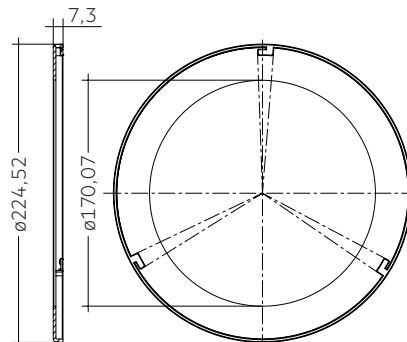
- Trim rings in 100, 150 and 200 mm diameter



ACD TRIM RING 100MM WHITE



ACD TRIM RING 150MM WHITE



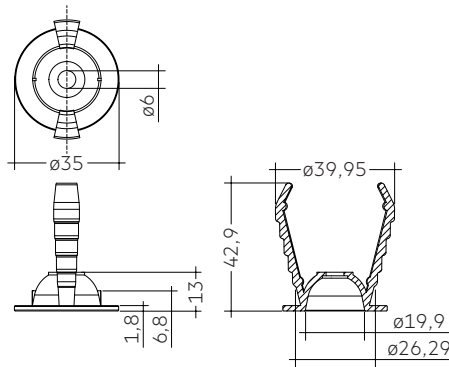
ACD TRIM RING 200MM WHITE

Ordering data

Type	Article number	Colour	Packaging carton	Weight per pc.
ACD TRIM RING 100MM WHITE	28002196	White	240 pc(s).	0.031 kg
ACD TRIM RING 150MM WHITE	28002197	White	120 pc(s).	0.054 kg
ACD TRIM RING 200MM WHITE	28002198	White	60 pc(s).	0.092 kg

Product description

- Holder for indicator LED in emergency operation
- Glow-wire test with a temperature of 850 °C passed

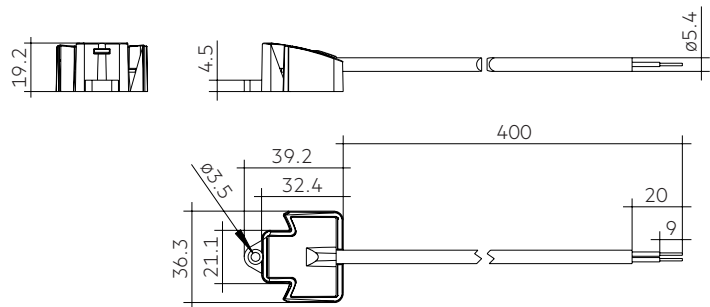
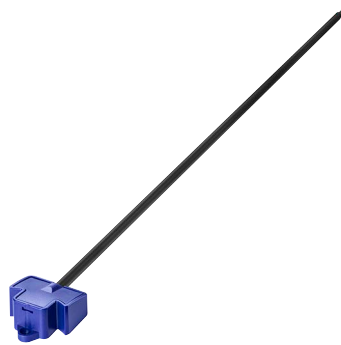


Ordering data

Type	Article number	Colour	Packaging carton	Weight per pc.
ACD EM LED INDICATOR HOLDER	28002189	White	120 pc(s).	0.013 kg

Product description

- Additional driver connector to enable the use of standard drivers with DLA G2 modules
- ST 3 x 8 mm screw included
- Cable type H03VV-F 2 x 0.5 mm²
- Length 400 mm
- Glow-wire test with a temperature of 850 °C passed
- Adjust stripping length according to driver



Ordering data

Type	Article number	Packaging carton	Weight per pc.
ACY DLA G2 connector	28004642	100 pc(s).	0.029 kg

Module DLA G2

Product description

1. Standards

EN 62031
EN 62471
IEC 61000-4-2
IEC TR 62778: 2014

1.1 Glow wire test

according to EN 62031 with increased temperature of 850 °C passed.

1.2 Photometric code

Key for photometric code, e. g. 830 / 469

1 st digit	2 nd + 3 rd digit	4 th digit	5 th digit	6 th 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)
7 70 – 79				Code Luminous flux
8 80 – 89				7 ≥ 70 %
9 ≥90				8 ≥ 80 % 9 ≥ 90 %

1.3 Energy classification

Type	Colour temperature	Energy classification	Energy consumption	Type of light source
DLA G2 100mm 1000lm 830 SNC EM MOD	3,000 K	G	9 kWh / 1,000 h	directional
DLA G2 100mm 1000lm 840 SNC EM MOD	4,000 K	F	9 kWh / 1,000 h	directional
DLA G2 150mm 1000/2000lm 830 SNC EM MOD	3,000 K	G	18 kWh / 1,000 h	directional
DLA G2 150mm 1000/2000lm 840 SNC EM MOD	4,000 K	F	18 kWh / 1,000 h	directional
DLA G2 200mm 2000/3000lm 830 SNC EM MOD	3,000 K	G	27 kWh / 1,000 h	directional
DLA G2 200mm 2000/3000lm 840 SNC EM MOD	4,000 K	F	27 kWh / 1,000 h	directional

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/>

1.4 Insulation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an insulation test with 500 V_{DC} for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.
The insulation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V_{AC} (or 1.414 x 1500 V_{DC}). To avoid damage to the electronic devices this test must not be conducted.

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.

The operating temperature of a LED product is crucial for the light output, the product lifetime but also for the product safety.

The thermal limits can be checked at the tp/tc point.

