

#### Module SLE G5 EXC

Modules SLE EXCITE

#### Product description

- For spotlights and downlights
- TIM variants for easy and fast assembly
- Housing with Snap-On feature for easy reflector mounting
- 50 mm housing with 35 mm mounting hole distance acc. to Zhaga
- 35 mm housing with 25 mm mounting hole distance acc. to Zhaga
- ENEC and CB certificates for LES10, LES15, LES19 and LES23
- ENEC+ for all module types
- UL certifactes for LES15, LES19 and LES23
- Luminous flux up to 7,430 lm at  $t_p = 65^\circ\text{C}$
- High efficacy up to 155 lm/W for the LED module at  $t_p = 25^\circ\text{C}$
- High system efficacy up to 134 lm/W at  $t_p = 65^\circ\text{C}$
- High colour consistency (MacAdam 3)
- Small LES (light emitting surface) diameter enables small beam angle for spotlights
- Excellent thermal management by COB technology
- Uniform radiation with Dam&Fill technology
- Fixing holes for M3 screws
- Integrated LED module
- Cooling required
- Flexible operating modes
- 5-year guarantee



**Standards**, page 7

**Colour temperatures and tolerances**, page 15



LES19 + LES23 with housing



LES15 D50 with housing



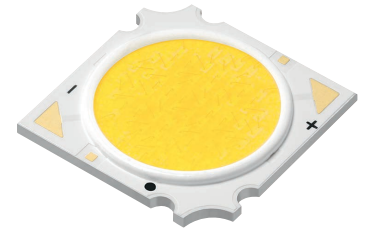
LES15 with housing



LES19 + LES23



LES15



LES6 + LES10 + LES11

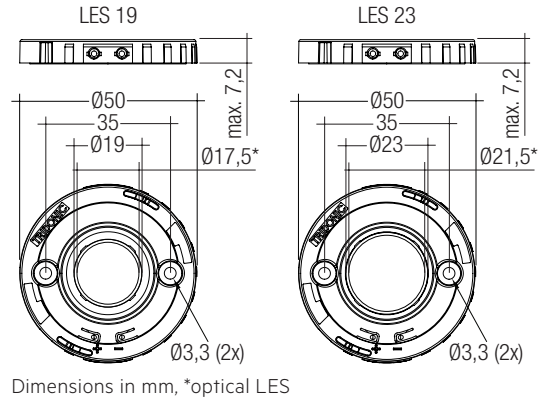




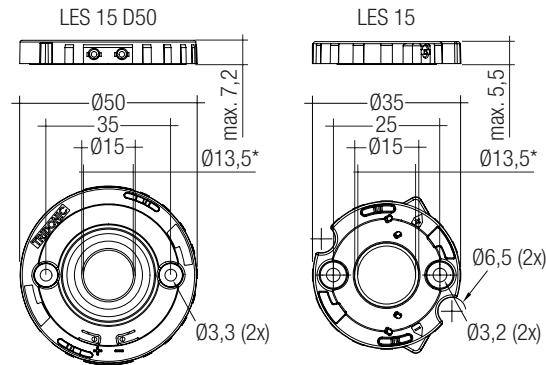
### Module SLE G5 EXC Modules SLE EXCITE

#### Technical data

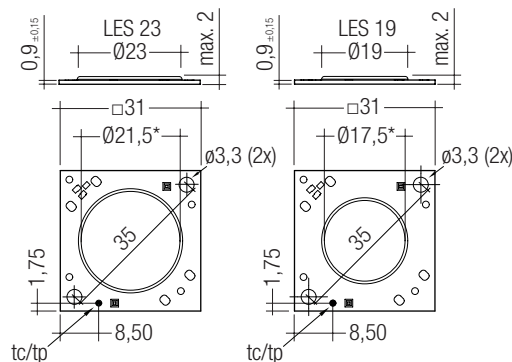
Beam characteristic	115°
Ambient temperature range	-25 ... +50 °C
tp rated	65 °C
tc <sup>①</sup>	Up to 100 °C
Max. allowed Silicontemperature / Tjunction_max	150 °C / 140 °C
Max. DC forward current for LES10 1,200 lm <sup>②</sup>	350 mA
Max. DC forward current for LES15 2,000 lm <sup>②</sup>	500 mA
Max. DC forward current for LES15 3,000 lm <sup>②</sup>	700 mA
Max. DC forward current for LES15 4,000 lm <sup>②</sup>	1400 mA
Max. DC forward current for LES19 <sup>②</sup>	1400 mA
Max. DC forward current for LES23 <sup>②</sup>	1,750 mA
Max. permissible LF current ripple for LES10 1,200 lm	400 mA
Max. permissible LF current ripple for LES15 2,000 lm	630 mA
Max. permissible LF current ripple for LES15 3,000 lm	960 mA
Max. permissible LF current ripple for LES15 4,000 lm	1,680 mA
Max. permissible LF current ripple for LES19	1,680 mA
Max. permissible LF current ripple for LES23	2,400 mA
Max. permissible peak current for LES10 1,200 lm	800 mA / max. 10 ms
Max. permissible peak current for LES15 2,000 lm	1,260 mA / max. 10 ms
Max. permissible peak current for LES15 3,000 lm	1,920 mA / max. 10 ms
Max. permissible peak current for LES15 4,000 lm	3,360 mA / max. 10 ms
Max. permissible peak current for LES19	3,360 mA / max. 10 ms
Max. permissible peak current for LES23	4,800 mA / max. 10 ms
Max. working voltage for insulation nonSELV <sup>③</sup>	50 V
Max. working voltage for insulation SELV for	60 V
LES10, LES15, LES17 <sup>③</sup>	
Max. working voltage for insulation SELV for	75 V
LES19, LES23 <sup>③</sup>	
Insulation test voltage	0.5 kV
ESD classification	Severity level 4
Risk group (EN 62471:2008) for LES10	RG1
Risk group (EN 62471:2008) for LES15	RG1
Risk group (EN 62471:2008) for LES19	RG1
Risk group (EN 62471:2008) for LES23	RG1
Type of protection	IP00



