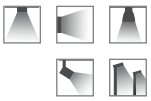


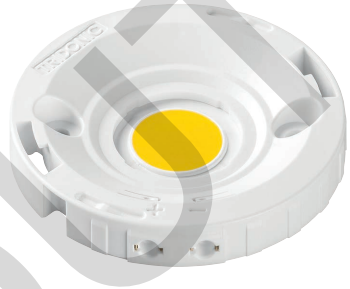
Module SLE G5 ADV
Modules SLE ADVANCED

Product description

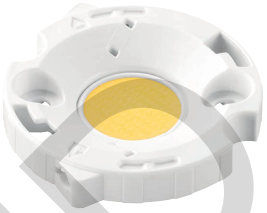
- For spotlights and downlights
- TIM variants for easy and fast assembly
- Housing with Snap-On feature for easy reflector mounting
- 50 mm housing with 35 mm mounting hole distance acc. to Zhaga
- 35 mm housing with 25 mm mounting hole distance acc. to Zhaga
- ENEC and CB certificates for LES10, LES15, LES19 and LES23
- ENEC+ for all module types except for LES23 2,700 K
- UL certifactes for LES15, LES19 and LES23
- Luminous flux up to 8,440 lm at tp = 65 °C
- High efficacy up to 173 lm/W for the LED module at tp = 25 °C
- High system efficacy up to 150 lm/W at tp = 65 °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 8
Colour temperatures and tolerances, page 16

LES19 + LES23 with housing



LES15 D50 with housing



LES15 with housing

LES19 + LES23

LES15

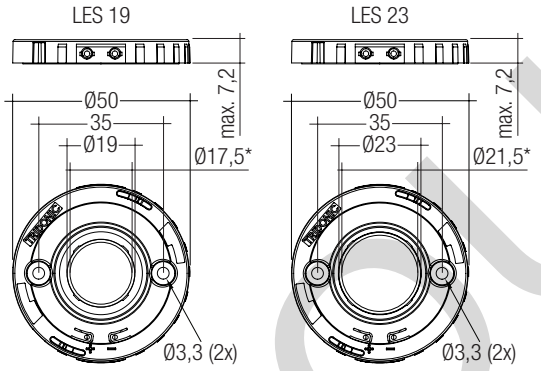
LES6 + LES10 + LES11

RoHS

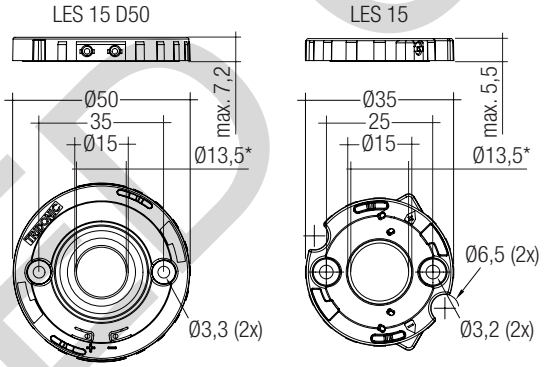
Module SLE G5 ADV
Modules SLE ADVANCED

Technical data

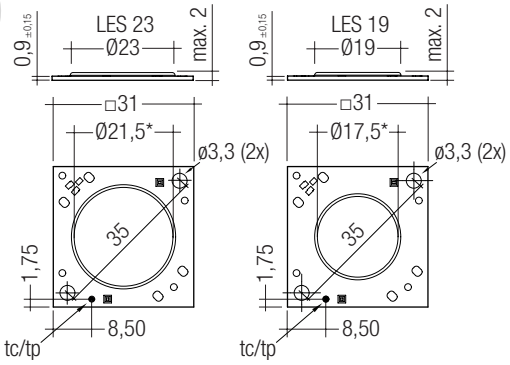
Beam characteristic	115°
Ambient temperature range	-25 … +50 °C
tp rated	65 °C
tc①	Up to 100 °C
Max. allowed Silicontemperature / Tjunction_max	150 °C / 140 °C
Max. DC forward current for LES10 1,200 lm②	350 mA
Max. DC forward current for LES15 2,000 lm②	500 mA
Max. DC forward current for LES15 3,000 lm②	700 mA
Max. DC forward current for LES15 4,000 lm②	1,400 mA
Max. DC forward current for LES19②	1,400 mA
Max. DC forward current for LES23②	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 nonSELV③	50 V
Max. working voltage for insulation SELV for LES10, LES15, LES17③	60 V
Max. working voltage for insulation SELV for LES19, LES23③	75 V
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 (2,700 K, 3,000 K)	RG1
Risk group (EN 62471:2008) for LES23 (3,500 K, 4,000 K)	RG2 at d = 200 mm, RG1 at d ≥ 2 m
Type of protection	IP00