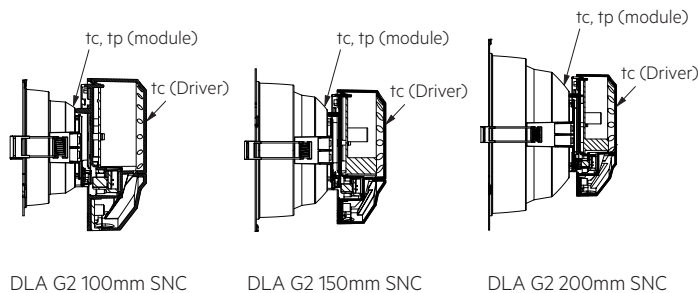
On page 11 the lumen maintenance is shown in relation to the temperature at tp. tp, rated shows the temperature at which the rated values are reached.

tc shows the thermal limit for safety reason and must never be exceeded under normal conditions.

For DLA G2 SNC the tp temperature has to be complied in order to achieve an optimum between heat sink requirements, light output and lifetime.

Compliance with the maximum permissible reference temperature at the tp 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 Thermal behaviour

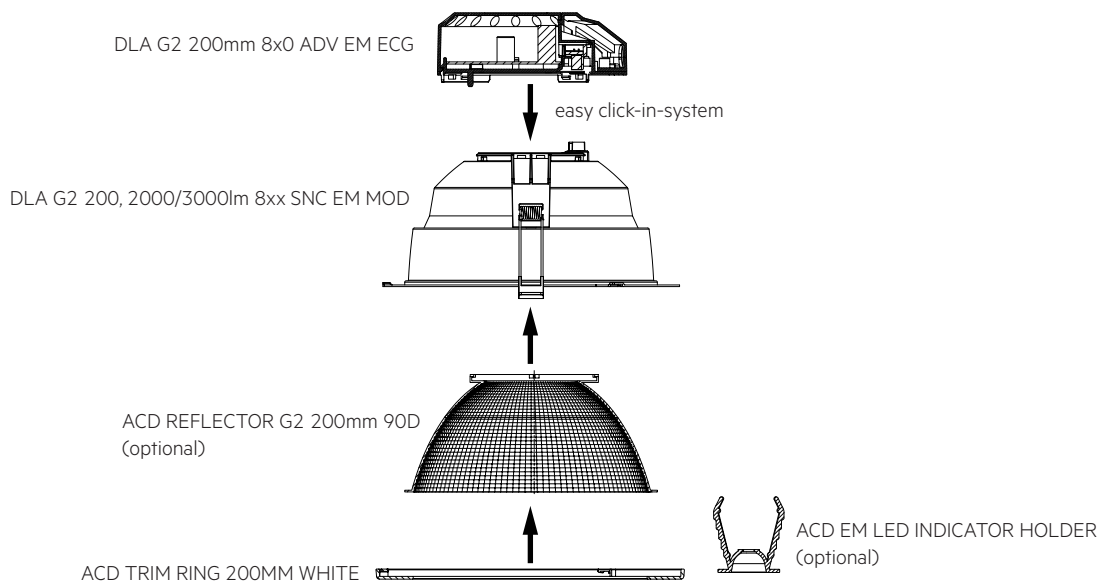
storage temperature	-30 ... +80 °C
---------------------	----------------

Operation only in non condensing environment.

Humidity during processing of the module should be between 30 to 70 %.

3. Installation

3.1 Assembly of DLA G2 SNC



3.2 Mounting hole size

	Mounting hole size
DLA G2 100mm SNC	ø 100 – 108 mm
DLA G2 150mm SNC	ø 145 – 158 mm
DLA G2 200mm SNC	ø 190 – 210 mm

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. In 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

DLA G2 100mm 1000lm 8x0 SNC EM MOD:

Type of Driver	tp temperature	L80 / F50	L80 / F10	L70 / F50	L70 / F10
DLA G2 100mm 1000lm 8xx SNC EM ECG	45 °C	35,000 h	29,000 h	56,000 h	49,000 h
	65 °C	35,000 h	29,000 h	56,000 h	49,000 h

DLA G2 150mm 1000/2000lm 8x0 SNC EM MOD:

Type of Driver	tp temperature	L80 / F50	L80 / F10	L70 / F50	L70 / F10
DLA G2 150mm 1000lm 8xx ADV EM ECG	40 °C	35,000 h	29,000 h	56,000 h	49,000 h
	55 °C	35,000 h	29,000 h	56,000 h	49,000 h
DLA G2 150mm 2000lm 8xx SNC EM ECG	50 °C	35,000 h	29,000 h	56,000 h	49,000 h
	65 °C	35,000 h	29,000 h	56,000 h	49,000 h

DLA G2 200mm 2000/3000lm 8x0 SNC EM MOD:

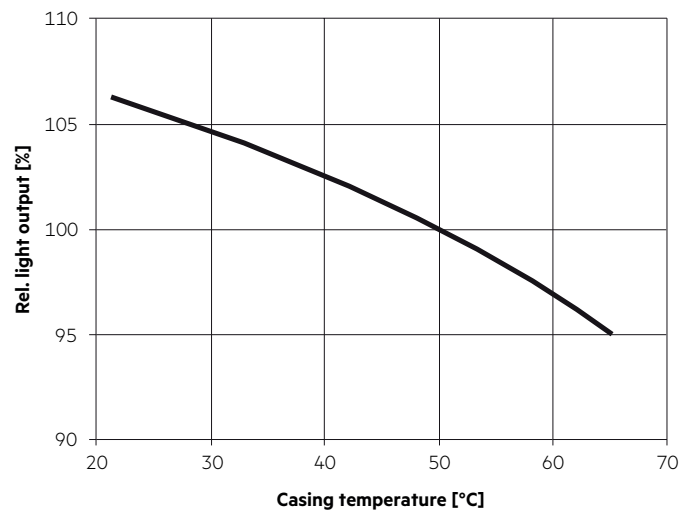
Type of Driver	tp temperature	L80 / F50	L80 / F10	L70 / F50	L70 / F10
DLA G2 200mm 2000lm 8xx ADV EM ECG	45 °C	35,000 h	29,000 h	56,000 h	49,000 h
	60 °C	35,000 h	29,000 h	56,000 h	49,000 h
DLA G2 200mm 3000lm 8xx SNC EM ECG	50 °C	35,000 h	29,000 h	56,000 h	49,000 h
	65 °C	33,000 h	27,000 h	53,000 h	47,000 h