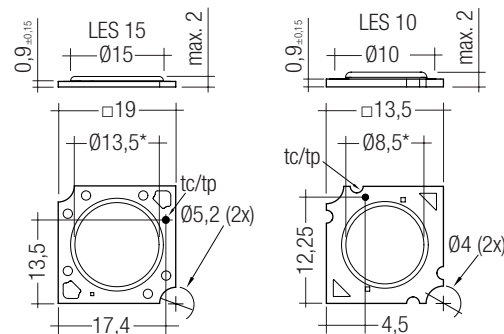
Dimensions in mm, \*optical LES



Dimensions in mm, \*optical LES



Dimensions in mm, \*optical LES



Dimensions in mm, \*optical LES

## Module SLE G5 EXC

## Modules SLE EXCITE

## Ordering data

Type	Article number	Colour temperature	Housing	Thermal interface material	Connection cable	Packaging	Weight per pc.
SLE G5 10mm 1200lm 930 R EXC	28001315	3,000 K	no	no	no	36 pc(s).	0.001 kg
SLE G5 10mm 1200lm 940 R EXC	28001316	4,000 K	no	no	no	36 pc(s).	0.001 kg
SLE G5 15mm 2000lm 927 R EXC	89602265	2,700 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 2000lm 930 R EXC	89602214	3,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 2000lm 935 R EXC	89602266	3,500 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 2000lm 940 R EXC	89602215	4,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 3000lm 927 R EXC	89602267	2,700 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 3000lm 930 R EXC	89602196	3,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 3000lm 935 R EXC	89602268	3,500 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 3000lm 940 R EXC	89602197	4,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 4000lm 927 R EXC	89602269	2,700 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 4000lm 930 R EXC	89602192	3,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 4000lm 935 R EXC	89602270	3,500 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 4000lm 940 R EXC	89602193	4,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 19mm 5000lm 927 R EXC	89602271	2,700 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 19mm 5000lm 930 R EXC	89602204	3,000 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 19mm 5000lm 935 R EXC	89602272	3,500 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 19mm 5000lm 940 R EXC	89602205	4,000 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 23mm 6000lm 927 R EXC	89602381	2,700 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 23mm 6000lm 930 R EXC	89602208	3,000 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 23mm 6000lm 935 R EXC	89602258	3,500 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 23mm 6000lm 940 R EXC	89602209	4,000 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 15mm 2000lm 930 C EXC	89602244	3,000 K	no	no	yes	20 pc(s).	0.004 kg
SLE G5 15mm 2000lm 940 C EXC	89602245	4,000 K	no	no	yes	20 pc(s).	0.004 kg
SLE G5 15mm 3000lm 930 C EXC	89602200	3,000 K	no	no	yes	20 pc(s).	0.004 kg
SLE G5 15mm 3000lm 940 C EXC	89602201	4,000 K	no	no	yes	20 pc(s).	0.004 kg
SLE G5 15mm 4000lm 930 C EXC	89602188	3,000 K	no	no	yes	20 pc(s).	0.004 kg
SLE G5 15mm 4000lm 940 C EXC	89602189	4,000 K	no	no	yes	20 pc(s).	0.004 kg
SLE G5 19mm 5000lm 927 C EXC	89602273	2,700 K	no	no	yes	20 pc(s).	0.008 kg
SLE G5 19mm 5000lm 930 C EXC	89602218	3,000 K	no	no	yes	20 pc(s).	0.008 kg
SLE G5 19mm 5000lm 935 C EXC	89602274	3,500 K	no	no	yes	20 pc(s).	0.008 kg
SLE G5 19mm 5000lm 940 C EXC	89602219	4,000 K	no	no	yes	20 pc(s).	0.008 kg
SLE G5 23mm 6000lm 930 C EXC	89602230	3,000 K	no	no	yes	20 pc(s).	0.008 kg
SLE G5 23mm 6000lm 935 C EXC	89602275	3,500 K	no	no	yes	20 pc(s).	0.008 kg
SLE G5 23mm 6000lm 940 C EXC	89602231	4,000 K	no	no	yes	20 pc(s).	0.008 kg
SLE G5 15mm 2000lm 930 H EXC	89600895	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 2000lm 940 H EXC	89600896	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 3000lm 930 H EXC	89600899	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 3000lm 940 H EXC	89601398	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 3000lm 930 H EXC D50	89602357	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 3000lm 940 H EXC D50	89602358	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 4000lm 930 H EXC	89602300	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 4000lm 940 H EXC	89602301	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 19mm 5000lm 927 H EXC	89602276	2,700 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 930 H EXC	89602222	3,000 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 935 H EXC	89602277	3,500 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 940 H EXC	89602223	4,000 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 927 H EXC	89602400	2,700 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 930 H EXC	89602234	3,000 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 935 H EXC	89602278	3,500 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 940 H EXC	89602235	4,000 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 930 H EXC T	89602226	3,000 K	yes	yes	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 940 H EXC T	89602227	4,000 K	yes	yes	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 930 H EXC T	89602238	3,000 K	yes	yes	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 940 H EXC T	89602239	4,000 K	yes	yes	no	50 pc(s).	0.007 kg

## Specific technical data

Type <sup>①</sup>	Photo-metric code	Forward current	Luminous flux at tp = 25 °C <sup>②</sup>	Luminous flux at tp = 65 °C <sup>②</sup>	Power consumption <sup>③</sup>	Min. forward voltage at tp = 65 °C	Max. forward voltage at tp = 25 °C	Luminous efficacy module at tp = 25 °C	Luminous efficacy module at tp = 65 °C	Luminous efficacy system at tp = 65 °C <sup>④</sup>	Colour rendering index CRI
<b>SLE 10mm 1200lm – Operating mode HE at 250 mA</b>											
SLE G5 10mm 1200lm 930 EXC	930/359	250 mA	980 lm	870 lm	9.2 W	32.7 V	38.3 V	105 lm/W	95 lm/W	86 lm/W	90
SLE G5 10mm 1200lm 940 EXC	940/359	250 mA	1,090 lm	950 lm	9.2 W	32.7 V	38.3 V	117 lm/W	103 lm/W	93 lm/W	90
<b>SLE 10mm 1200lm – Operating mode HO at 350 mA</b>											
SLE G5 10mm 1200lm 930 EXC	930/359	350 mA	1,290 lm	1,130 lm	13.4 W	34.2 V	40.3 V	95 lm/W	84 lm/W	76 lm/W	90
SLE G5 10mm 1200lm 940 EXC	940/359	350 mA	1,420 lm	1,230 lm	13.4 W	34.2 V	40.3 V	104 lm/W	92 lm/W	83 lm/W	90
<b>SLE 15mm 2000lm – Operating mode HE at 180 mA</b>											
SLE G5 15mm 2000lm 927 EXC	927/359	180 mA	800 lm	720 lm	6.3 W	32.7 V	38.5 V	123 lm/W	114 lm/W	103 lm/W	90
SLE G5 15mm 2000lm 930 EXC	930/359	180 mA	800 lm	730 lm	6.3 W	32.7 V	38.5 V	123 lm/W	116 lm/W	104 lm/W	90
SLE G5 15mm 2000lm 935 EXC	935/359	180 mA	810 lm	750 lm	6.3 W	32.7 V	38.5 V	125 lm/W	119 lm/W	107 lm/W	90
SLE G5 15mm 2000lm 940 EXC	940/359	180 mA	830 lm	760 lm	6.3 W	32.7 V	38.5 V	128 lm/W	121 lm/W	109 lm/W	90
<b>SLE 15mm 2000lm – Operating mode NM at 350 mA</b>											
SLE G5 15mm 2000lm 927 EXC	927/359	350 mA	1,420 lm	1,260 lm	13.3 W	35.3 V	41.6 V	104 lm/W	95 lm/W	85 lm/W	90
SLE G5 15mm 2000lm 930 EXC	930/359	350 mA	1,440 lm	1,290 lm	13.3 W	35.3 V	41.6 V	106 lm/W	97 lm/W	87 lm/W	90
SLE G5 15mm 2000lm 935 EXC	935/359	350 mA	1,460 lm	1,310 lm	13.3 W	35.3 V	41.6 V	107 lm/W	98 lm/W	89 lm/W	90
SLE G5 15mm 2000lm 940 EXC	940/359	350 mA	1,500 lm	1,340 lm	13.3 W	35.3 V	41.6 V	110 lm/W	101 lm/W	91 lm/W	90
<b>SLE 15mm 2000lm – Operating mode HO at 500 mA</b>											
SLE G5 15mm 2000lm 927 EXC	927/359	500 mA	1,890 lm	1,650 lm	20.1 W	37.4 V	43.9 V	92 lm/W	82 lm/W	74 lm/W	90
SLE G5 15mm 2000lm 930 EXC	930/359	500 mA	1,940 lm	1,710 lm	20.1 W	37.4 V	43.9 V	95 lm/W	85 lm/W	77 lm/W	90
SLE G5 15mm 2000lm 935 EXC	935/359	500 mA	1,980 lm	1,740 lm	20.1 W	37.4 V	43.9 V	97 lm/W	87 lm/W	78 lm/W	90
SLE G5 15mm 2000lm 940 EXC	940/359	500 mA	2,010 lm	1,770 lm	20.1 W	37.4 V	43.9 V	98 lm/W	88 lm/W	79 lm/W	90
<b>SLE 15mm 3000lm – Operating mode HE at 350 mA</b>											
SLE G5 15mm 3000lm 927 EXC	927/359	350 mA	1,540 lm	1,340 lm	11.9 W	31.7 V	36.8 V	127 lm/W	113 lm/W	101 lm/W	90
SLE G5 15mm 3000lm 930 EXC	930/359	350 mA	1,600 lm	1,440 lm	11.9 W	31.7 V	36.8 V	132 lm/W	121 lm/W	109 lm/W	90
SLE G5 15mm 3000lm 935 EXC	935/359	350 mA	1,695 lm	1,510 lm	11.9 W	31.7 V	36.8 V	140 lm/W	127 lm/W	114 lm/W	90
SLE G5 15mm 3000lm 940 EXC	940/359	350 mA	1,700 lm	1,540 lm	11.9 W	31.7 V	36.8 V	140 lm/W	129 lm/W	116 lm/W	90
<b>SLE 15mm 3000lm – Operating mode NM at 500 mA</b>											
SLE G5 15mm 3000lm 927 EXC	927/359	500 mA	2,110 lm	1,810 lm	17.8 W	33.2 V	38.6 V	117 lm/W	102 lm/W	92 lm/W	90
SLE G5 15mm 3000lm 930 EXC	930/359	500 mA	2,200 lm	1,950 lm	17.8 W	33.2 V	38.6 V	122 lm/W	110 lm/W	99 lm/W	90
SLE G5 15mm 3000lm 935 EXC	935/359	500 mA	2,250 lm	2,040 lm	17.8 W	33.2 V	38.6 V	124 lm/W	115 lm/W	103 lm/W	90
SLE G5 15mm 3000lm 940 EXC	940/359	500 mA	2,340 lm	2,080 lm	17.8 W	33.2 V	38.6 V	129 lm/W	117 lm/W	105 lm/W	90
<b>SLE 15mm 3000lm – Operating mode HO at 700 mA</b>											
SLE G5 15mm 3000lm 927 EXC	927/359	700 mA	2,790 lm	2,350 lm	26.3 W	35.0 V	40.7 V	104 lm/W	89 lm/W	80 lm/W	90
SLE G5 15mm 3000lm 930 EXC	930/359	700 mA	2,920 lm	2,560 lm	26.3 W	35.0 V	40.7 V	109 lm/W	97 lm/W	88 lm/W	90
SLE G5 15mm 3000lm 935 EXC	935/359	700 mA	3,050 lm	2,670 lm	26.3 W	35.0 V	40.7 V	114 lm/W	102 lm/W	91 lm/W	90
SLE G5 15mm 3000lm 940 EXC	940/359	700 mA	3,120 lm	2,730 lm	26.3 W	35.0 V	40.7 V	117 lm/W	104 lm/W	93 lm/W	90
<b>SLE 15mm 4000lm – Operating mode HE at 700 mA</b>											
SLE G5 15mm 4000lm 927 EXC	927/359	700 mA	2,800 lm	2,520 lm	24.3 W	30.5 V	38.0 V	115 lm/W	104 lm/W	93 lm/W	90
SLE G5 15mm 4000lm 930 EXC	930/359	700 mA	2,830 lm	2,620 lm	24.3 W	30.5 V	38.0 V	116 lm/W	108 lm/W	97 lm/W	90
SLE G5 15mm 4000lm 935 EXC	935/359	700 mA	2,900 lm	2,690 lm	24.3 W	30.5 V	38.0 V	119 lm/W	111 lm/W	100 lm/W	90
SLE G5 15mm 4000lm 940 EXC	940/359	700 mA	3,030 lm	2,740 lm	24.3 W	30.5 V	38.0 V	124 lm/W	113 lm/W	101 lm/W	90
<b>SLE 15mm 4000lm – Operating mode NM at 900 mA</b>											
SLE G5 15mm 4000lm 927 EXC	927/359	900 mA	3,490 lm	3,120 lm	32.1 W	32.5 V	40.0 V	108 lm/W	97 lm/W	87 lm/W	90
SLE G5 15mm 4000lm 930 EXC	930/359	900 mA	3,510 lm	3,240 lm	32.1 W	32.5 V	40.0 V	109 lm/W	101 lm/W	91 lm/W	90
SLE G5 15mm 4000lm 935 EXC	935/359	900 mA	3,600 lm	3,300 lm	32.1 W	32.5 V	40.0 V	112 lm/W	103 lm/W	93 lm/W	90
SLE G5 15mm 4000lm 940 EXC	940/359	900 mA	3,770 lm	3,380 lm	32.1 W	32.5 V	40.0 V	117 lm/W	105 lm/W	95 lm/W	90
<b>SLE 15mm 4000lm – Operating mode HO at 1,400 mA</b>											
SLE G5 15mm 4000lm 927 EXC	927/359	1,400 mA	4,990 lm	4,440 lm	53.2 W	34.5 V	42.0 V	94 lm/W	83 lm/W	75 lm/W	90
SLE G5 15mm 4000lm 930 EXC	930/359	1,400 mA	5,010 lm	4,590 lm	53.2 W	34.5 V	42.0 V	94 lm/W	86 lm/W	78 lm/W	90
SLE G5 15mm 4000lm 935 EXC	935/359	1,400 mA	5,200 lm	4,680 lm	53.2 W	34.5 V	42.0 V	98 lm/W	88 lm/W	79 lm/W	90
SLE G5 15mm 4000lm 940 EXC	940/359	1,400 mA	5,410 lm	4,790 lm	53.2 W	34.5 V	42.0 V	102 lm/W	90 lm/W	81 lm/W	90

