



Module LLE FLEX CC 14mm 1250lm ADV1

Modules LLE FLEX CC advanced (constant current)

Product description

- Ideal for profile and linear luminaires made of extruded aluminium or sheet steel
- 16 LEDs per 140 mm segment provide a very homogeneous light image, which remains uniform with a total length of 3 m when fed in from both sides
- AVX Low-Profile terminals for simple and shadow-free wiring every 280 mm
- Long life-time: 60,000 hours (L80B10)
- 5-year guarantee

Optical properties

- Colour temperatures 2,700 K, 3,000 K and 4,000 K
- Typ. luminous flux 1,250 lm
- Efficacy of the module up to 209 lm/W
- High colour rendering index CRI > 80 and CRI > 90
- Small colour tolerance MacAdam 3rd
- Small luminous flux tolerances

Mechanical properties

- The LLE FLEX CC is 14 mm wide, one tape is up to 25 m long and can be divided every 140 mm
- The 3M 9460 adhesive tape ensures simple installation and optimum heat dissipation, it is long-term stable and weather-proof

System solution

- LED system solution with outstanding system efficacy up to 182 lm/W, consisting of linear LED flextape and a SELV LED Driver



Standards, page 4

Colour temperatures and tolerances, page 8

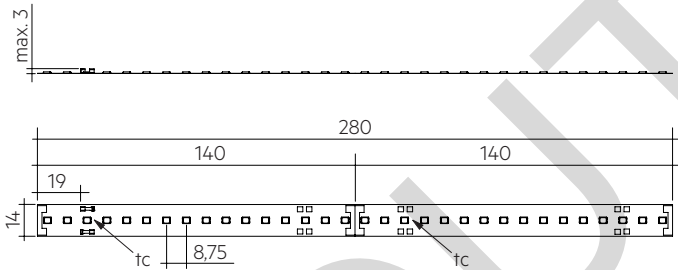


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Technical data

Beam characteristic	120°
Ambient temperature range	-25 ... +50 °C
tp rated	65 °C
tc	80 °C
Irated for CRI80®	80 mA
Irated for CRI90®	100 mA
I _{max} ®	160 mA
Max. permissible LF current ripple®	160 mA
Max. permissible peak current®	240 mA / max. 10 ms
Max. working voltage for insulation SELV	60 V
Insulation test voltage	0.5 kV
CTI of the printed circuit board	< 600
ESD classification	severity level 2
Risk group (IEC 62471:2008)®	RG0
Classification acc. to IEC 62031	Built-in
Type of protection	IPO0



Ordering data

Type	Article number	Colour temperature	Tape length	Packaging carton	Weight per pc.
LLE FLEX CC 14mm 1250lm 140R025 827 ADV1	28002279	2,700 K	25.20 m	8 pc(s).	0.68 kg
LLE FLEX CC 14mm 1250lm 140R025 830 ADV1	28002280	3,000 K	25.20 m	8 pc(s).	0.68 kg
LLE FLEX CC 14mm 1250lm 140R025 840 ADV1	28002281	4,000 K	25.20 m	8 pc(s).	0.68 kg
LLE FLEX CC 14mm 1250lm 140R005 840 ADV1	28002811	4,000 K	5.04 m	7 pc(s).	0.34 kg
LLE FLEX CC 14mm 1250lm 140R025 927 ADV1	28002571	2,700 K	25.20 m	8 pc(s).	0.68 kg
LLE FLEX CC 14mm 1250lm 140R025 930 ADV1	28002572	3,000 K	25.20 m	8 pc(s).	0.68 kg
LLE FLEX CC 14mm 1250lm 140R025 940 ADV1	28002573	4,000 K	25.20 m	8 pc(s).	0.68 kg