The L70 / F50 lumen maintenance value represents the expected lifetime of the module with a failure probability of less than 10 %.

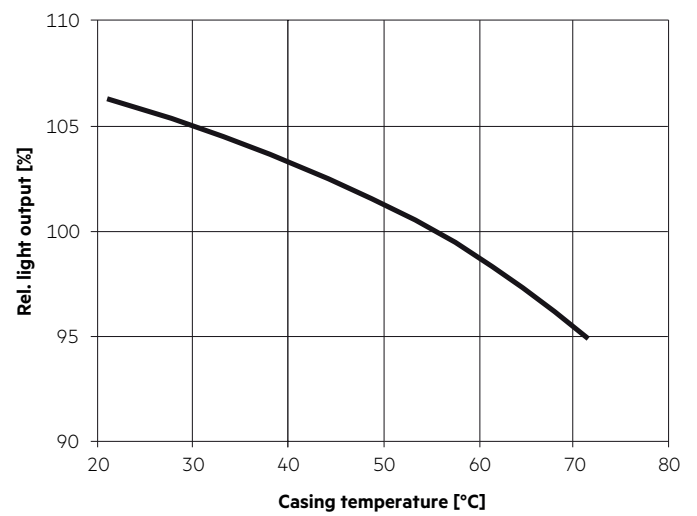
5. Optical values

5.1 Typ. light output vs. tc temperature

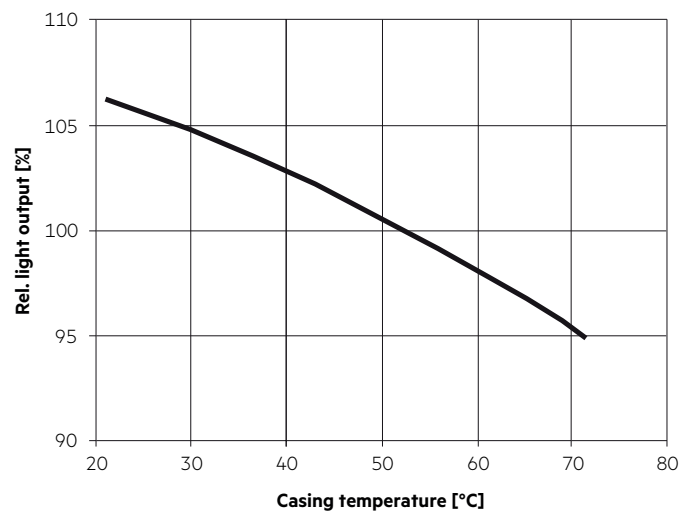
DLA G2 100mm 1000lm 8xx SNC EM MOD



DLA G2 200mm 2000/3000lm 8xx SNC EM MOD



DLA G2 150mm 1000/2000lm 8xx SNC EM MOD



6. Photometric characteristics

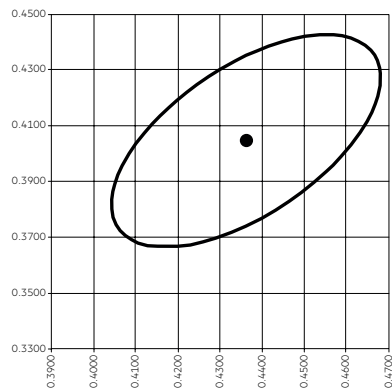
6.1 Coordinates and tolerances according to CIE 1931

The specified colour coordinates are measured integral in thermal saturated stage at specified tp. The current impuls depends on the module type. The ambient temperature of the measurement is $t_a = 25^\circ\text{C}$. The measurement tolerance of the colour coordinates are ± 0.01 .

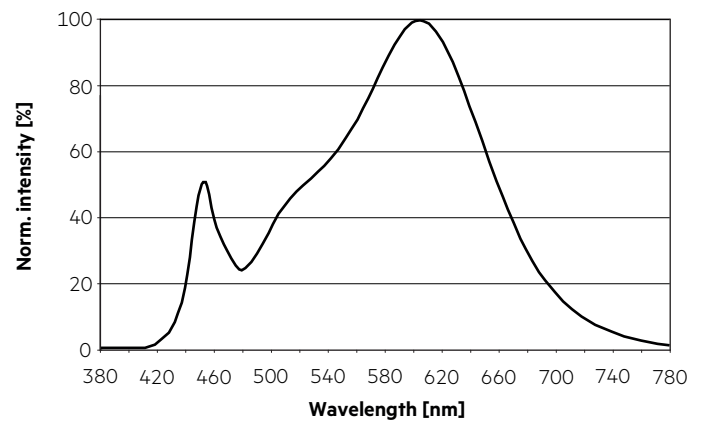
6.2 DLA G2 100mm 1000lm SNC (tp = 45 °C)