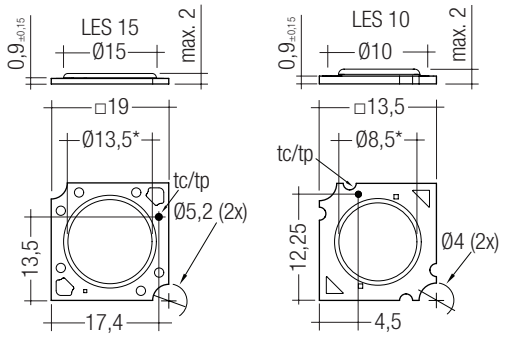
Dimensions in mm, *optical LES



Dimensions in mm, *optical LES



Dimensions in mm, *optical LES



Dimensions in mm, *optical LES

Module SLE G5 ADV
Modules SLE ADVANCED

Ordering data

Type	Article number	Colour temperature	Housing	Connection cable	Thermal interface material	Packaging	Weight per pc.
SLE G5 10mm 1200lm 830 R ADV	**28001313**	3,000 K	no	no	no	36 pc(s).	0.001 kg
SLE G5 10mm 1200lm 840 R ADV	**28001314**	4,000 K	no	no	no	36 pc(s).	0.001 kg
SLE G5 15mm 2000lm 827 R ADV	**89602249**	2,700 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 2000lm 830 R ADV	**89602212**	3,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 2000lm 835 R ADV	**89602250**	3,500 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 2000lm 840 R ADV	**89602213**	4,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 3000lm 827 R ADV	**89602251**	2,700 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 3000lm 830 R ADV	**89602194**	3,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 3000lm 835 R ADV	**89602252**	3,500 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 3000lm 840 R ADV	**89602195**	4,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 4000lm 827 R ADV	**89602253**	2,700 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 4000lm 830 R ADV	**89602190**	3,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 4000lm 835 R ADV	**89602254**	3,500 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 15mm 4000lm 840 R ADV	**89602191**	4,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 19mm 5000lm 827 R ADV	**89602255**	2,700 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 19mm 5000lm 830 R ADV	**89602202**	3,000 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 19mm 5000lm 835 R ADV	**89602256**	3,500 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 19mm 5000lm 840 R ADV	**89602203**	4,000 K	no	no	no	20 pc(s).	0.001 kg
SLE G5 23mm 6000lm 827 R ADV	**89602375**	2,700 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 23mm 6000lm 830 R ADV	**89602206**	3,000 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 23mm 6000lm 835 R ADV	**89602257**	3,500 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 23mm 6000lm 840 R ADV	**89602207**	4,000 K	no	no	no	20 pc(s).	0.003 kg
SLE G5 10mm 1200lm 830 C ADV	**28001527**	3,000 K	no	yes	no	20 pc(s).	0.004 kg
SLE G5 10mm 1200lm 840 C ADV	**28001526**	4,000 K	no	yes	no	20 pc(s).	0.004 kg
SLE G5 15mm 2000lm 830 C ADV	**89602242**	3,000 K	no	yes	no	20 pc(s).	0.004 kg
SLE G5 15mm 2000lm 840 C ADV	**89602243**	4,000 K	no	yes	no	20 pc(s).	0.004 kg
SLE G5 15mm 3000lm 830 C ADV	**89602198**	3,000 K	no	yes	no	20 pc(s).	0.004 kg
SLE G5 15mm 3000lm 840 C ADV	**89602199**	4,000 K	no	yes	no	20 pc(s).	0.004 kg
SLE G5 15mm 4000lm 830 C ADV	**89602186**	3,000 K	no	yes	no	20 pc(s).	0.004 kg
SLE G5 15mm 4000lm 840 C ADV	**89602187**	4,000 K	no	yes	no	20 pc(s).	0.004 kg
SLE G5 19mm 5000lm 827 C ADV	**89602259**	2,700 K	no	yes	no	20 pc(s).	0.008 kg
SLE G5 19mm 5000lm 830 C ADV	**89602216**	3,000 K	no	yes	no	20 pc(s).	0.008 kg
SLE G5 19mm 5000lm 835 C ADV	**89602260**	3,500 K	no	yes	no	20 pc(s).	0.008 kg
SLE G5 19mm 5000lm 840 C ADV	**89602217**	4,000 K	no	yes	no	20 pc(s).	0.008 kg
SLE G5 23mm 6000lm 830 C ADV	**89602228**	3,000 K	no	yes	no	20 pc(s).	0.008 kg
SLE G5 23mm 6000lm 835 C ADV	**89602261**	3,500 K	no	yes	no	20 pc(s).	0.008 kg
SLE G5 23mm 6000lm 840 C ADV	**89602229**	4,000 K	no	yes	no	20 pc(s).	0.008 kg

Module SLE G5 ADV

Modules SLE ADVANCED

Ordering data

Type	Article number	Colour temperature	Housing	Connection cable	Thermal interface material	Packaging	Weight per pc.
SLE G5 15mm 2000lm 830 H ADV	**89600893**	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 2000lm 840 H ADV	**89600894**	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 2000lm 830 H ADV D50	**89602813**	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 2000lm 840 H ADV D50	**89602814**	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 3000lm 830 H ADV	**89600897**	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 3000lm 840 H ADV	**89600898**	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 3000lm 830 H ADV D50	**89602355**	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 3000lm 840 H ADV D50	**89602356**	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 4000lm 830 H ADV	**89602298**	3,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 15mm 4000lm 840 H ADV	**89602299**	4,000 K	yes	no	no	50 pc(s).	0.003 kg
SLE G5 19mm 5000lm 827 H ADV	**89602262**	2,700 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 830 H ADV	**89602220**	3,000 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 835 H ADV	**89602263**	3,500 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 840 H ADV	**89602221**	4,000 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 827 H ADV	**89602399**	2,700 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 830 H ADV	**89602232**	3,000 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 835 H ADV	**89602264**	3,500 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 840 H ADV	**89602233**	4,000 K	yes	no	no	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 830 H ADV T	**89602224**	3,000 K	yes	no	yes	50 pc(s).	0.007 kg
SLE G5 19mm 5000lm 840 H ADV T	**89602225**	4,000 K	yes	no	yes	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 830 H ADV T	**89602236**	3,000 K	yes	no	yes	50 pc(s).	0.007 kg
SLE G5 23mm 6000lm 840 H ADV T	**89602237**	4,000 K	yes	no	yes	50 pc(s).	0.007 kg