Specific technical data

Type [®]	Photo-metric code	Typ. luminous flux at tp = 25 °C [®] ®	Typ. luminous flux at tp = 65 °C [®] ®	Typ. forward current [®]	Min. forward voltage at tp = 65 °C [®]	Max. forward voltage at tp = 25 °C [®]	Typ. power consumption at tp = 65 °C [®] ®	Efficacy of the module at tp = 25 °C	Efficacy of the module at tp = 65 °C	Efficacy of the system at tp = 65 °C	Colour rendering index CRI
Operating mode HE 300 lm/ft											
LLE FLEX CC 14mm 1250lm 140R025 827 ADV1	827/359	330 lm	310 lm	40 mA	411 V	43.5 V	1.7 W	193 lm/W	183 lm/W	168 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 830 ADV1	830/359	340 lm	320 lm	40 mA	411 V	43.5 V	1.7 W	199 lm/W	188 lm/W	177 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 840 ADV1	840/359	310 lm	290 lm	35 mA	41.0 V	43.4 V	1.5 W	209 lm/W	198 lm/W	182 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R005 840 ADV1	840/359	310 lm	290 lm	35 mA	41.0 V	43.4 V	1.5 W	209 lm/W	198 lm/W	182 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 927 ADV1	927/359	310 lm	290 lm	50 mA	41.0 V	43.4 V	1.5 W	145 lm/W	138 lm/W	127 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 930 ADV1	930/359	340 lm	320 lm	50 mA	41.0 V	43.4 V	1.5 W	158 lm/W	150 lm/W	138 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 940 ADV1	940/359	360 lm	340 lm	50 mA	41.0 V	43.4 V	1.5 W	168 lm/W	160 lm/W	147 lm/W	> 90
Operating mode HE 625 lm/ft											
LLE FLEX CC 14mm 1250lm 140R025 827 ADV1	827/359	720 lm	670 lm	90 mA	42.2 V	44.7 V	3.9 W	182 lm/W	172 lm/W	158 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 830 ADV1	830/359	660 lm	620 lm	80 mA	42.0 V	44.5 V	3.4 W	189 lm/W	179 lm/W	165 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 840 ADV1	840/359	680 lm	630 lm	80 mA	42.0 V	44.5 V	3.4 W	199 lm/W	188 lm/W	173 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R005 840 ADV1	840/359	680 lm	630 lm	80 mA	42.0 V	44.5 V	3.4 W	199 lm/W	188 lm/W	173 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 927 ADV1	927/359	660 lm	620 lm	110 mA	42.6 V	45.0 V	4.8 W	136 lm/W	128 lm/W	118 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 930 ADV1	930/359	660 lm	610 lm	100 mA	42.4 V	44.9 V	4.3 W	148 lm/W	140 lm/W	129 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 940 ADV1	940/359	700 lm	650 lm	100 mA	42.4 V	44.9 V	4.3 W	158 lm/W	150 lm/W	138 lm/W	> 90
Operating mode NM 1,000 lm/ft											
LLE FLEX CC 14mm 1250lm 140R025 827 ADV1	827/359	1,170 lm	1,090 lm	150 mA	43.4 V	45.8 V	6.6 W	173 lm/W	164 lm/W	151 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 830 ADV1	830/359	1,190 lm	1,050 lm	140 mA	43.3 V	45.8 V	6.2 W	180 lm/W	170 lm/W	156 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 840 ADV1	840/359	1,100 lm	1,030 lm	130 mA	42.9 V	45.4 V	5.7 W	190 lm/W	180 lm/W	165 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R005 840 ADV1	840/359	1,100 lm	1,030 lm	130 mA	42.9 V	45.4 V	5.7 W	190 lm/W	180 lm/W	165 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 927 ADV1	927/359	1,170 lm	1,090 lm	200 mA	44.1 V	46.6 V	9.0 W	127 lm/W	121 lm/W	111 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 930 ADV1	930/359	1,120 lm	1,050 lm	175 mA	43.7 V	46.2 V	7.8 W	141 lm/W	133 lm/W	122 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 940 ADV1	940/359	1,030 lm	960 lm	150 mA	43.4 V	45.8 V	6.6 W	152 lm/W	145 lm/W	133 lm/W	> 90
Operating mode NM 1,250 lm/ft											
LLE FLEX CC 14mm 1250lm 140R025 827 ADV1	827/359	1,320 lm	1,230 lm	170 mA	43.6 V	46.1 V	7.6 W	171 lm/W	162 lm/W	149 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 830 ADV1	830/359	1,320 lm	1,230 lm	165 mA	43.6 V	46.0 V	7.4 W	176 lm/W	167 lm/W	154 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 840 ADV1	840/359	1,340 lm	1,260 lm	160 mA	43.5 V	46.0 V	7.1 W	186 lm/W	176 lm/W	162 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R005 840 ADV1	840/359	1,340 lm	1,260 lm	160 mA	43.5 V	46.0 V	7.1 W	186 lm/W	176 lm/W	162 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 927 ADV1	927/359	1,330 lm	1,240 lm	230 mA	44.5 V	47.0 V	10.5 W	125 lm/W	118 lm/W	109 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 930 ADV1	930/359	1,270 lm	1,190 lm	200 mA	44.1 V	46.6 V	9.0 W	138 lm/W	131 lm/W	121 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 940 ADV1	940/359	1,350 lm	1,260 lm	200 mA	44.1 V	46.6 V	9.0 W	147 lm/W	140 lm/W	129 lm/W	> 90
Operating mode HO 1,750 lm/ft											
LLE FLEX CC 14mm 1250lm 140R025 827 ADV1	827/359	1,880 lm	1,760 lm	250 mA	44.8 V	47.3 V	11.4 W	162 lm/W	153 lm/W	141 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 830 ADV1	830/359	1,870 lm	1,750 lm	240 mA	44.6 V	47.1 V	11.0 W	168 lm/W	160 lm/W	147 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 840 ADV1	840/359	1,880 lm	1,760 lm	230 mA	44.5 V	47.0 V	10.5 W	177 lm/W	168 lm/W	155 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R005 840 ADV1	840/359	1,880 lm	1,760 lm	230 mA	44.5 V	47.0 V	10.5 W	177 lm/W	168 lm/W	155 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 927 ADV1	927/359	1,780 lm	1,670 lm	320 mA	45.7 V	48.2 V	15.0 W	117 lm/W	111 lm/W	102 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 930 ADV1	930/359	1,840 lm	1,720 lm	300 mA	45.5 V	48.0 V	13.9 W	130 lm/W	122 lm/W	112 lm/W	> 90
LLE FLEX CC 14mm 1250lm 140R025 940 ADV1	940/359	1,950 lm	1,820 lm	300 mA	45.5 V	48.0 V	13.9 W	137 lm/W	130 lm/W	120 lm/W	> 90
Operating mode HO 2,000 lm/ft											
LLE FLEX CC 14mm 1250lm 140R025 827 ADV1	827/359	2,080 lm	1,950 lm	280 mA	45.2 V	47.7 V	13.0 W	158 lm/W	150 lm/W	138 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 830 ADV1	830/359	2,090 lm	1,960 lm	270 mA	45.1 V	47.6 V	12.5 W	164 lm/W	155 lm/W	143 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R025 840 ADV1	840/359	2,180 lm	2,040 lm	270 mA	45.1 V	47.6 V	12.5 W	172 lm/W	163 lm/W	150 lm/W	> 80
LLE FLEX CC 14mm 1250lm 140R005 840 ADV1	840/359	2,180 lm	2,040 lm	270 mA	45.1 V	47.6 V	12.5 W	172 lm/W	163 lm/W	150 lm/W	> 80