3,000 K

	x0	y0
Centre	0.4365	0.4048

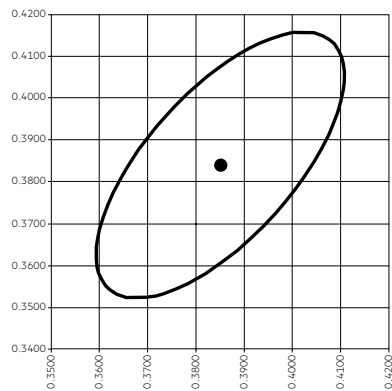


MacAdam ellipse: 4SDCM

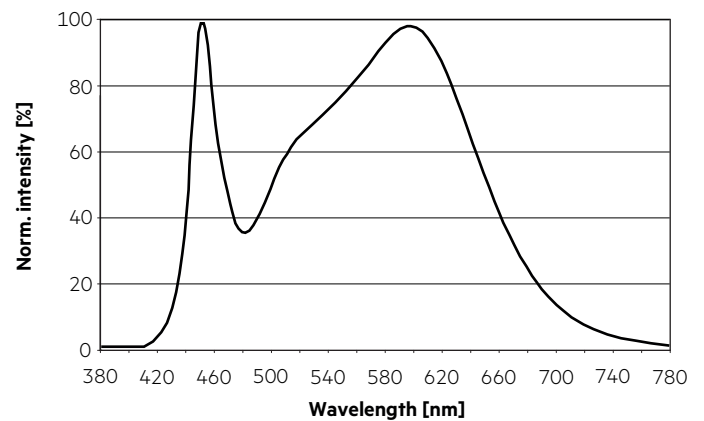


4,000 K

	x0	y0
Centre	0.3854	0.3832



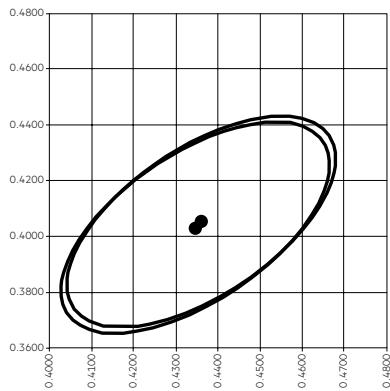
MacAdam ellipse: 4SDCM



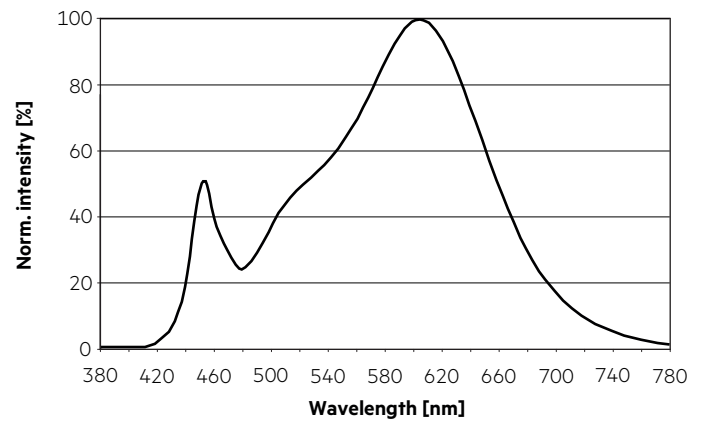
6.3 DLA G2 150mm 1000/2000lm SNC

3,000 K

	x0	y0
255 mA (tp = 40 °C)	0.4371	0.4055
530 mA (tp = 50 °C)	0.4344	0.4034

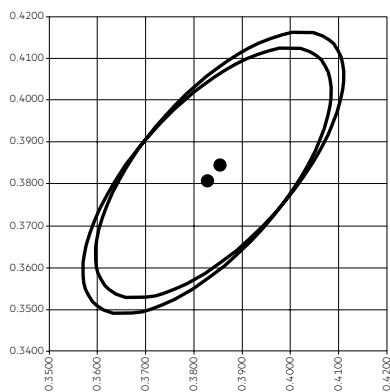


MacAdam ellipse: 4SDCM

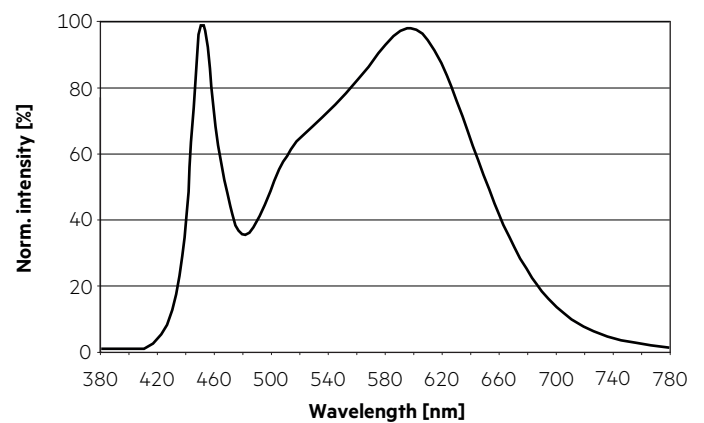


4,000 K

	x0	y0
255 mA (tp = 40 °C)	0.3863	0.3843
530 mA (tp = 50 °C)	0.3828	0.3807