Specific technical data

Type[7]	Photo-metric code	Forward current	Luminous flux at tp = 25 °C[4]	Luminous flux at tp = 65 °C[4]	Power consumption[4] [6]	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[5]	Colour rendering index CRI
SLE 10mm 1200lm – Operating mode HE at 250 mA											
SLE G5 10mm 1200lm 830 ADV	830/359	250 mA	1,180 lm	1,020 lm	9.2 W	32.7 V	38.3 V	127 lm/W	111 lm/W	100 lm/W	80
SLE G5 10mm 1200lm 840 ADV	840/359	250 mA	1,260 lm	1,120 lm	9.2 W	32.7 V	38.3 V	135 lm/W	122 lm/W	110 lm/W	80
SLE 10mm 1200lm – Operating mode HO at 350 mA											
SLE G5 10mm 1200lm 830 ADV	830/359	350 mA	1,560 lm	1,330 lm	13.4 W	34.2 V	40.3 V	115 lm/W	99 lm/W	89 lm/W	80
SLE G5 10mm 1200lm 840 ADV	840/359	350 mA	1,640 lm	1,440 lm	13.4 W	34.2 V	40.3 V	121 lm/W	107 lm/W	97 lm/W	80
SLE 15mm 2000lm – Operating mode HE at 180 mA											
SLE G5 15mm 2000lm 827 ADV	827/359	180 mA	970 lm	870 lm	6.3 W	32.7 V	38.5 V	149 lm/W	138 lm/W	124 lm/W	80
SLE G5 15mm 2000lm 830 ADV	830/359	180 mA	990 lm	910 lm	6.3 W	32.7 V	38.5 V	152 lm/W	144 lm/W	130 lm/W	80
SLE G5 15mm 2000lm 835 ADV	835/359	180 mA	1,010 lm	920 lm	6.3 W	32.7 V	38.5 V	155 lm/W	146 lm/W	131 lm/W	80
SLE G5 15mm 2000lm 840 ADV	840/359	180 mA	1,040 lm	960 lm	6.3 W	32.7 V	38.5 V	160 lm/W	152 lm/W	137 lm/W	80
SLE 15mm 2000lm – Operating mode NM at 350 mA											
SLE G5 15mm 2000lm 827 ADV	827/359	350 mA	1,730 lm	1,530 lm	13.3 W	35.3 V	41.6 V	127 lm/W	115 lm/W	104 lm/W	80
SLE G5 15mm 2000lm 830 ADV	830/359	350 mA	1,770 lm	1,610 lm	13.3 W	35.3 V	41.6 V	130 lm/W	121 lm/W	109 lm/W	80
SLE G5 15mm 2000lm 835 ADV	835/359	350 mA	1,790 lm	1,615 lm	13.3 W	35.3 V	41.6 V	132 lm/W	121 lm/W	109 lm/W	80
SLE G5 15mm 2000lm 840 ADV	840/359	350 mA	1,860 lm	1,690 lm	13.3 W	35.3 V	41.6 V	137 lm/W	127 lm/W	114 lm/W	80
SLE 15mm 2000lm – Operating mode HO at 500 mA											
SLE G5 15mm 2000lm 827 ADV	827/359	500 mA	2,300 lm	2,000 lm	20.1 W	37.4 V	43.9 V	112 lm/W	100 lm/W	90 lm/W	80
SLE G5 15mm 2000lm 830 ADV	830/359	500 mA	2,390 lm	2,130 lm	20.1 W	37.4 V	43.9 V	117 lm/W	106 lm/W	95 lm/W	80
SLE G5 15mm 2000lm 835 ADV	835/359	500 mA	2,390 lm	2,135 lm	20.1 W	37.4 V	43.9 V	117 lm/W	106 lm/W	96 lm/W	80
SLE G5 15mm 2000lm 840 ADV	840/359	500 mA	2,500 lm	2,240 lm	20.1 W	37.4 V	43.9 V	122 lm/W	111 lm/W	100 lm/W	80
SLE 15mm 3000lm – Operating mode HE at 350 mA											
SLE G5 15mm 3000lm 827 ADV	827/359	350 mA	1,850 lm	1,660 lm	11.9 W	31.7 V	36.8 V	153 lm/W	139 lm/W	126 lm/W	80
SLE G5 15mm 3000lm 830 ADV	830/359	350 mA	1,860 lm	1,720 lm	11.9 W	31.7 V	36.8 V	154 lm/W	145 lm/W	130 lm/W	80
SLE G5 15mm 3000lm 835 ADV	835/359	350 mA	1,910 lm	1,740 lm	11.9 W	31.7 V	36.8 V	158 lm/W	146 lm/W	132 lm/W	80
SLE G5 15mm 3000lm 840 ADV	840/359	350 mA	1,920 lm	1,800 lm	11.9 W	31.7 V	36.8 V	159 lm/W	151 lm/W	136 lm/W	80
SLE 15mm 3000lm – Operating mode NM at 500 mA											
SLE G5 15mm 3000lm 827 ADV	827/359	500 mA	2,550 lm	2,260 lm	17.8 W	33.2 V	38.6 V	141 lm/W	127 lm/W	114 lm/W	80
SLE G5 15mm 3000lm 830 ADV	830/359	500 mA	2,560 lm	2,340 lm	17.8 W	33.2 V	38.6 V	141 lm/W	131 lm/W	118 lm/W	80
SLE G5 15mm 3000lm 835 ADV	835/359	500 mA	2,630 lm	2,340 lm	17.8 W	33.2 V	38.6 V	145 lm/W	131 lm/W	118 lm/W	80
SLE G5 15mm 3000lm 840 ADV	840/359	500 mA	2,640 lm	2,440 lm	17.8 W	33.2 V	38.6 V	146 lm/W	137 lm/W	123 lm/W	80
SLE 15mm 3000lm – Operating mode HO at 700 mA											
SLE G5 15mm 3000lm 827 ADV	827/359	700 mA	3,390 lm	2,950 lm	26.3 W	35.0 V	40.7 V	127 lm/W	112 lm/W	101 lm/W	80
SLE G5 15mm 3000lm 830 ADV	830/359	700 mA	3,400 lm	3,070 lm	26.3 W	35.0 V	40.7 V	127 lm/W	117 lm/W	105 lm/W	80
SLE G5 15mm 3000lm 835 ADV	835/359	700 mA	3,495 lm	3,080 lm	26.3 W	35.0 V	40.7 V	131 lm/W	117 lm/W	105 lm/W	80
SLE G5 15mm 3000lm 840 ADV	840/359	700 mA	3,500 lm	3,190 lm	26.3 W	35.0 V	40.7 V	131 lm/W	121 lm/W	109 lm/W	80
SLE 15mm 4000lm – Operating mode HE at 700 mA											
SLE G5 15mm 4000lm 827 ADV	827/359	700 mA	3,420 lm	3,150 lm	24.3 W	30.5 V	38.0 V	140 lm/W	130 lm/W	117 lm/W	80
SLE G5 15mm 4000lm 830 ADV	830/359	700 mA	3,420 lm	3,160 lm	24.3 W	30.5 V	38.0 V	140 lm/W	130 lm/W	117 lm/W	80
SLE G5 15mm 4000lm 835 ADV	835/359	700 mA	3,500 lm	3,170 lm	24.3 W	30.5 V	38.0 V	143 lm/W	130 lm/W	117 lm/W	80
SLE G5 15mm 4000lm 840 ADV	840/359	700 mA	3,550 lm	3,190 lm	24.3 W	30.5 V	38.0 V	145 lm/W	131 lm/W	118 lm/W	80
SLE 15mm 4000lm – Operating mode NM at 900 mA											
SLE G5 15mm 4000lm 827 ADV	827/359	900 mA	4,180 lm	3,880 lm	32.1 W	32.5 V	40.0 V	130 lm/W	121 lm/W	109 lm/W	80
SLE G5 15mm 4000lm 830 ADV	830/359	900 mA	4,260 lm	3,920 lm	32.1 W	32.5 V	40.0 V	132 lm/W	122 lm/W	110 lm/W	80
SLE G5 15mm 4000lm 835 ADV	835/359	900 mA	4,300 lm	3,940 lm	32.1 W	32.5 V	40.0 V	134 lm/W	123 lm/W	110 lm/W	80
SLE G5 15mm 4000lm 840 ADV	840/359	900 mA	4,410 lm	3,960 lm	32.1 W	32.5 V	40.0 V	137 lm/W	123 lm/W	111 lm/W	80
SLE 15mm 4000lm – Operating mode HO at 1,400 mA											
SLE G5 15mm 4000lm 827 ADV	827/359	1,400 mA	5,690 lm	5,460 lm	53.2 W	34.5 V	42.0 V	107 lm/W	103 lm/W	92 lm/W	80
SLE G5 15mm 4000lm 830 ADV	830/359	1,400 mA	6,080 lm	5,550 lm	53.2 W	34.5 V	42.0 V	114 lm/W	104 lm/W	94 lm/W	80
SLE G5 15mm 4000lm 835 ADV	835/359	1,400 mA	6,170 lm	5,570 lm	53.2 W	34.5 V	42.0 V	116 lm/W	105 lm/W	94 lm/W	80
SLE G5 15mm 4000lm 840 ADV	840/359	1,400 mA	6,290 lm	5,600 lm	53.2 W	34.5 V	42.0 V	118 lm/W	105 lm/W	95 lm/W	80