^① Integral measurement over the complete module.

^② Measured at I_{max}.

^③ Value for 1 segment (140 mm).

^④ Value for 2 segments (280 mm).

[®] HE ... high efficiency, NM ... nominal mode, HO ... high output.

[®] Tolerance range for optical and electrical data: ±10 %.

1. Standards

IEC 62031
IEC 62471
IEC 61000-4-2
IEC 62778
IEC 61547

1.1 Photometric code

Key for photometric code, e. g. 830 / 349

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

1.2 Energy classification

Typ	Energieklassifizierung
LLE FLEX CC 14mm 1250lm 8xx ADV1	A++
LLE FLEX CC 14mm 1250lm 9xx ADV1	A+

2. Thermal details

2.1 tc point, ambient temperature and life-time

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

For LLE a tp temperature of 65 °C has to be complied in order to achieve an optimum between heat sink requirements, light output and life-time.

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	-35 ... +80 °C
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Operation only in non condensing environment.
Humidity during processing of the module should be between 30 to 70 %.

2.3 Heat sink values

ta	tp	Forward current	Rth, hs-a*	Cooling area*
25 °C	65 °C	150 mA	10.12 K/W	66 cm ²
35 °C	65 °C	150 mA	7.58 K/W	88 cm ²
40 °C	65 °C	150 mA	6.32 K/W	106 cm ²
45 °C	65 °C	150 mA	5.05 K/W	132 cm ²
50 °C	65 °C	150 mA	3.78 K/W	176 cm ²

* Values for each segment (140 mm).

Notes

The actual cooling surface can differ because of the material, the structural shape, outside influences and the installation situation.

3. Installation / wiring

3.1 Electrical supply/choice of LED Driver

LLE 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 Driver from Tridonic in combination with LLE 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



LLE 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 LLE.

With parallel wiring tolerance-related differences in output are possible (thermal stress of the module) and can cause differences in brightness.

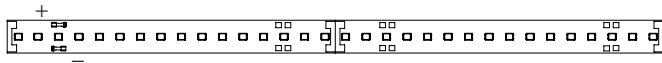
The max. permissible output current of the LED Driver for parallel wiring is 1,900 mA.

LLE have to be operated with SELV LED Drivers.



LLE are basic insulated up to 60 V SELV against ground and can be mounted directly on earthed metal parts of the luminaire. Insulation must be ensured at both ends of the applied LLE FLEX (> 500 V AC). If the max. output voltage of the LED Driver (also against earth) is above 60 V SELV, an additional insulation between LED module and heat sink is required (for example by insulated thermal pads) or by a suitable luminaire construction.