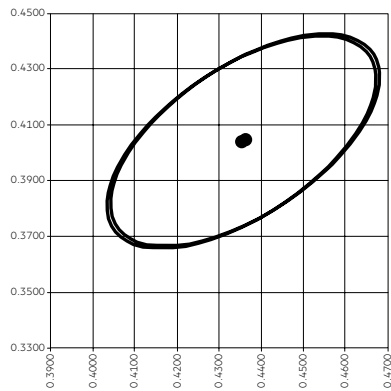
MacAdam ellipse: 4SDCM



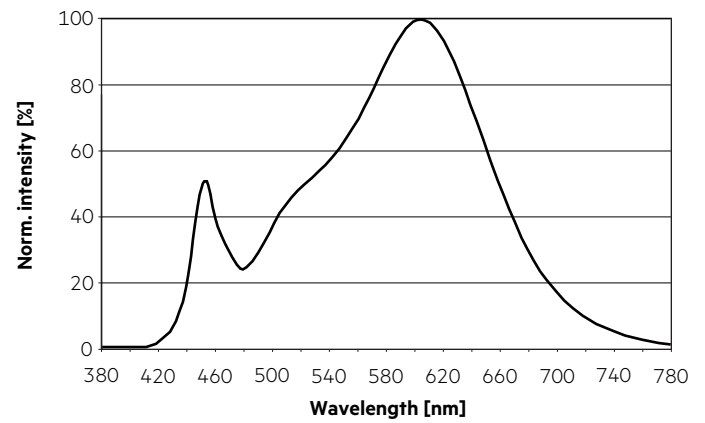
6.4 DLA G2 200mm 2000/3000lm SNC

3,000 K

	x0	y0
530 mA (tp = 45 °C)	0.4365	0.4048
790 mA (tp = 50 °C)	0.4355	0.4040

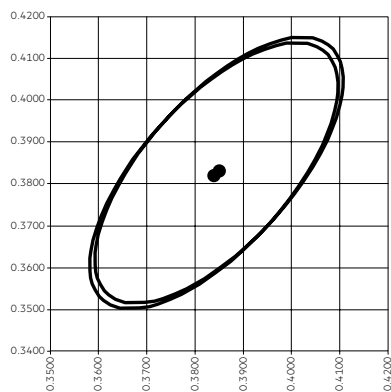


MacAdam ellipse: 4SDCM

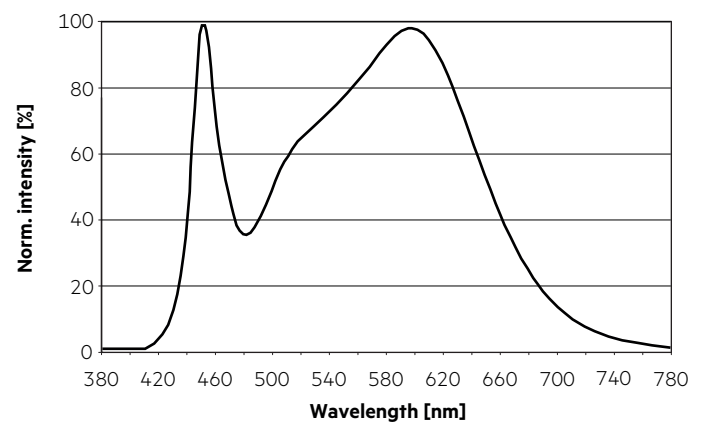


4,000 K

	x0	y0
530 mA (tp = 45 °C)	0.3850	0.3829
790 mA (tp = 50 °C)	0.3839	0.3817

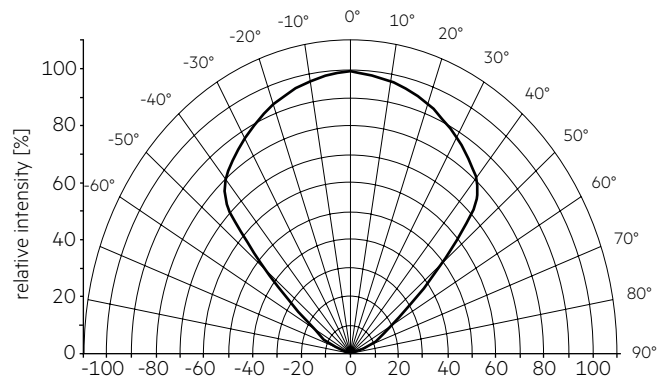


MacAdam ellipse: 4SDCM

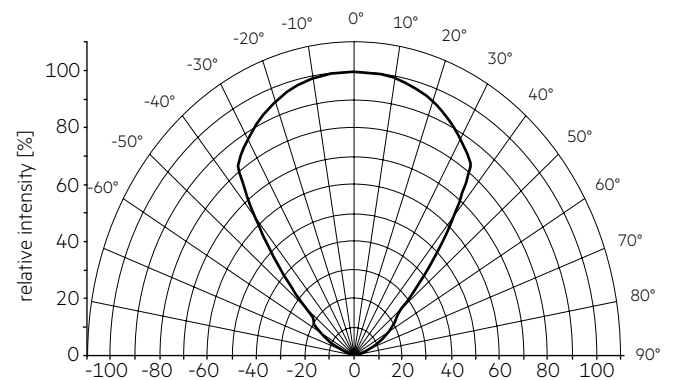


6.5 Light distribution

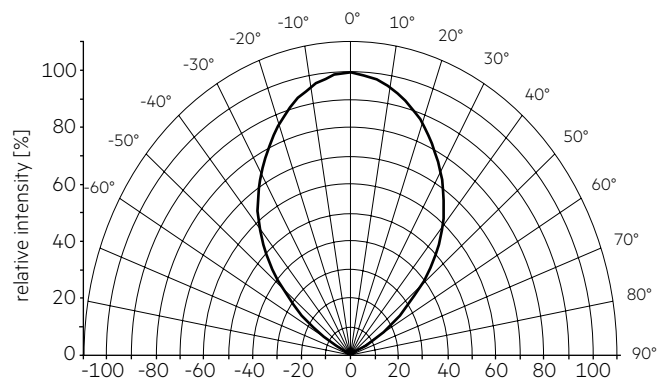
DLA G2 100mm SNC without reflector