[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[7]	Photo-metric code	Forward current	Luminous flux at tp = 25 °C[4]	Luminous flux at tp = 65 °C[4]	Power consumption[4] [6]	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[5]	Colour rendering index CRI
SLE 19mm 5000lm – Operating mode HE at 500 mA											
SLE G5 19mm 5000lm 827 ADV	827/359	500 mA	2,770 lm	2,590 lm	16.6 W	31.0 V	36.1 V	164 lm/W	156 lm/W	140 lm/W	80
SLE G5 19mm 5000lm 830 ADV	830/359	500 mA	2,800 lm	2,610 lm	16.6 W	31.0 V	36.1 V	166 lm/W	157 lm/W	142 lm/W	80
SLE G5 19mm 5000lm 835 ADV	835/359	500 mA	2,830 lm	2,680 lm	16.6 W	31.0 V	36.1 V	167 lm/W	161 lm/W	145 lm/W	80
SLE G5 19mm 5000lm 840 ADV	840/359	500 mA	2,920 lm	2,740 lm	16.6 W	31.0 V	36.1 V	173 lm/W	165 lm/W	149 lm/W	80
SLE 19mm 5000lm – Operating mode NM at 1,050 mA											
SLE G5 19mm 5000lm 827 ADV	827/359	1,050 mA	5,240 lm	4,780 lm	38.4 W	34.1 V	39.8 V	134 lm/W	124 lm/W	112 lm/W	80
SLE G5 19mm 5000lm 830 ADV	830/359	1,050 mA	5,390 lm	4,920 lm	38.4 W	34.1 V	39.8 V	138 lm/W	128 lm/W	115 lm/W	80
SLE G5 19mm 5000lm 835 ADV	835/359	1,050 mA	5,420 lm	5,100 lm	38.4 W	34.1 V	39.8 V	139 lm/W	133 lm/W	120 lm/W	80
SLE G5 19mm 5000lm 840 ADV	840/359	1,050 mA	5,590 lm	5,160 lm	38.4 W	34.1 V	39.8 V	143 lm/W	134 lm/W	121 lm/W	80
SLE 19mm 5000lm – Operating mode HO at 1,400 mA											
SLE G5 19mm 5000lm 827 ADV	827/359	1,400 mA	6,570 lm	5,880 lm	54.0 W	36.0 V	41.8 V	120 lm/W	109 lm/W	98 lm/W	80
SLE G5 19mm 5000lm 830 ADV	830/359	1,400 mA	6,800 lm	6,100 lm	54.0 W	36.0 V	41.8 V	124 lm/W	113 lm/W	102 lm/W	80
SLE G5 19mm 5000lm 835 ADV	835/359	1,400 mA	6,825 lm	6,350 lm	54.0 W	36.0 V	41.8 V	125 lm/W	118 lm/W	106 lm/W	80
SLE G5 19mm 5000lm 840 ADV	840/359	1,400 mA	7,040 lm	6,400 lm	54.0 W	36.0 V	41.8 V	128 lm/W	119 lm/W	107 lm/W	80
SLE 23mm 6000lm – Operating mode HE at 700 mA											
SLE G5 23mm 6000lm 827 ADV	827/359	700 mA	3,850 lm	3,600 lm	23.3 W	30.9 V	36.0 V	162 lm/W	155 lm/W	139 lm/W	80
SLE G5 23mm 6000lm 830 ADV	830/359	700 mA	3,970 lm	3,780 lm	23.3 W	30.9 V	36.0 V	168 lm/W	162 lm/W	146 lm/W	80
SLE G5 23mm 6000lm 835 ADV	835/359	700 mA	4,040 lm	3,800 lm	23.3 W	30.9 V	36.0 V	170 lm/W	163 lm/W	147 lm/W	80
SLE G5 23mm 6000lm 840 ADV	840/359	700 mA	4,090 lm	3,880 lm	23.3 W	30.9 V	36.0 V	173 lm/W	167 lm/W	150 lm/W	80
SLE 23mm 6000lm – Operating mode NM at 1,400 mA											
SLE G5 23mm 6000lm 827 ADV	827/359	1,400 mA	7,100 lm	6,510 lm	50.7 W	33.7 V	39.3 V	138 lm/W	128 lm/W	116 lm/W	80
SLE G5 23mm 6000lm 830 ADV	830/359	1,400 mA	7,350 lm	6,900 lm	50.7 W	33.7 V	39.3 V	143 lm/W	136 lm/W	122 lm/W	80
SLE G5 23mm 6000lm 835 ADV	835/359	1,400 mA	7,470 lm	6,930 lm	50.7 W	33.7 V	39.3 V	145 lm/W	137 lm/W	123 lm/W	80
SLE G5 23mm 6000lm 840 ADV	840/359	1,400 mA	7,570 lm	7,080 lm	50.7 W	33.7 V	39.3 V	147 lm/W	140 lm/W	126 lm/W	80
SLE 23mm 6000lm – Operating mode HO at 1,750 mA											
SLE G5 23mm 6000lm 827 ADV	827/359	1,750 mA	8,550 lm	7,740 lm	65.8 W	35.0 V	40.7 V	128 lm/W	118 lm/W	106 lm/W	80
SLE G5 23mm 6000lm 830 ADV	830/359	1,750 mA	8,840 lm	8,200 lm	65.8 W	35.0 V	40.7 V	132 lm/W	125 lm/W	112 lm/W	80
SLE G5 23mm 6000lm 835 ADV	835/359	1,750 mA	9,000 lm	8,220 lm	65.8 W	35.0 V	40.7 V	135 lm/W	125 lm/W	113 lm/W	80
SLE G5 23mm 6000lm 840 ADV	840/359	1,750 mA	9,120 lm	8,440 lm	65.8 W	35.0 V	40.7 V	136 lm/W	128 lm/W	115 lm/W	80