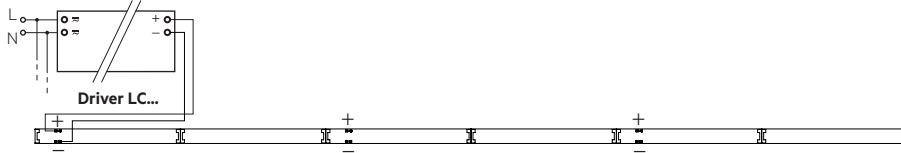
3.2 Wiring



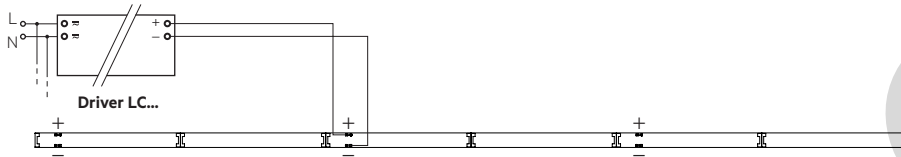
Terminal at each 2nd segment.

Wiring examples

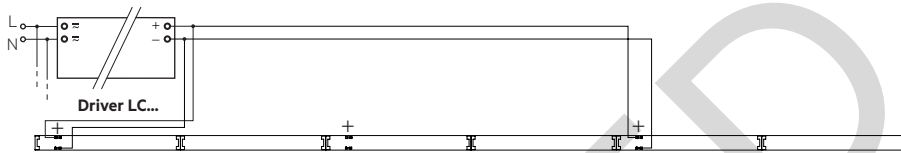
Connection at one side



Connection at middle



Connection at both sides



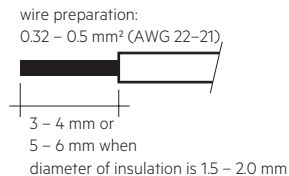
Lumen per feet	Connection at one side	Connection at middle	Connection at both sides
LLE FLEX CC 14mm 1250lm 8xx ADV1			
300 lm/ft	10 segments	20 segments	20 segments
625 lm/ft	10 segments	20 segments	20 segments
1,000 lm/ft	10 segments	20 segments	20 segments
1,250 lm/ft	10 segments	20 segments	20 segments
1,750 lm/ft	7 segments	14 segments	14 segments
2,000 lm/ft	6 segments	12 segments	12 segments
LLE FLEX CC 14mm 1250lm 9xx ADV1			
300 lm/ft	10 segments	20 segments	20 segments
625 lm/ft	10 segments	20 segments	20 segments
1,000 lm/ft	10 segments	20 segments	20 segments
1,250 lm/ft	8 segments	16 segments	16 segments
1,750 lm/ft	6 segments	12 segments	12 segments

Max. number of segments to keep the reduction of luminous flux below 5 %.

The max. permissible output current of the LED Driver is 1,900 mA.

3.3 Wiring type and cross section

The wiring must be solid with a cross section of 0.32 – 0.5 mm² (AWG22–21). For the push-wire connection you have to strip the insulation (3–4 mm or 5–6 mm when diameter of insulation is 1.5–2.0 mm).



Remove the wires through twist and pull.

3.4 Mounting instruction



None of the components of the LLE (substrate, LED, electronic components etc.) may be exposed to tensile or compressive stresses.

The LLE FLEX is separable each 140 mm with the full function of each segment.

Insulation must be ensured at both ends of the applied LLE FLEX (> 500 V AC).

The fixing/cooling surface must be cleaned before installing the LLE FLEX modules to remove all dirt, dust and grease.

Prevent shear- or peel forces

Min. bending radius of the LLE FLEX is 50 mm.



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.

Materials which are used in LED applications (e.g. sealings, adhesives) must not produce dissolver gas. They must not be condensation curing based, acetate curing based or contain sulfur, chlorine or phthalate.

Avoid corrosive atmosphere during usage and storage.

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. Please note the requirements set out in the document EOS / ESD guidelines (Guideline_EOS_ESD.pdf) at: <http://www.tridonic.com/esd-protection>

4. Life-time

4.1 Life-time, lumen maintenance and failure rate

The light output of an LED module decreases over the life-time, 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 life-time 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