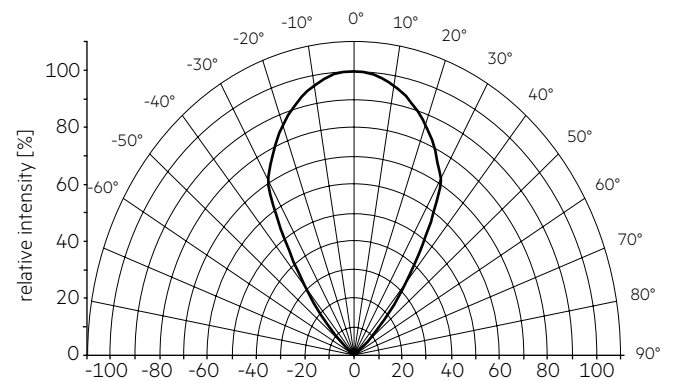
DLA G2 150mm SNC without reflector



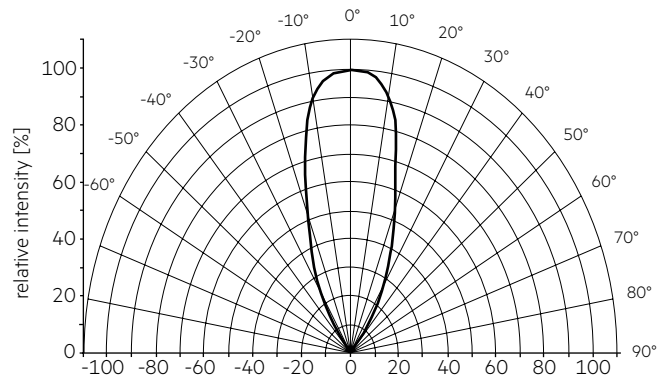
DLA G2 100mm SNC mit 90° Reflektor



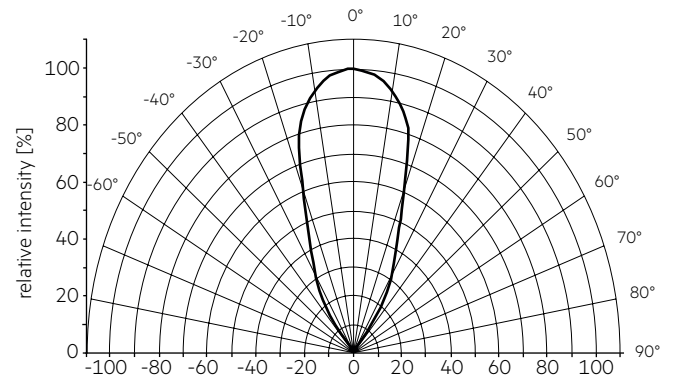
DLA G2 150mm SNC mit 90° Reflektor



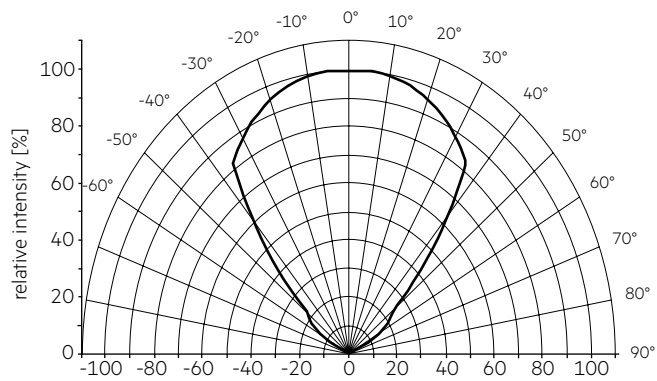
DLA G2 100mm SNC mit 60° Reflektor



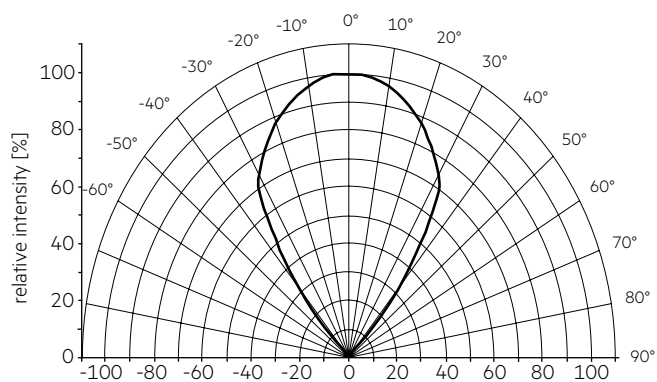
DLA G2 150mm SNC mit 60° Reflektor



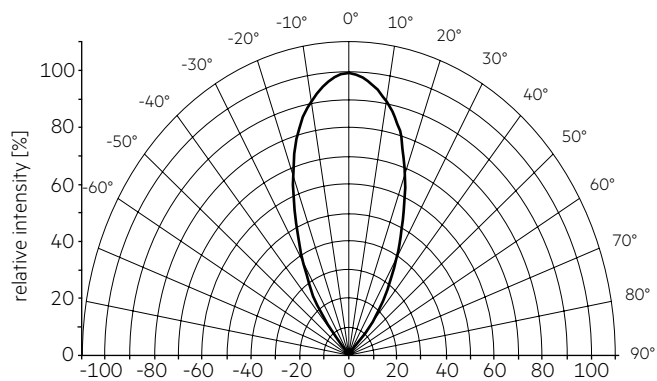
DLA G2 200mm SNC without reflector



DLA G2 200mm SNC mit 90° Reflektor



DLA G2 200mm SNC mit 60° Reflektor



7. Miscellaneous

7.1 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.