[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.

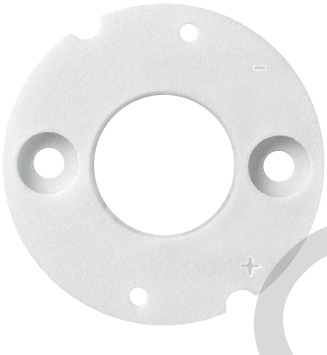
[7] HE ... high efficiency, NM ... nominal mode, HO ... high output.

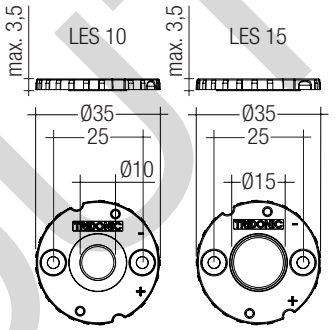
ACCES-SORIES

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. 830 / 359

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

1.3 Energy classification

Type	Forward current	Energy classification
SLE G5 10mm 1200lm 830 ADV	250 mA	A+
	350 mA	A+
SLE G5 10mm 1200lm 840 ADV	250 mA	A+
	350 mA	A+
SLE G5 15mm 2000lm 827 ADV	180 mA	A++
	350 mA	A+
	500 mA	A+
SLE G5 15mm 2000lm 830 ADV	180 mA	A++
	350 mA	A+
	500 mA	A+
SLE G5 15mm 2000lm 835 ADV	180 mA	A++
	350 mA	A+
	500 mA	A+
SLE G5 15mm 2000lm 840 ADV	180 mA	A++
	350 mA	A+
	500 mA	A+
SLE G5 15mm 3000lm 827 ADV	350 mA	A++
	500 mA	A+
	700 mA	A+
SLE G5 15mm 3000lm 830 ADV	350 mA	A++
	500 mA	A+
	700 mA	A+
SLE G5 15mm 3000lm 835 ADV	350 mA	A++
	500 mA	A+
	700 mA	A+
SLE G5 15mm 3000lm 840 ADV	350 mA	A++
	500 mA	A++
	700 mA	A+
SLE G5 15mm 4000lm 827 ADV	700 mA	A+
	900 mA	A+
	1,400 mA	A+
SLE G5 15mm 4000lm 830 ADV	700 mA	A+
	900 mA	A+
	1,400 mA	A+
SLE G5 15mm 4000lm 835 ADV	700 mA	A+
	900 mA	A+
	1,400 mA	A+
SLE G5 15mm 4000lm 840 ADV	700 mA	A+
	900 mA	A+
	1,400 mA	A+
SLE G5 19mm 5000lm 827 ADV	500 mA	A++
	1,050 mA	A+
	1,400 mA	A+
SLE G5 19mm 5000lm 830 ADV	500 mA	A++
	1,050 mA	A+
	1,400 mA	A+
SLE G5 19mm 5000lm 835 ADV	500 mA	A++
	1,050 mA	A+
	1,400 mA	A+
SLE G5 19mm 5000lm 840 ADV	500 mA	A++
	1,050 mA	A+
	1,400 mA	A+
SLE G5 23mm 6000lm 827 ADV	700 mA	A++
	1,400 mA	A+
	1,750 mA	A+
SLE G5 23mm 6000lm 830 ADV	700 mA	A++
	1,400 mA	A+
	1,750 mA	A+
SLE G5 23mm 6000lm 835 ADV	700 mA	A++
	1,400 mA	A+
	1,750 mA	A+
SLE G5 23mm 6000lm 840 ADV	700 mA	A++
	1,400 mA	A++
	1,750 mA	A+