Forward current*	tp temperature	L90 / F10	L90 / F50	L80 / F10	L80 / F50	L70 / F10	L70 / F50
50 mA	40 °C	42,000 h	57,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	45 °C	41,000 h	55,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	50 °C	40,000 h	54,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	55 °C	39,000 h	52,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	60 °C	38,000 h	50,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	65 °C	38,000 h	49,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	70 °C	37,000 h	47,000 h	74,000 h	>75,000 h	>75,000 h	>75,000 h
	75 °C	36,000 h	46,000 h	73,000 h	>75,000 h	>75,000 h	>75,000 h
100 mA	80 °C	35,000 h	45,000 h	71,000 h	>75,000 h	>75,000 h	>75,000 h
	40 °C	41,000 h	56,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	45 °C	40,000 h	54,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	50 °C	40,000 h	52,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	55 °C	39,000 h	51,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	60 °C	38,000 h	49,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	65 °C	37,000 h	48,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	70 °C	36,000 h	46,000 h	73,000 h	>75,000 h	>75,000 h	>75,000 h
160 mA	75 °C	36,000 h	45,000 h	72,000 h	>75,000 h	>75,000 h	>75,000 h
	80 °C	34,000 h	44,000 h	70,000 h	>75,000 h	>75,000 h	>75,000 h
	40 °C	41,000 h	55,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	45 °C	40,000 h	53,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	50 °C	39,000 h	51,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	55 °C	38,000 h	50,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	60 °C	37,000 h	48,000 h	>75,000 h	>75,000 h	>75,000 h	>75,000 h
	65 °C	36,000 h	47,000 h	74,000 h	>75,000 h	>75,000 h	>75,000 h
	70 °C	35,000 h	45,000 h	72,000 h	>75,000 h	>75,000 h	>75,000 h
	75 °C	35,000 h	44,000 h	70,000 h	>75,000 h	>75,000 h	>75,000 h
	80 °C	34,000 h	43,000 h	69,000 h	>75,000 h	>75,000 h	>75,000 h

* Values for each segment (140 mm).

4.3 Switching capability

100,000 cycles

Tridonic test according to IEC 62717 Cl 10.3.3

30 s on / 30 s off at Imax

5. Electrical values

5.1 Declaration of electrical parameters

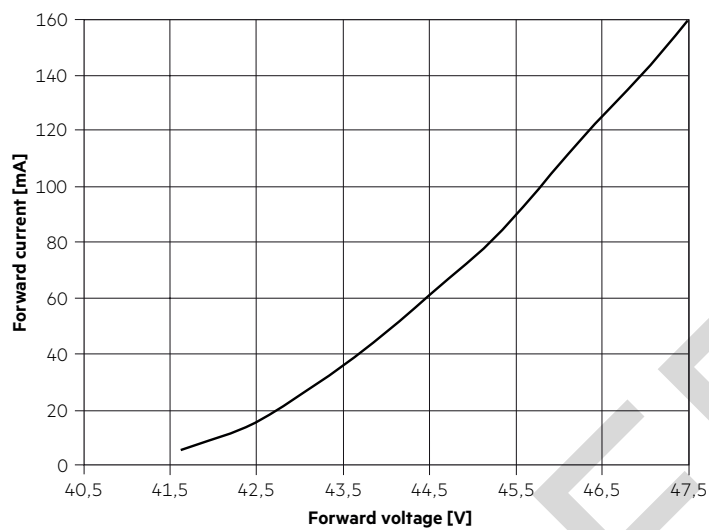
I_{rated} ... Nominal operating current the module is designed for.

I_{max} ... Max. permissible continuous operating current incl. The tolerances of the LED Driver.

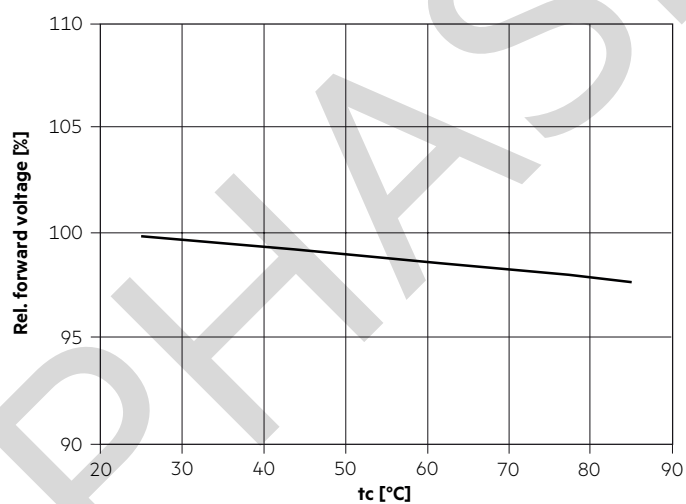
Max. permissible LF current ripple ... Max. output current of the LED Driver incl. Tolerances and LF current ripple must not exceed this value.

Max. permissible peak current ... The max. output peak current of the LED Driver must not exceed this value.

5.2 Typ. forward voltage vs. forward current for one segment (140 mm)



5.3 Forward voltage vs. tc temperature



The diagrams are based on statistic values.
The real values can be different.

6. Photometric characteristics

6.1 Coordinates and tolerances according to CIE 1931

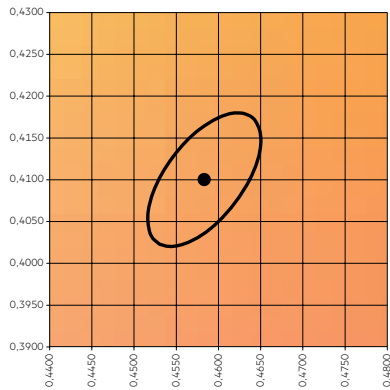
The specified colour coordinates are integral measured by current impulse of 150 mA and a duration of 100 ms.