① See derating curves in data sheet section 2.3.

② Max. DC forward current varies over the temperature of the LED module. See derating curves in data sheet section 2.3.

③ The detailed explanation, see data sheet section 3.1.

④ Tolerance range for optical and electrical data: ±10 %.

⑤ Assumed efficiency for the LED Driver is 0.9.

⑥ All values at tp = 65 °C.

⑦ HE ... high efficiency, NM ... nominal mode, HO ... high output.

## Specific technical data

Type <sup>Ⓢ</sup>	Photo-metric code	Forward current	Luminous flux at tp = 25 °C <sup>Ⓣ</sup>	Luminous flux at tp = 65 °C <sup>Ⓣ</sup>	Power consumption <sup>Ⓣ</sup>	Min. forward voltage at tp = 65 °C	Max. forward voltage at tp = 25 °C	Luminous efficacy module at tp = 25 °C	Luminous efficacy module at tp = 65 °C	Luminous efficacy system at tp = 65 °C <sup>Ⓣ</sup>	Colour rendering index CRI
<b>SLE 19mm 5000lm – Operating mode HE at 500 mA</b>											
SLE G5 19mm 5000lm 927 EXC	927/359	500 mA	2,290 lm	2,120 lm	16.6 W	31.0 V	36.1 V	136 lm/W	128 lm/W	115 lm/W	90
SLE G5 19mm 5000lm 930 EXC	930/359	500 mA	2,410 lm	2,260 lm	16.6 W	31.0 V	36.1 V	143 lm/W	136 lm/W	123 lm/W	90
SLE G5 19mm 5000lm 935 EXC	935/359	500 mA	2,480 lm	2,320 lm	16.6 W	31.0 V	36.1 V	147 lm/W	140 lm/W	126 lm/W	90
SLE G5 19mm 5000lm 940 EXC	940/359	500 mA	2,580 lm	2,440 lm	16.6 W	31.0 V	36.1 V	153 lm/W	147 lm/W	132 lm/W	90
<b>SLE 19mm 5000lm – Operating mode NM at 1,050 mA</b>											
SLE G5 19mm 5000lm 927 EXC	927/359	1,050 mA	4,360 lm	3,960 lm	38.4 W	34.1 V	39.8 V	112 lm/W	103 lm/W	93 lm/W	90
SLE G5 19mm 5000lm 930 EXC	930/359	1,050 mA	4,640 lm	4,250 lm	38.4 W	34.1 V	39.8 V	119 lm/W	111 lm/W	100 lm/W	90
SLE G5 19mm 5000lm 935 EXC	935/359	1,050 mA	4,730 lm	4,320 lm	38.4 W	34.1 V	39.8 V	121 lm/W	113 lm/W	101 lm/W	90
SLE G5 19mm 5000lm 940 EXC	940/359	1,050 mA	4,970 lm	4,610 lm	38.4 W	34.1 V	39.8 V	127 lm/W	120 lm/W	108 lm/W	90
<b>SLE 19mm 5000lm – Operating mode HO at 1,400 mA</b>											
SLE G5 19mm 5000lm 927 EXC	927/359	1,400 mA	5,200 lm	4,900 lm	54.0 W	36.0 V	41.8 V	95 lm/W	91 lm/W	82 lm/W	90
SLE G5 19mm 5000lm 930 EXC	930/359	1,400 mA	5,850 lm	5,270 lm	54.0 W	36.0 V	41.8 V	107 lm/W	98 lm/W	88 lm/W	90
SLE G5 19mm 5000lm 935 EXC	935/359	1,400 mA	5,950 lm	5,320 lm	54.0 W	36.0 V	41.8 V	109 lm/W	99 lm/W	89 lm/W	90
SLE G5 19mm 5000lm 940 EXC	940/359	1,400 mA	6,280 lm	5,720 lm	54.0 W	36.0 V	41.8 V	115 lm/W	106 lm/W	95 lm/W	90
<b>SLE 23mm 6000lm – Operating mode HE at 700 mA</b>											
SLE G5 23mm 6000lm 927 EXC	927/359	700 mA	3,160 lm	2,940 lm	23.3 W	30.9 V	36.0 V	133 lm/W	126 lm/W	114 lm/W	90
SLE G5 23mm 6000lm 930 EXC	930/359	700 mA	3,440 lm	3,260 lm	23.3 W	30.9 V	36.0 V	145 lm/W	140 lm/W	126 lm/W	90
SLE G5 23mm 6000lm 935 EXC	935/359	700 mA	3,550 lm	3,280 lm	23.3 W	30.9 V	36.0 V	150 lm/W	141 lm/W	127 lm/W	90
SLE G5 23mm 6000lm 940 EXC	940/359	700 mA	3,680 lm	3,480 lm	23.3 W	30.9 V	36.0 V	155 lm/W	149 lm/W	134 lm/W	90
<b>SLE 23mm 6000lm – Operating mode NM at 1,400 mA</b>											
SLE G5 23mm 6000lm 927 EXC	927/359	1,400 mA	5,860 lm	5,330 lm	50.7 W	33.7 V	39.3 V	114 lm/W	105 lm/W	95 lm/W	90
SLE G5 23mm 6000lm 930 EXC	930/359	1,400 mA	6,350 lm	5,900 lm	50.7 W	33.7 V	39.3 V	124 lm/W	116 lm/W	105 lm/W	90
SLE G5 23mm 6000lm 935 EXC	935/359	1,400 mA	6,620 lm	5,940 lm	50.7 W	33.7 V	39.3 V	129 lm/W	117 lm/W	105 lm/W	90
SLE G5 23mm 6000lm 940 EXC	940/359	1,400 mA	6,780 lm	6,290 lm	50.7 W	33.7 V	39.3 V	132 lm/W	124 lm/W	112 lm/W	90
<b>SLE 23mm 6000lm – Operating mode HO at 1,750 mA</b>											
SLE G5 23mm 6000lm 927 EXC	927/359	1,750 mA	7,050 lm	6,350 lm	65.8 W	35.0 V	40.7 V	105 lm/W	97 lm/W	87 lm/W	90
SLE G5 23mm 6000lm 930 EXC	930/359	1,750 mA	7,620 lm	7,000 lm	65.8 W	35.0 V	40.7 V	114 lm/W	106 lm/W	96 lm/W	90
SLE G5 23mm 6000lm 935 EXC	935/359	1,750 mA	7,980 lm	7,050 lm	65.8 W	35.0 V	40.7 V	119 lm/W	107 lm/W	96 lm/W	90
SLE G5 23mm 6000lm 940 EXC	940/359	1,750 mA	8,140 lm	7,430 lm	65.8 W	35.0 V	40.7 V	122 lm/W	113 lm/W	102 lm/W	90

<sup>Ⓢ</sup> See derating curves in data sheet section 2.3.