Driver DLA G2 SNC / ADV

Product description

1. Standards

EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-1
EN 61347-2-13
EN 61547
EN 62384

1.1 Glow-wire test

according to EN 61347-1 with increased temperature of 850 °C passed.

2. Thermal details and lifetime

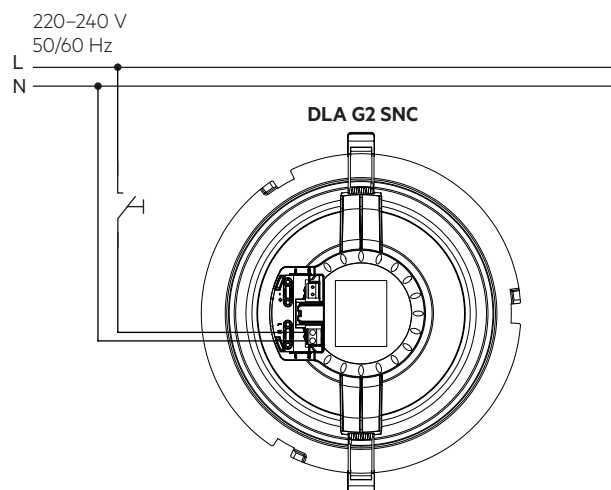
2.1 Expected lifetime

Expected lifetime		
Type	ta	40 °C
DLA G2 100mm 1000lm 8x0 SNC EM ECG	tc	60 °C
	Lifetime	50,000 h
DLA G2 150mm 1000lm 8x0 ADV EM ECG	tc	60 °C
	Lifetime	50,000 h
DLA G2 150mm 2000lm 8x0 SNC EM ECG	tc	60 °C
	Lifetime	50,000 h
DLA G2 200mm 2000lm 8x0 ADV EM ECG	tc	60 °C
	Lifetime	50,000 h
DLA G2 200mm 3000lm 8x0 SNC EM ECG	tc	65 °C
	Lifetime	50,000 h

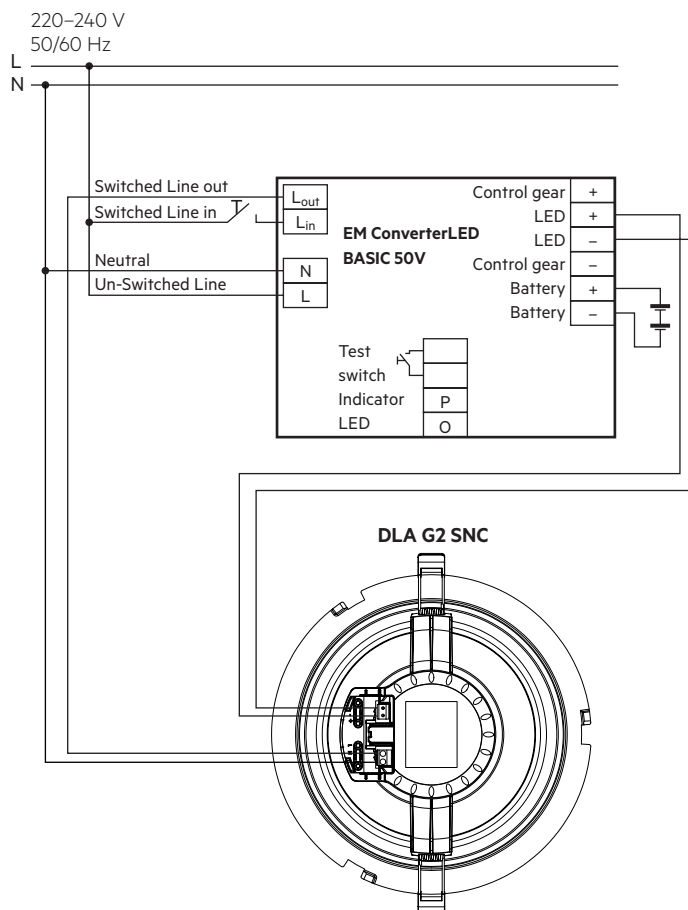
Failure rate per 1,000 h = 0.3 %.