The ambient temperature of the measurement is $t_a = 25^\circ\text{C}$.

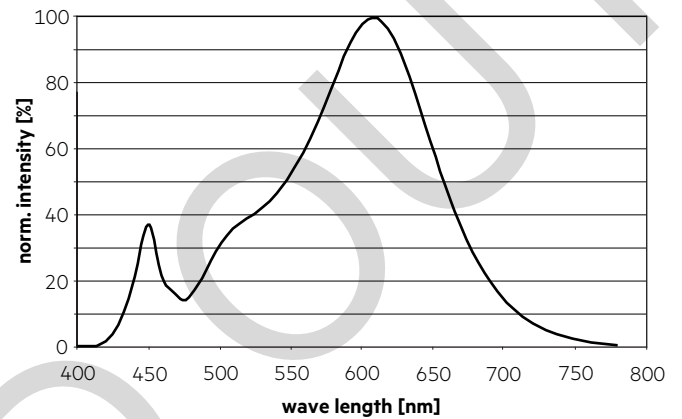
The measurement tolerance of the colour coordinates are ± 0.01 .

2,700 K – CRI80

	x0	y0
Centre	0.4578	0.4101

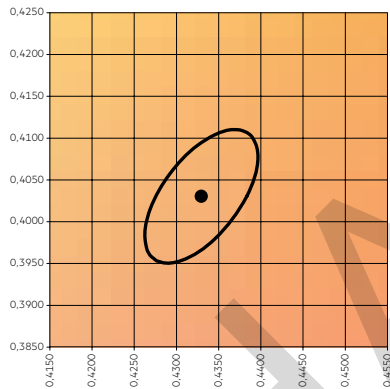


— MacAdam Ellipse: 3SDCM

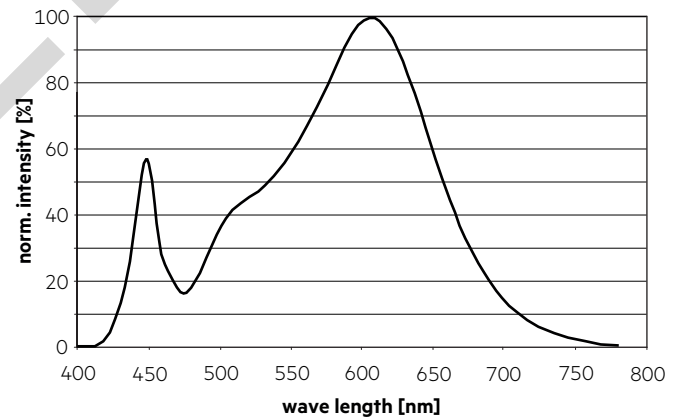


3,000 K – CRI80

	x0	y0
Centre	0.4338	0.4030

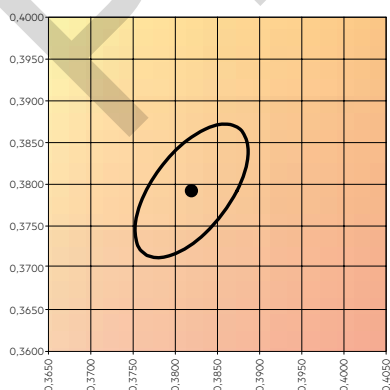


— MacAdam Ellipse: 3SDCM

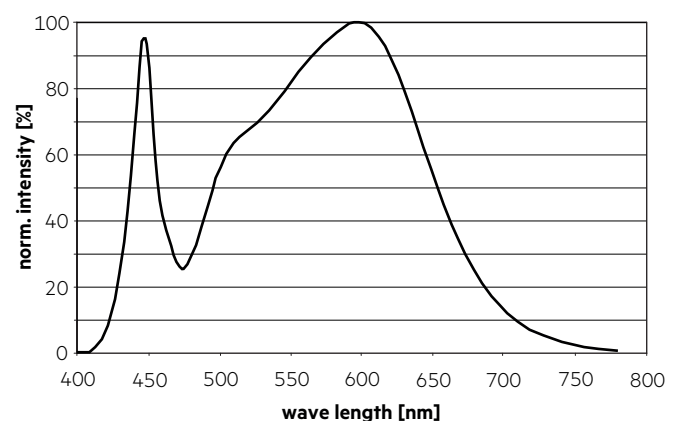


4,000 K – CRI80

	x0	y0
Center	0.3818	0.3797

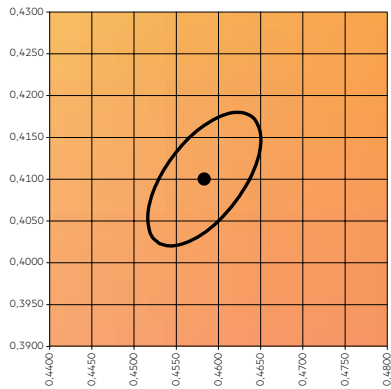


— MacAdam Ellipse: 3SDCM

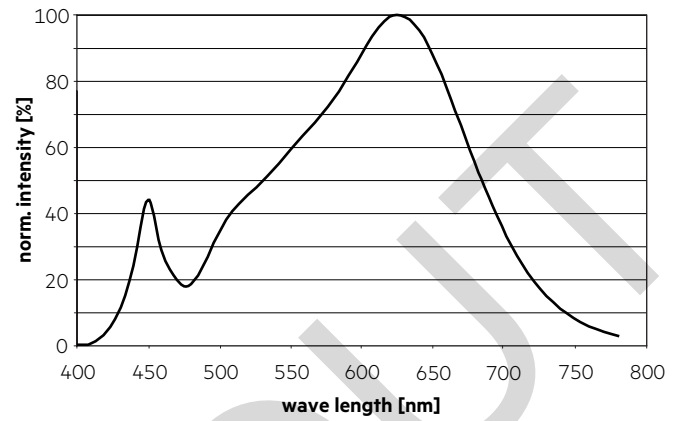


2,700 K – CRI90

	x0	y0
Centre	0.4578	0.4101

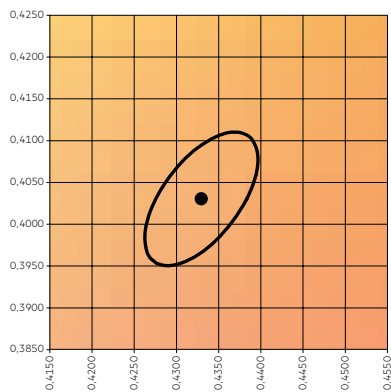