<sup>Ⓣ</sup> Max. DC forward current varies over the temperature of the LED module. See derating curves in data sheet section 2.3.

<sup>Ⓤ</sup> The detailed explanation, see data sheet section 3.1.

<sup>Ⓦ</sup> Tolerance range for optical and electrical data: ±10 %.

<sup>Ⓧ</sup> Assumed efficiency for the LED Driver is 0.9.

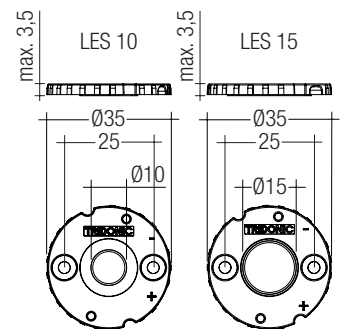
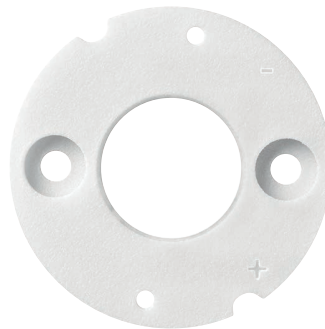
<sup>Ⓨ</sup> All values at tp = 65 °C.

<sup>Ⓩ</sup> HE ... high efficiency, NM ... nominal mode, HO ... high output.

## SLE housing for LES 10 / LES 15

**Product description**

- Housing for LES 10 / LES 15
- Diameter: 35 mm
- Material: Lexan Resin 943

**Ordering data**

Type	Article number	Packaging bag	Weight per pc.
SLE housing for LES 10	28001038	100 pc(s).	0.002 kg
SLE housing for LES 15	28001039	100 pc(s).	0.002 kg

## 1. Standards

EN 62031  
 EN 62471  
 IEC 62717  
 IEC 61000-4-2  
 UL 8750 - certificate number: E366084

### 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. 930 / 359

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

Type	Forward current	Energy classification
SLE G5 10mm 1200lm 930 EXC	250 mA	A+
	350 mA	A
SLE G5 10mm 1200lm 940 EXC	250 mA	A+
	350 mA	A+
SLE G5 15mm 2000lm 927 EXC	180 mA	A+
	350 mA	A+
SLE G5 15mm 2000lm 930 EXC	500 mA	A
	180 mA	A+
SLE G5 15mm 2000lm 935 EXC	350 mA	A+
	500 mA	A
SLE G5 15mm 2000lm 940 EXC	180 mA	A+
	350 mA	A+
SLE G5 15mm 2000lm 940 EXC	500 mA	A
	350 mA	A+
SLE G5 15mm 3000lm 927 EXC	500 mA	A+
	700 mA	A+
SLE G5 15mm 3000lm 930 EXC	350 mA	A+
	500 mA	A+
SLE G5 15mm 3000lm 935 EXC	700 mA	A+
	350 mA	A+
SLE G5 15mm 3000lm 940 EXC	500 mA	A+
	700 mA	A+
SLE G5 15mm 3000lm 940 EXC	700 mA	A+
	700 mA	A+
SLE G5 15mm 4000lm 927 EXC	900 mA	A+
	1400 mA	A
SLE G5 15mm 4000lm 930 EXC	700 mA	A+
	900 mA	A+
SLE G5 15mm 4000lm 930 EXC	1400 mA	A
	700 mA	A+
SLE G5 15mm 4000lm 935 EXC	900 mA	A+
	1400 mA	A
SLE G5 15mm 4000lm 940 EXC	700 mA	A+
	900 mA	A+
SLE G5 15mm 4000lm 940 EXC	1400 mA	A+
	500 mA	A+
SLE G5 19mm 5000lm 927 EXC	1,050 mA	A+
	1400 mA	A+
SLE G5 19mm 5000lm 930 EXC	500 mA	A+
	1,050 mA	A+
SLE G5 19mm 5000lm 930 EXC	1400 mA	A+
	500 mA	A++
SLE G5 19mm 5000lm 935 EXC	1,050 mA	A+
	1400 mA	A+
SLE G5 19mm 5000lm 940 EXC	500 mA	A++
	1,050 mA	A+
SLE G5 19mm 5000lm 940 EXC	1400 mA	A+
	700 mA	A+
SLE G5 23mm 6000lm 927 EXC	1400 mA	A+
	1,750 mA	A+
SLE G5 23mm 6000lm 930 EXC	700 mA	A++
	1400 mA	A+
SLE G5 23mm 6000lm 930 EXC	1,750 mA	A+
	700 mA	A++
SLE G5 23mm 6000lm 935 EXC	1400 mA	A+
	1,750 mA	A+
SLE G5 23mm 6000lm 940 EXC	700 mA	A++
	1400 mA	A+
SLE G5 23mm 6000lm 940 EXC	1,750 mA	A+
	700 mA	A+

## 2. Thermal details

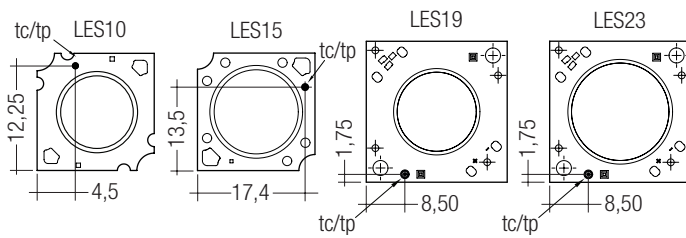
### 2.1 tp point, ambient temperature and life-time

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

For SLE G5 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 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.

To check the tc / tp temperature, the temperature sensor has to be mounted on the PCB at the marked position as stated in the drawing.



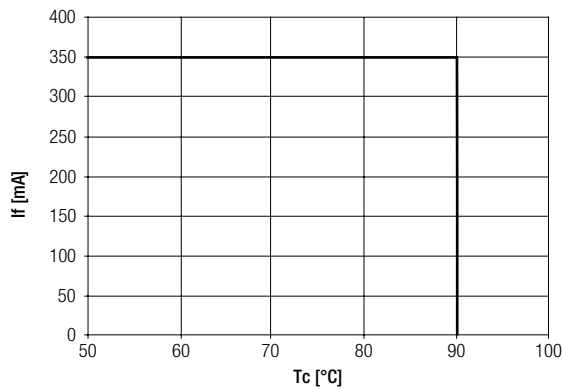
### 2.2 Storage and humidity

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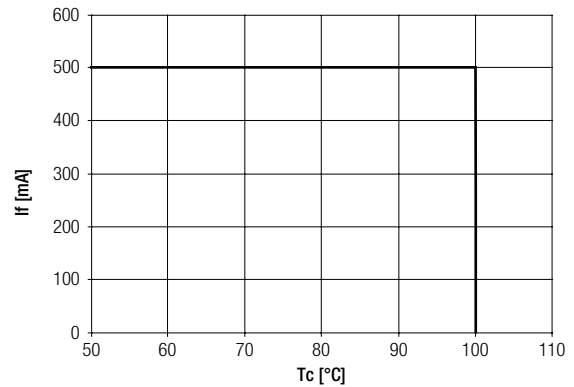
Operation only in non condensing environment.  
Humidity during processing of the module should be between 30 to 70 %.