3. Installation / wiring

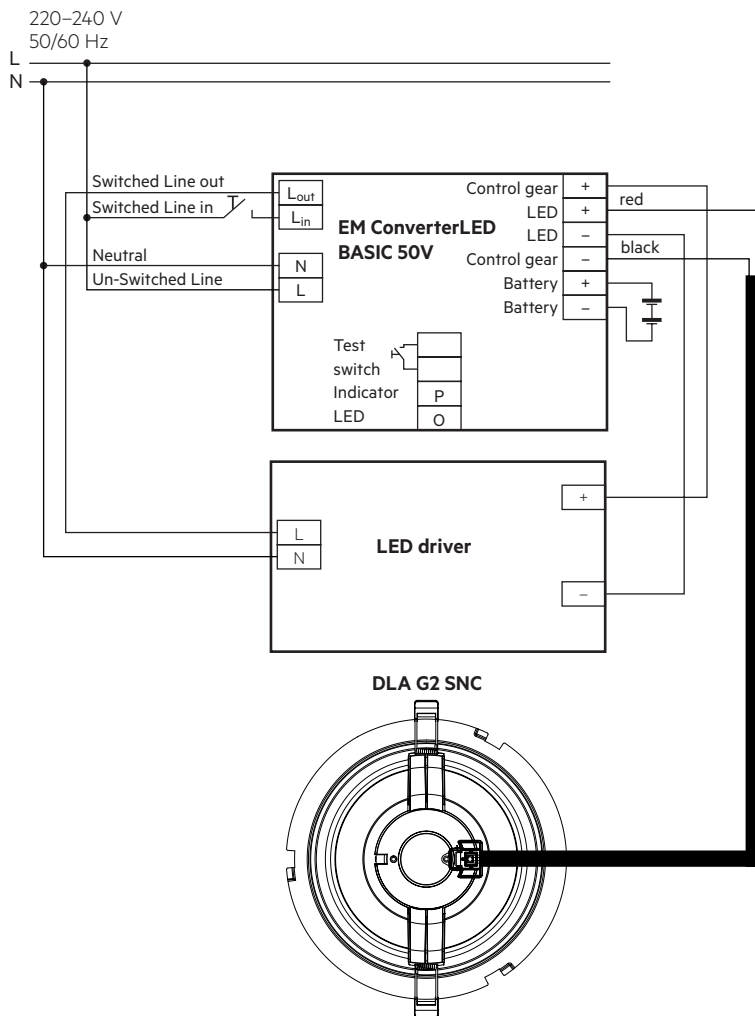
3.1 Circuit diagram



Emergency wiring:



Emergency wiring with ACY DLA G2 connector:



3.2 Electrical supply/choice of LED driver

DLA modules from Tridonic are not protected against overvoltages, overcurrents, overloads or short-circuit currents.

In combination with ACY DLA G2 connector the 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 DLA 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

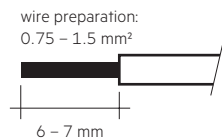


DLA modules must be supplied by a constant current LED driver.
Operation with a constant voltage LED driver will lead to an irreversible damage of the module.
Wrong polarity can damage the DLA.

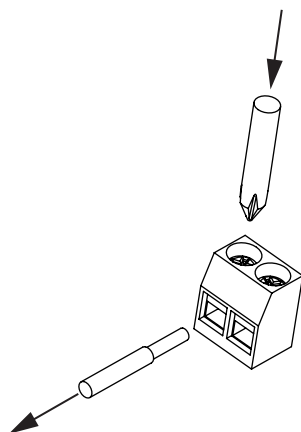
Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

3.2 Wiring type and cross section

For wiring use stranded wire with ferrules or solid wire from 0.75 to 1.5 mm².
For the push-wire connection you have to strip the insulation (6–7 mm).
Loosen wire through twisting and pulling.



3.3 Release of the wiring



3.4 Installation instructions

The LED module and all contact points within the wiring must be sufficiently insulated against 2 kV surge voltage.
Air and creepage distance must be maintained.

3.5 Terminal

Max. torque for terminal: 0.4 Nm/M2.5

4. Electrical values

4.1 Maximum loading of automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current	
Installation Ø	1.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	1.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	I _{max}	Time
DLA G2 100mm 1000lm 8x0 SNC EM ECG	100	130	165	200	60	80	100	120	9 A	100 µs
DLA G2 150mm 2000lm 8x0 SNC EM ECG	50	75	100	116	30	45	60	70	13 A	150 µs
DLA G2 200mm 3000lm 8x0 SNC EM ECG	33	50	65	75	20	30	40	45	30 A	60 µs
DLA G2 150mm 1000lm 8x0 ADV EM ECG	100	130	165	200	60	80	100	120	7 A	110 µs
DLA G2 200mm 2000lm 8x0 ADV EM ECG	50	75	100	116	30	45	60	70	28 A	50 µs

4.2 Harmonic distortion in the mains supply (at 230 V / 50 Hz and full load) in %

	THD	3.	5.	7.	9.	11.
DLA G2 100mm 1000lm 8x0 SNC EM ECG	< 13	< 10	< 5	< 5	< 2	< 2
DLA G2 150mm 2000lm 8x0 SNC EM ECG	< 14	< 13	< 3	< 4	< 3	< 2
DLA G2 200mm 3000lm 8x0 SNC EM ECG	< 15	< 12	< 4	< 5	< 3	< 2
DLA G2 150mm 1000lm 8x0 ADV EM ECG	< 13	< 9	< 5	< 5	< 3	< 2
DLA G2 200mm 2000lm 8x0 ADV EM ECG	< 14	< 12	< 4	< 4	< 3	< 2

5. Miscellaneous

5.1 Insulation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an insulation test with 500 V_{DC} for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.
The insulation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V_{AC} (or 1.414 x 1500 V_{DC}). To avoid damage to the electronic devices this test must not be conducted.

5.2 Conditions of use and storage

Humidity: 5 % up to max. 85 %,
not condensed
(max. 56 days/year at 85 %)

Storage temperature: -30 °C up to max. +80 °C

The devices have to be within the specified temperature range (ta) before they can be operated.

5.3 Additional information

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

Lifetime declarations are informative and represent no warranty claim.
No warranty if device was opened.