2. Thermical details

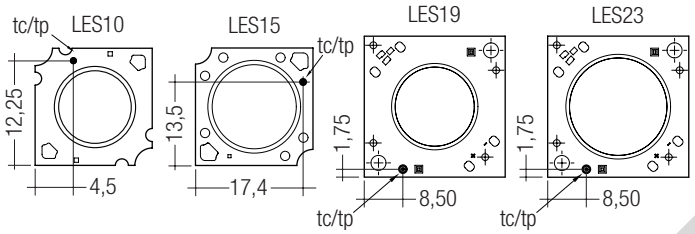
2.1 tp point, ambient temperature and life-time

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.



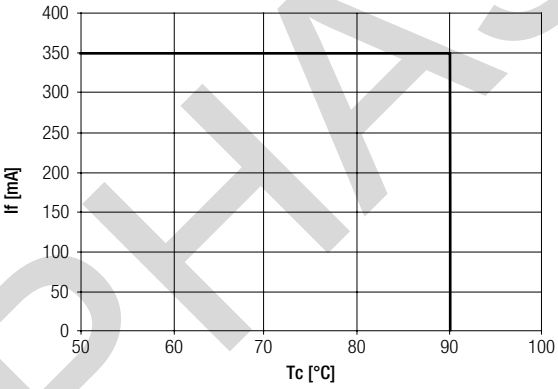
2.2 Storage and humidity

storage temperature	-30 ... +80 °C

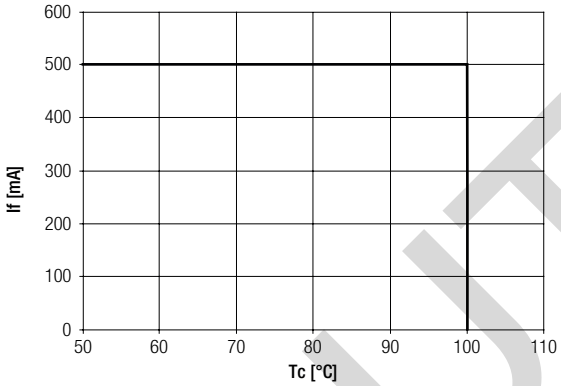
Operation only in non condensing environment.
Humidity during processing of the module should be between 30 to 70 %.