### 2.3 Derating curves

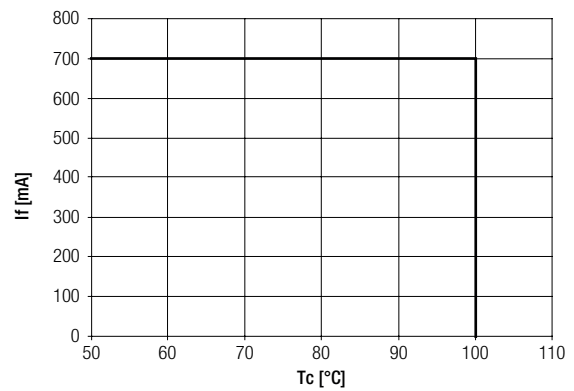
#### SLE G5 10mm 1200lm 9xx EXCITE



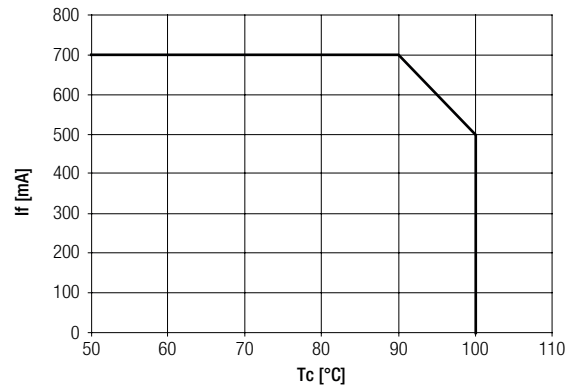
#### SLE G5 15mm 2000lm 9xx EXCITE



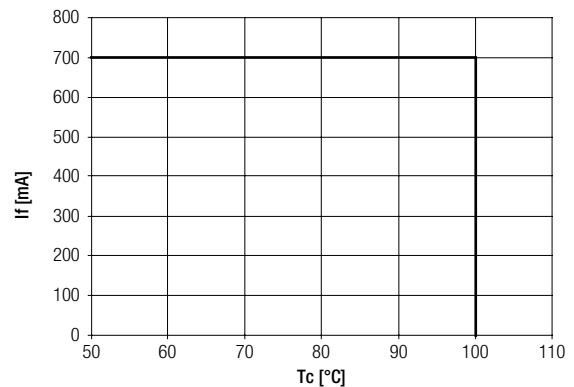
#### SLE G5 15mm 3000lm 927 EXCITE



#### SLE G5 15mm 3000lm 930 EXCITE

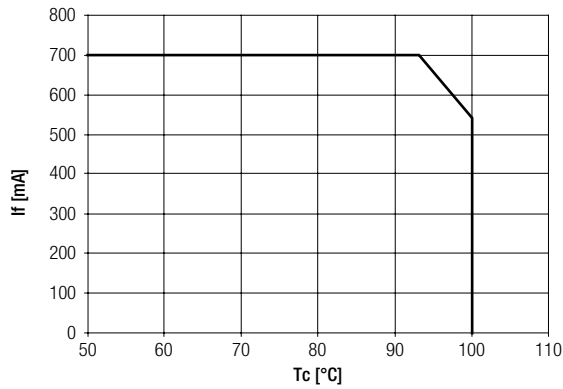


#### SLE G5 15mm 3000lm 935 EXCITE

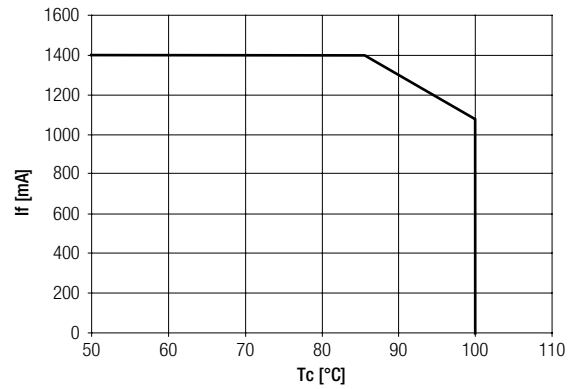




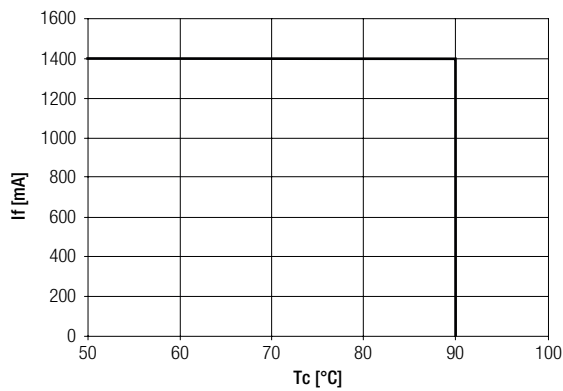
SLE G5 15mm 3000lm 940 EXCITE



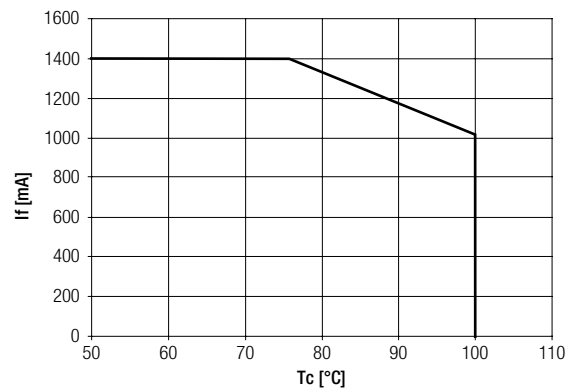
SLE G5 19mm 5000lm 935 EXCITE



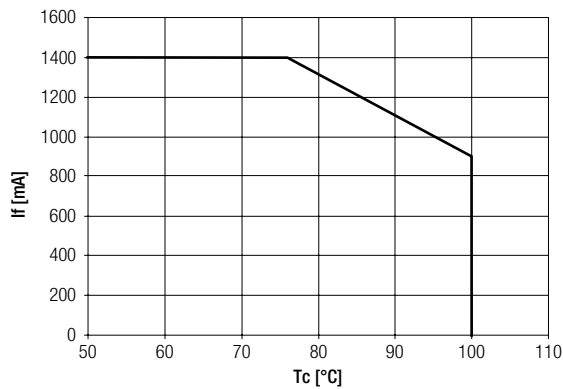
SLE G5 15mm 4000lm 9xx EXCITE



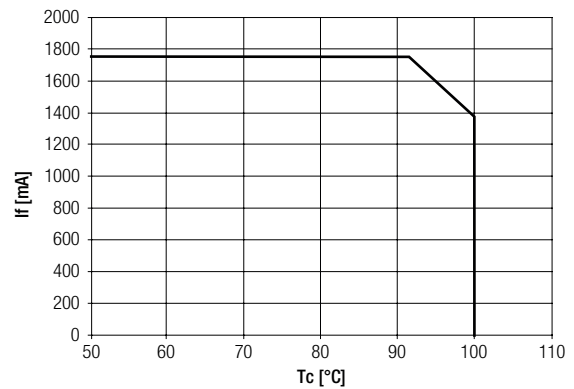
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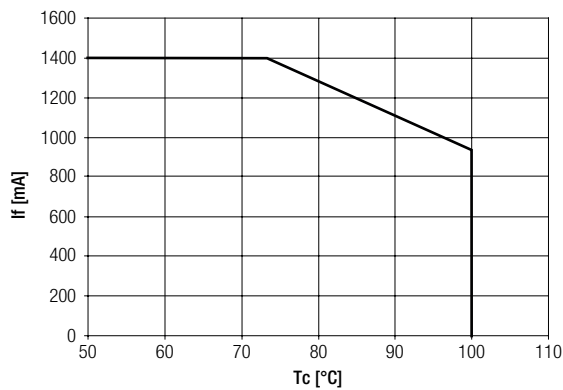
SLE G5 19mm 5000lm 927 EXCITE



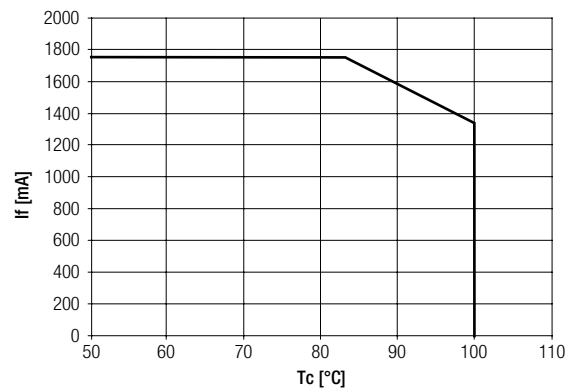
SLE G5 23mm 6000lm 927 EXCITE

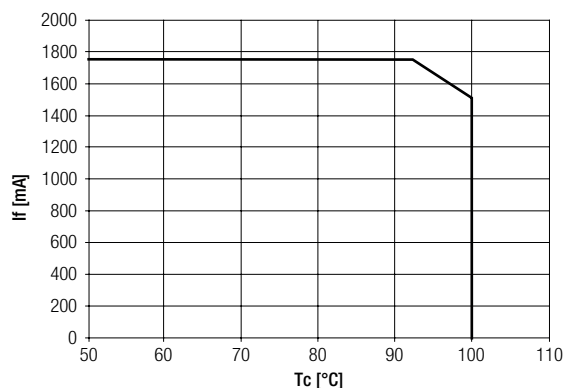
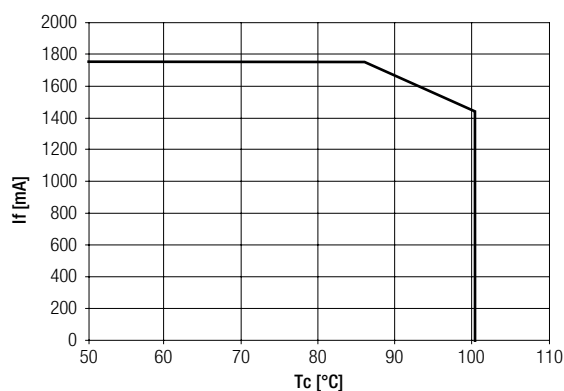


SLE G5 19mm 5000lm 930 EXCITE



SLE G5 23mm 6000lm 930 EXCITE



**SLE G5 23mm 6000lm 935 EXCITE****SLE G5 23mm 6000lm 940 EXCITE****2.4 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 SLE G5 will be greatly reduced or the SLE G5 may be destroyed.