MacAdam Ellipse: 3SDCM

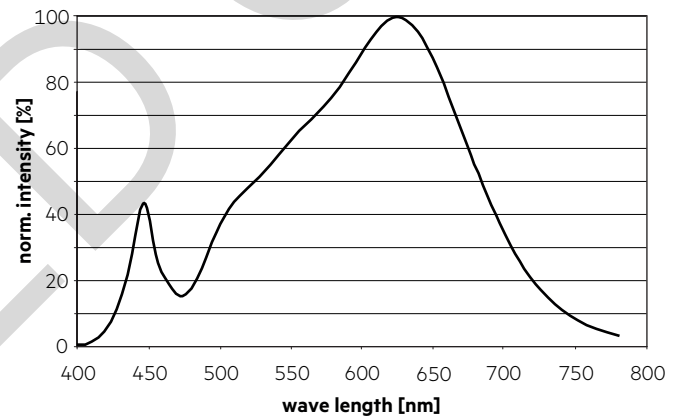


3,000 K – CRI90

	x0	y0
Centre	0.4338	0.4030

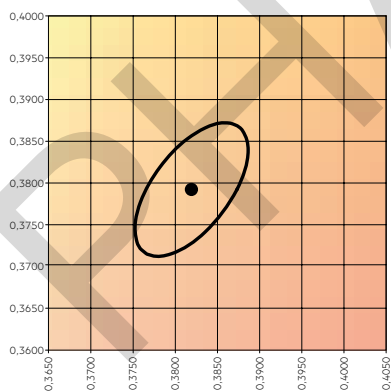


MacAdam Ellipse: 3SDCM

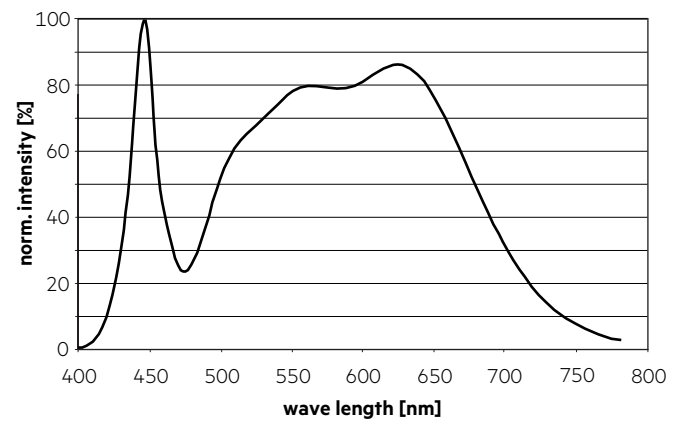


4,000 K – CRI90

	x0	y0
Center	0.3818	0.3797

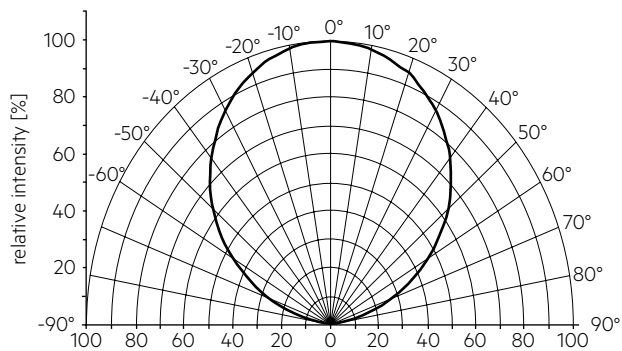


MacAdam Ellipse: 3SDCM



6.2 Light distribution

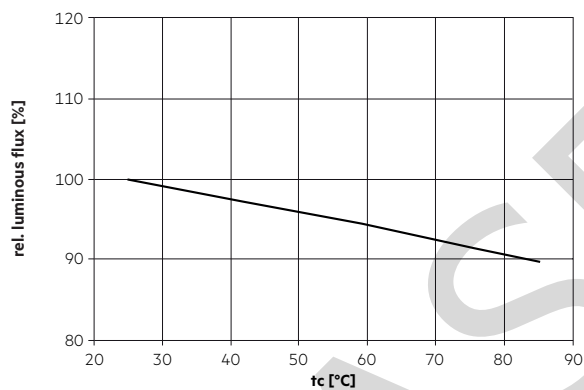
The optical design of the LLE product line ensures optimum homogeneity for the light distribution.



The colour temperature is measured integral over the complete module. The single LED light points can have deviations in the colour coordinates within MacAdam 3.

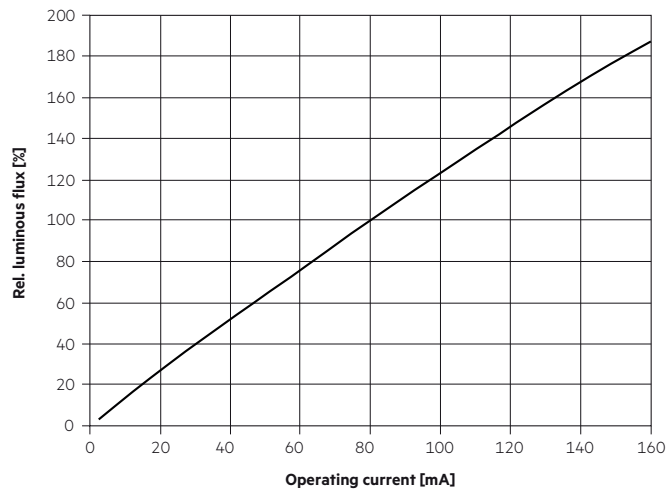