2.3 Derating curves

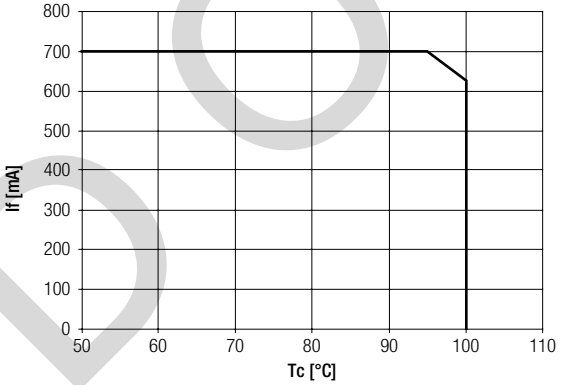
SLE G5 10mm 1200lm 8xx ADVANCED



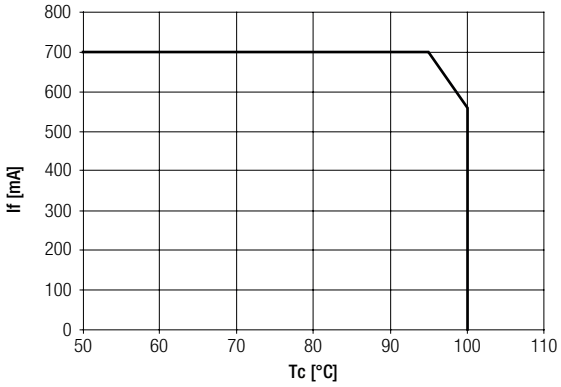
SLE G5 15mm 2000lm 8xx ADVANCED



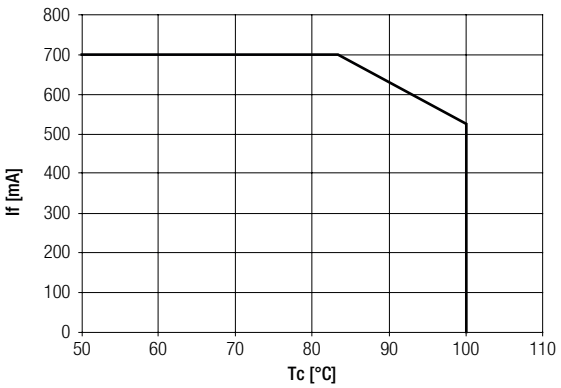
SLE G5 15mm 3000lm 827 ADVANCED



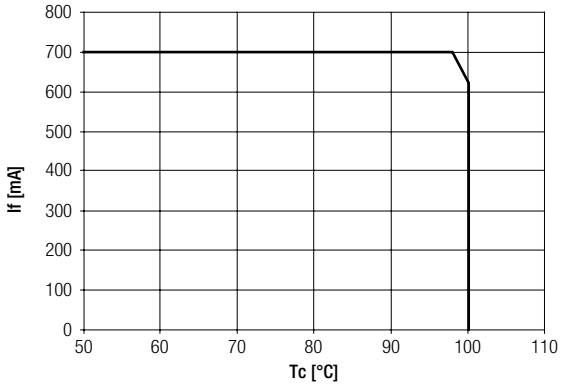
SLE G5 15mm 3000lm 830 ADVANCED



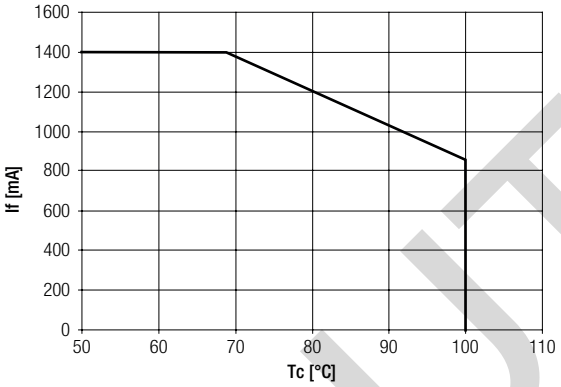
SLE G5 15mm 3000lm 835 ADVANCED



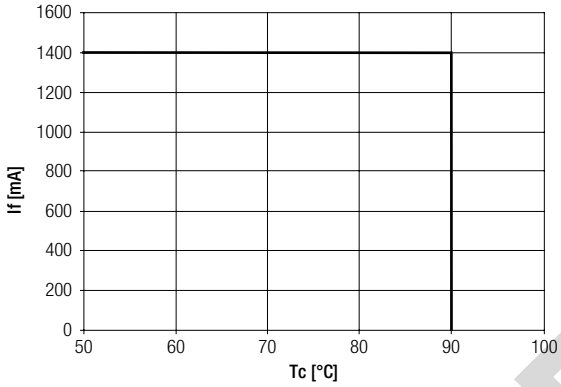
SLE G5 15mm 3000lm 840 ADVANCED



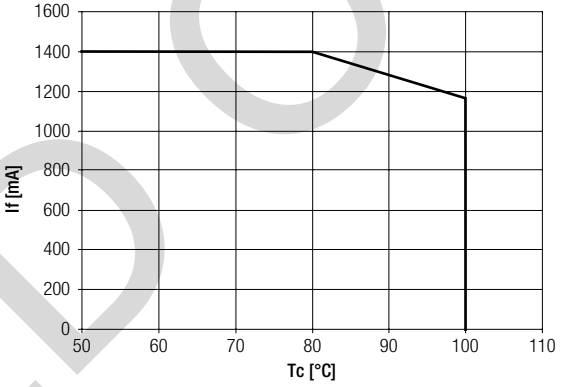
SLE G5 19mm 5000lm 835 ADVANCED



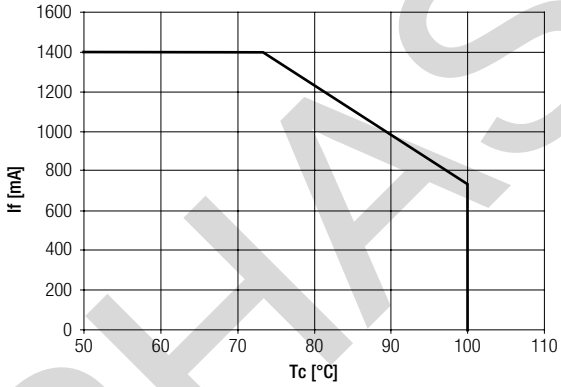
SLE G5 15mm 4000lm 8xx ADVANCED



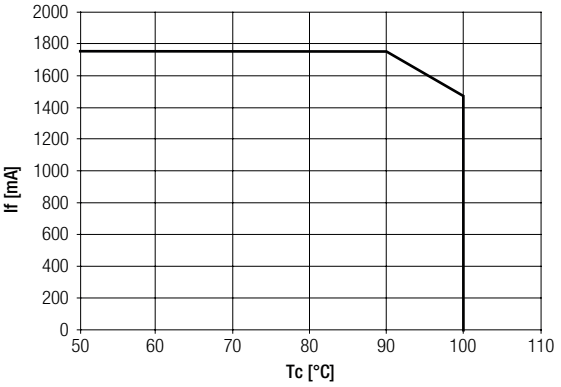
SLE G5 19mm 5000lm 840 ADVANCED



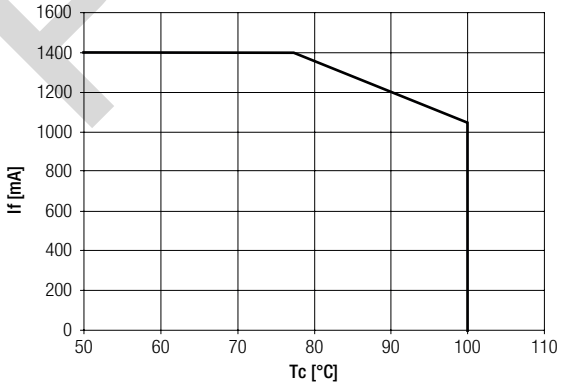
SLE G5 19mm 5000lm 827 ADVANCED



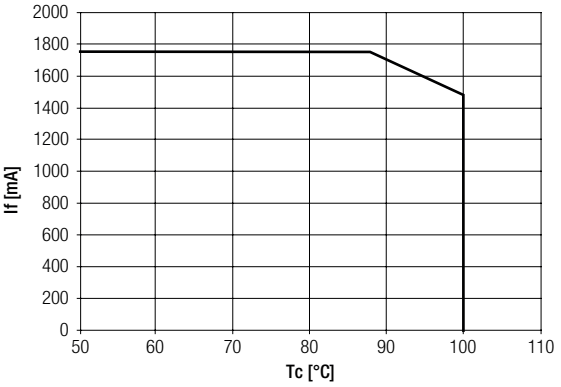
SLE G5 23mm 6000lm 827 ADVANCED



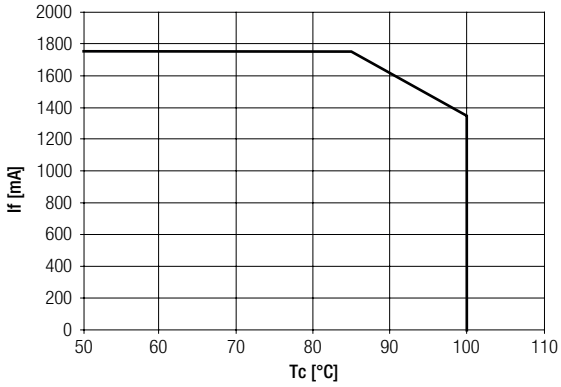
SLE G5 19mm 5000lm 830 ADVANCED



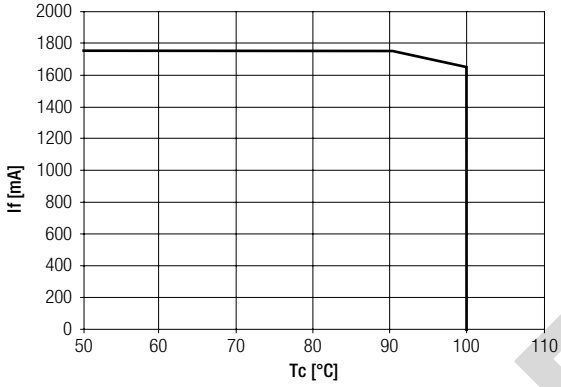
SLE G5 23mm 6000lm 830 ADVANCED



SLE G5 23mm 6000lm 835 ADVANCED



SLE G5 23mm 6000lm 840 ADVANCED



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 8xx ADVANCED

ta	tp	Operating current	$R_{th, hs-a}$
25 °C	65 °C	250 mA	6.33 K/W
30 °C	65 °C	250 mA	5.50 K/W
40 °C	65 °C	250 mA	3.84 K/W
50 °C	65 °C	250 mA	2.18 K/W
25 °C	65 °C	350 mA	3.97 K/W
30 °C	65 °C	350 mA	3.43 K/W
40 °C	65 °C	350 mA	2.37 K/W
50 °C	65 °C	350 mA	1.30 K/W

SLE G5 15mm 2000lm 8xx ADVANCED

ta	tp	Operating current	$R_{th, hs-a}$