**2.5 Heat sink values****SLE G5 10mm 1200lm 9xx EXCITE**

ta	tp	Operating current	Rth, hs-a
25°C	65°C	250 mA	6,21 K/W
30°C	65°C	250 mA	5,40 K/W
40°C	65°C	250 mA	3,77 K/W
50°C	65°C	250 mA	2,14 K/W
25°C	65°C	350 mA	3,90 K/W
30°C	65°C	350 mA	3,38 K/W
40°C	65°C	350 mA	2,33 K/W
50°C	65°C	350 mA	1,27 K/W

**SLE G5 15mm 2000lm 9xx EXCITE**

ta	tp	Operating current	Rth, hs-a
25°C	65°C	180 mA	10,28 K/W
30°C	65°C	180 mA	8,96 K/W
40°C	65°C	180 mA	6,31 K/W
50°C	65°C	180 mA	3,66 K/W
25°C	65°C	350 mA	4,24 K/W
30°C	65°C	350 mA	3,67 K/W
40°C	65°C	350 mA	2,53 K/W
50°C	65°C	350 mA	1,40 K/W
25°C	65°C	500 mA	2,52 K/W
30°C	65°C	500 mA	2,17 K/W
40°C	65°C	500 mA	1,46 K/W
50°C	65°C	500 mA	0,75 K/W

**SLE G5 15mm 3000lm 9xx EXCITE**

ta	tp	Operating current	Rth, hs-a
25°C	65°C	350 mA	5,35 K/W
30°C	65°C	350 mA	4,64 K/W
40°C	65°C	350 mA	3,23 K/W
50°C	65°C	350 mA	1,81 K/W
25°C	65°C	500 mA	3,24 K/W
30°C	65°C	500 mA	2,80 K/W
40°C	65°C	500 mA	1,91 K/W
50°C	65°C	500 mA	1,02 K/W
25°C	65°C	700 mA	1,95 K/W
30°C	65°C	700 mA	1,67 K/W
40°C	65°C	700 mA	1,10 K/W
50°C	65°C	700 mA	0,54 K/W

**SLE G5 15mm 4000lm 9xx EXCITE**

ta	tp	Operating current	Rth, hs-a
25°C	65°C	700 mA	2,37 K/W
30°C	65°C	700 mA	2,03 K/W
40°C	65°C	700 mA	1,36 K/W
50°C	65°C	700 mA	0,70 K/W
25°C	65°C	900 mA	1,64 K/W
30°C	65°C	900 mA	1,39 K/W
40°C	65°C	900 mA	0,91 K/W
50°C	65°C	900 mA	0,42 K/W
25°C	65°C	1,400 mA	0,78 K/W
30°C	65°C	1,400 mA	0,64 K/W
40°C	65°C	1,400 mA	0,37 K/W
50°C	65°C	1,400 mA	0,10 K/W

**SLE G5 19mm 5000lm 9xx EXCITE**

ta	tp	Operating current	Rth, hs-a
25°C	65°C	500 mA	4,27 K/W
30°C	65°C	500 mA	3,72 K/W
40°C	65°C	500 mA	2,63 K/W
50°C	65°C	500 mA	1,53 K/W
25°C	65°C	1,050 mA	1,54 K/W
30°C	65°C	1,050 mA	1,33 K/W
40°C	65°C	1,050 mA	0,92 K/W
50°C	65°C	1,050 mA	0,50 K/W
25°C	65°C	1,400 mA	0,98 K/W
30°C	65°C	1,400 mA	0,85 K/W
40°C	65°C	1,400 mA	0,57 K/W
50°C	65°C	1,400 mA	0,30 K/W

**SLE G5 23mm 6000lm 9xx EXCITE**

ta	tp	Operating current	Rth, hs-a
25°C	65°C	700 mA	3,12 K/W
30°C	65°C	700 mA	2,72 K/W
40°C	65°C	700 mA	1,91 K/W
50°C	65°C	700 mA	1,10 K/W
25°C	65°C	1,400 mA	1,17 K/W
30°C	65°C	1,400 mA	1,01 K/W
40°C	65°C	1,400 mA	0,69 K/W
50°C	65°C	1,400 mA	0,37 K/W
25°C	65°C	1,750 mA	0,82 K/W
30°C	65°C	1,750 mA	0,71 K/W
40°C	65°C	1,750 mA	0,47 K/W
50°C	65°C	1,750 mA	0,24 K/W

**Notes**

The actual cooling can differ because of the material, the structural shape, outside influences and the installation situation. A thermal connection between SLE G5 and heat sink with heat-conducting paste or heat conducting adhesive film is absolutely necessary.

Additionally the SLE G5 has to be fixed on the heat sink with M3 screws to optimise the thermal connection.

Use of thermal interface material with thermal conductivity of  $\lambda > 1 \text{ W/mK}$  and layer thickness of interface material with max.  $50 \mu\text{m}$  or a similar interface material where the quotient of layer thickness and thermal conductivity  $b < 50 \mu\text{mmK/W}$ .

The SLE G5 TIM modules will be delivered with thermal interface foil of type Tgard 3000.

The bottom side of the thermal pad is glued to the module, the upper side is not adhesive. This makes it easier to position the module when it is connected to the heat sink.



The thermal pad is an integral part of the "TIM" module and must not be confused with a protective foil. The thermal pad must not be pulled off!

For further information about the thermal interface foil please refer to the data sheet of the product Tgard 3000.

**3. Installation / wiring****3.1 Electrical supply/choice of LED Driver**

SLE G5 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 SLE G5 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

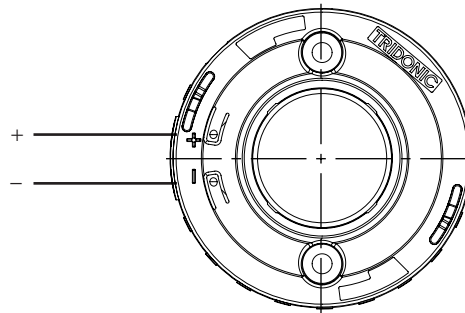
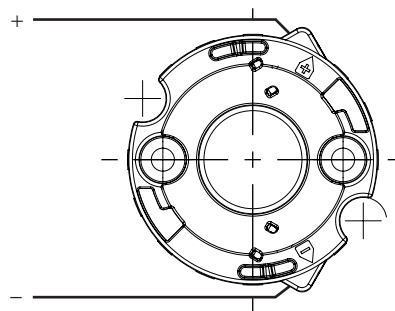


SLE G5 must be supplied by a constant current LED Driver. Operation with a constant voltage LED Driver will lead to an irreversible damage of the module. Wrong polarity can damage the SLE G5.

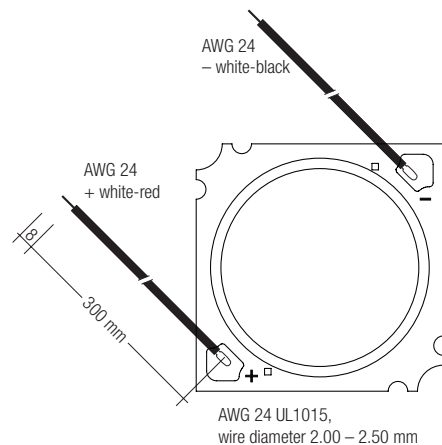


SLE G5 are basic isolated up to 75 V SELV (LES19 and LES23) / 60 V SELV (LES10, LES15 and LES17) / 50 V nonSELV against ground and can be mounted directly on earthed metal parts of the luminaire. If the max. output voltage of the LED Driver (also against earth) is above 75 V SELV (LES19 and LES23) / 60 V SELV (LES10, LES15 and LES17) / 50 V nonSELV, an additional isolation between LED module and heat sink is required (for example by isolated thermal pads) or by a suitable luminaire construction.