To ensure an ideal mixture of colours and a homogeneous light distribution a suitable optic (e. g. PMMA diffuser) and a sufficient spacing between module and optic (typ. 4 cm) should be used.

6.3 Relative luminous flux vs. tc temperature

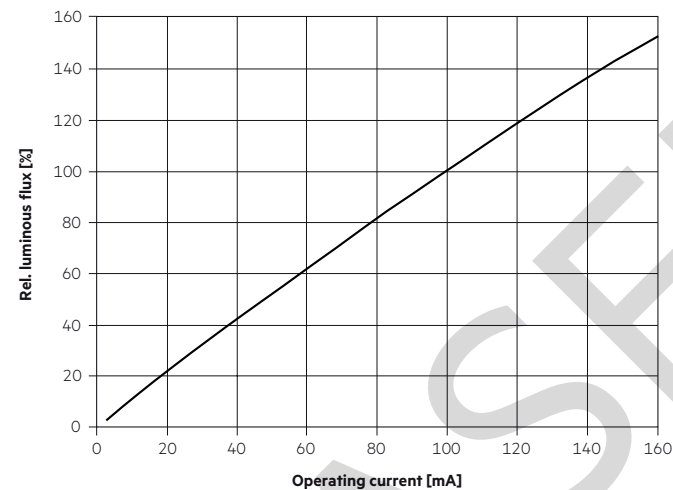


6.4 Relative luminous flux vs. operating current

LLE FLEX CC 14mm 1250lm 8xx ADV1 for one segment (140 mm)



LLE FLEX CC 14mm 1250lm 9xx ADV1 for one segment (140 mm)



The diagrams are based on statistic values.
The real values can be different.

7. Miscellaneous

7.1 Additional information

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

Guarantee conditions at www.tridonic.com → Services

Life-time declarations are informative and represent no warranty claim.