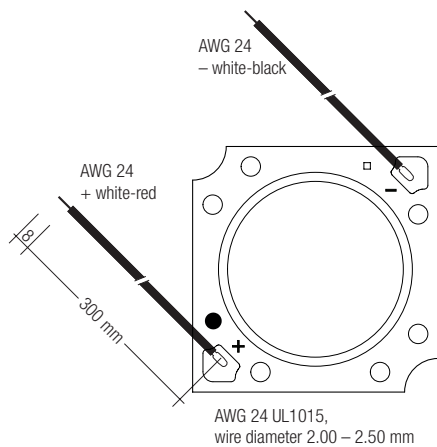
At voltages  $> 60 \text{ V}$  an additional protection against direct touch (test finger) to the light emitting side of the module has to be guaranteed. This is typically achieved by means of a non removable light distributor over the module.

**3.2 Wiring****Wiring with housing (LES15 D50, LES19 and LES23)****Wiring with housing (LES15)****Wiring without housing**

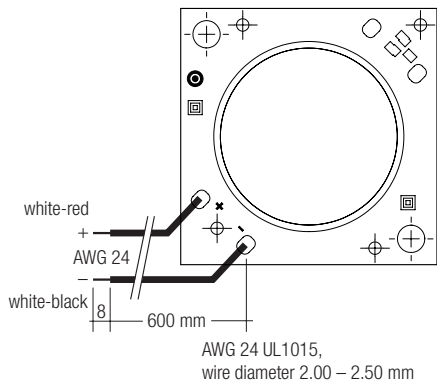
LES10



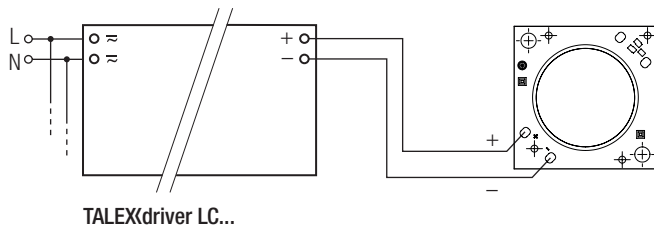
LES15



LES19 and LES23



**Wiring example**

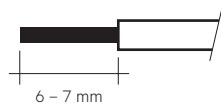


**3.3 Wiring type and cross section**

The wiring has to be solid cable with a cross section of 0.5 to 0.75 mm<sup>2</sup> or with stranded wire with soldered ends with a cross section of 0.5 mm<sup>2</sup>. For the push-wire connection you have to strip the insulation (6 – 7 mm).

Loosen wire through twisting and pulling.

wire preparation:



**3.4 Mounting instruction**



SLE G5 from Tridonic which have to be installed on a heat sink have to be connected with heat-conducting paste or heat conducting adhesive film and fixed with M3 screws. The fixing/cooling surface must be cleaned by removing all dirt, dust and grease before installing the LED modules.

None of the components of the SLE G5 (substrate, LED, electronic components etc.) may be exposed to tensile or compressive stresses.



Max. torque for fixing: 0.5 Nm.

The LED modules are mounted with 2 screws per module. In order not to damage the modules only rounded head screws and an additional plastic flat washer should be used for LED modules without housing.

For further information please refer to the brochure entitled "Technical Design-In-Guide SLE GEN5".



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.

For further information for EOS/ESD safety guidelines and the ESD classification please refer to the brochure entitled <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

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

#### SLE G5 10mm 1200lm 9xx EXCITE

Operating current	tp temperature	L80 / F10	L80 / F50	L70 / F10	L70 / F50
250 mA	65 °C	42,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	37,000 h	55,000 h	59,000 h	>60,000 h
	85 °C	32,000 h	49,000 h	52,000 h	>60,000 h
350 mA	65 °C	36,000 h	54,000 h	57,000 h	>60,000 h
	75 °C	31,000 h	47,000 h	50,000 h	>60,000 h
	85 °C	27,000 h	41,000 h	44,000 h	>60,000 h

#### SLE G5 15mm 2000lm 9xx EXCITE

Operating current	tp temperature	L80 / F10	L80 / F50	L70 / F10	L70 / F50
180 mA	65 °C	51,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	44,000 h	>60,000 h	>60,000 h	>60,000 h
	85 °C	39,000 h	58,000 h	>60,000 h	>60,000 h
350 mA	65 °C	43,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	38,000 h	57,000 h	>60,000 h	>60,000 h
	85 °C	33,000 h	50,000 h	53,000 h	>60,000 h
500 mA	65 °C	37,000 h	55,000 h	59,000 h	>60,000 h
	75 °C	32,000 h	48,000 h	51,000 h	>60,000 h
	85 °C	28,000 h	42,000 h	45,000 h	>60,000 h

#### SLE G5 15mm 3000lm 9xx EXCITE

Operating current	tp temperature	L80 / F10	L80 / F50	L70 / F10	L70 / F50
350 mA	65 °C	49,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	43,000 h	>60,000 h	>60,000 h	>60,000 h
	85 °C	38,000 h	56,000 h	>60,000 h	>60,000 h
500 mA	65 °C	45,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	39,000 h	59,000 h	>60,000 h	>60,000 h
	85 °C	34,000 h	52,000 h	55,000 h	>60,000 h
700 mA	65 °C	40,000 h	59,000 h	>60,000 h	>60,000 h
	75 °C	35,000 h	52,000 h	55,000 h	>60,000 h
	85 °C	30,000 h	46,000 h	49,000 h	>60,000 h

#### SLE G5 15mm 4000lm 9xx EXCITE

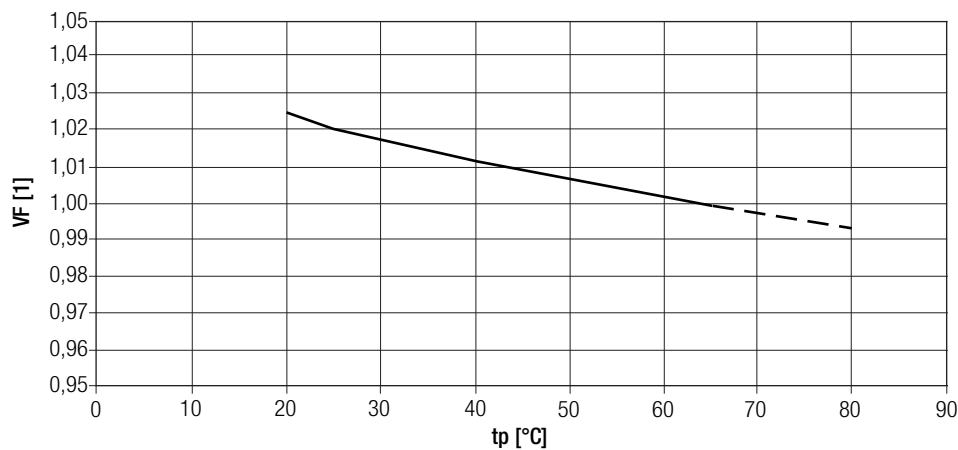
Operating current	tp temperature	L80 / F10	L80 / F50	L70 / F10	L70 / F50
700 mA	65 °C	48,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	42,000 h	>60,000 h	>60,000 h	>60,000 h
	85 °C	37,000 h	55,000 h	58,000 h	>60,000 h
900 mA	65 °C	45,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	39,000 h	58,000 h	>60,000 h	>60,000 h
	85 °C	34,000 h	51,000 h	55,000 h	>60,000 h
1,400 mA	65 °C	37,000 h	55,000 h	59,000 h	>60,000 h
	75 °C	32,000 h	48,000 h	51,000 h	>60,000 h
	85 °C	28,000 h	42,000 h	45,000 h	>60,000 h

**SLE G5 19mm 5000lm 9xxx EXCITE**

Operating current	tp temperature	L80 / F10	L80 / F50	L70 / F10	L70 / F50
500 mA	65 °C	51,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	44,000 h	>60,000 h	>60,000 h	>60,000 h
	85 °C	39,000 h	58,000 h	>60,000 h	>60,000 h
1,050 mA	65 °C	42,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	37,000 h	55,000 h	59,000 h	>60,000 h
	85 °C	32,000 h	49,000 h	52,000 h	>60,000 h
1,400 mA	65 °C	37,000 h	55,000 h	59,000 h	>60,000 h
	75 °C	32,000 h	48,000 h	51,000 h	>60,000 h
	85 °C	28,000 h	42,000 h	45,000 h	>60,000 h

**SLE G5 23mm 6000lm 9xx EXCITE**

Operating current	tp temperature	L80 / F10	L80 / F50	L70 / F10	L70 / F50
700 mA	65 °C	51,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	44,000 h	>60,000 h	>60,000 h	>60,000 h
	85 °C	39,000 h	58,000 h	>60,000 h	>60,000 h
1,400 mA	65 °C	43,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	38,000 h	57,000 h	>60,000 h	>60,000 h
	85 °C	33,000 h	50,000 h	53,000 h	>60,000 h
1,750 mA	65 °C	40,000 h	59,000 h	>60,000 h	>60,000 h
	75 °C	35,000 h	52,000 h	55,000 h	>60,000 h
	85 °C	30,000 h	46,000 h	49,000 h	>60,000 h

**5. Electrical values****5.1 Forward voltage vs. tp temperature**

The diagrams 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 measured integral after a settling time of 100 ms. The current impuls depends on the module type.

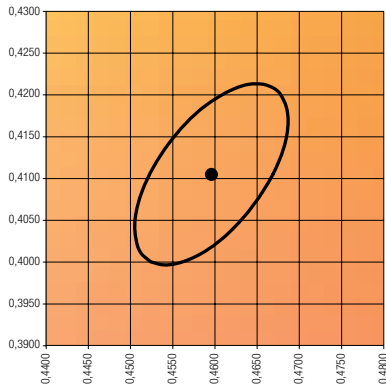
Module type	Current impulse
TALEXmodule SLE G5 10mm 1200lm 9xx EXC	350 mA
TALEXmodule SLE G5 15mm 2000lm 9xx EXC	500 mA
TALEXmodule SLE G5 15mm 3000lm 9xx EXC	500 mA
TALEXmodule SLE G5 15mm 4000lm 9xx EXC	900 mA
TALEXmodule SLE G5 19mm 5000lm 9xx EXC	1,050 mA
TALEXmodule SLE G5 23mm 6000lm 9xx EXC	1,400 mA

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

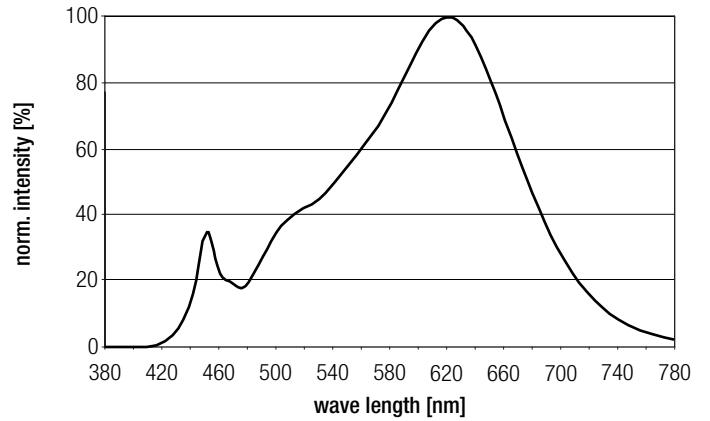
The measurement tolerance of the colour coordinates are  $\pm 0.01$ .

#### 2,700 K

	x0	y0
Centre	0.4599	0.4106

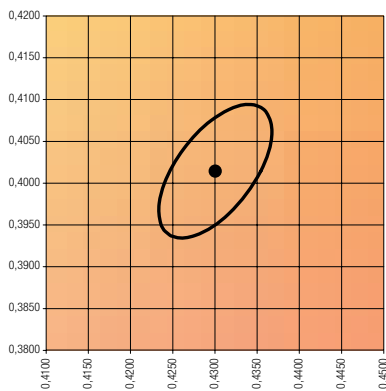


MacAdam ellipse: 3SDCM

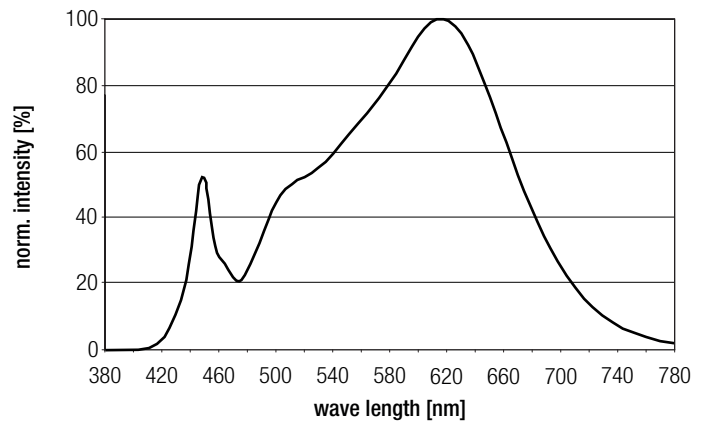


#### 3,000 K

	x0	y0
Centre	0.4300	0.4016

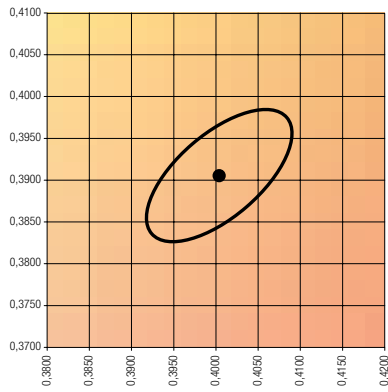


MacAdam ellipse: 3SDCM

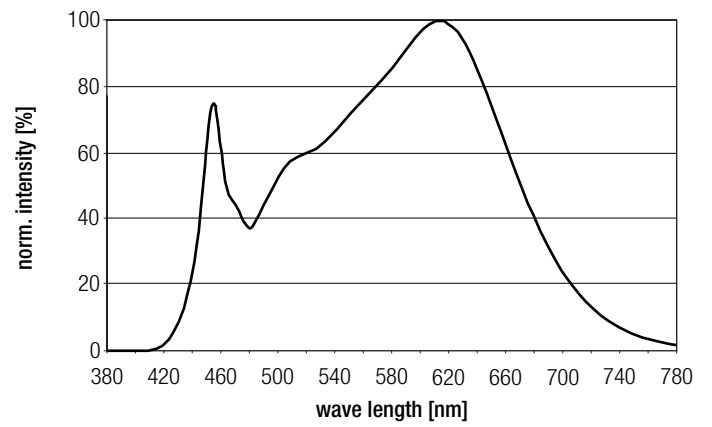


**3,500 K**

	x0	y0
Centre	0.4053	0.3907

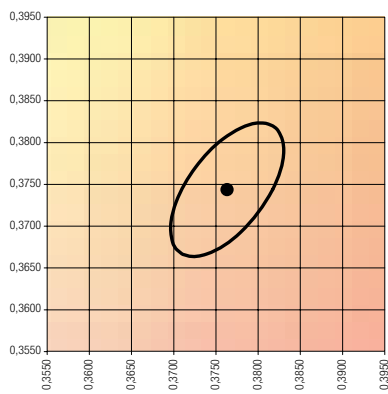


MacAdam ellipse: 3SDCM

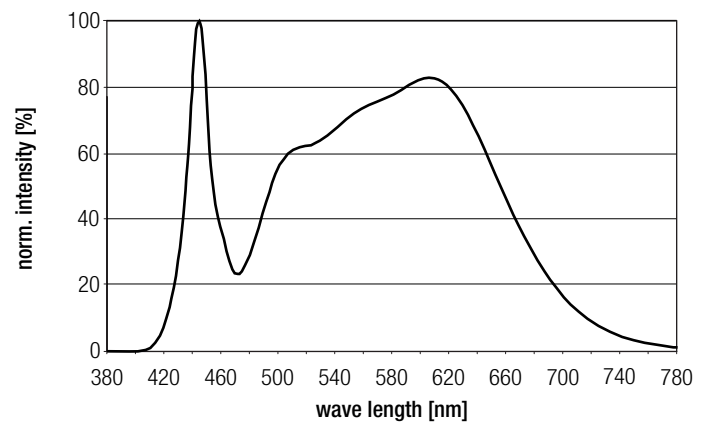


**4,000 K**

	x0	y0
Centre	0.3761	0.3740



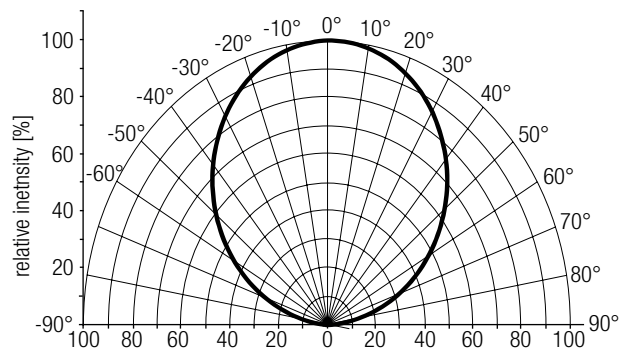
MacAdam ellipse: 3SDCM





## 6.2 Light distribution

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



For further information see Design-in Guide, 3D data and photometric data on [www.tridonic.com](http://www.tridonic.com) or on request.

## 6.3 Relative luminous flux vs. tp temperature