25 °C	65 °C	180 mA	10.78 K/W
30 °C	65 °C	180 mA	9.39 K/W
40 °C	65 °C	180 mA	6.62 K/W
50 °C	65 °C	180 mA	3.85 K/W
25 °C	65 °C	350 mA	4.39 K/W
30 °C	65 °C	350 mA	3.81 K/W
40 °C	65 °C	350 mA	2.63 K/W
50 °C	65 °C	350 mA	1.46 K/W
25 °C	65 °C	500 mA	2.60 K/W
30 °C	65 °C	500 mA	2.23 K/W
40 °C	65 °C	500 mA	1.51 K/W
50 °C	65 °C	500 mA	0.78 K/W

SLE G5 15mm 3000lm 8xx ADVANCED

ta	tp	Operating current	$R_{th, hs-a}$
25 °C	65 °C	350 mA	5.67 K/W
30 °C	65 °C	350 mA	4.92 K/W
40 °C	65 °C	350 mA	3.43 K/W
50 °C	65 °C	350 mA	1.93 K/W
25 °C	65 °C	500 mA	3.42 K/W
30 °C	65 °C	500 mA	2.95 K/W
40 °C	65 °C	500 mA	2.02 K/W
50 °C	65 °C	500 mA	1.09 K/W
25 °C	65 °C	700 mA	2.04 K/W
30 °C	65 °C	700 mA	1.75 K/W
40 °C	65 °C	700 mA	1.16 K/W
50 °C	65 °C	700 mA	0.57 K/W

SLE G5 15mm 4000lm 8xx ADVANCED

ta	tp	Operating current	$R_{th, hs-a}$
25 °C	65 °C	700 mA	2.48 K/W
30 °C	65 °C	700 mA	2.13 K/W
40 °C	65 °C	700 mA	1.44 K/W
50 °C	65 °C	700 mA	0.74 K/W
25 °C	65 °C	900 mA	1.71 K/W
30 °C	65 °C	900 mA	1.46 K/W
40 °C	65 °C	900 mA	0.95 K/W
50 °C	65 °C	900 mA	0.45 K/W
25 °C	65 °C	1,400 mA	0.81 K/W
30 °C	65 °C	1,400 mA	0.67 K/W
40 °C	65 °C	1,400 mA	0.39 K/W
50 °C	65 °C	1,400 mA	0.11 K/W

SLE G5 19mm 5000lm 8xx ADVANCED

ta	tp	Operating current	$R_{th, hs-a}$
25 °C	65 °C	500 mA	4.44 K/W
30 °C	65 °C	500 mA	3.87 K/W
40 °C	65 °C	500 mA	2.73 K/W
50 °C	65 °C	500 mA	1.59 K/W
25 °C	65 °C	1,050 mA	1.58 K/W
30 °C	65 °C	1,050 mA	1.37 K/W
40 °C	65 °C	1,050 mA	0.95 K/W
50 °C	65 °C	1,050 mA	0.52 K/W
25 °C	65 °C	1,400 mA	1.00 K/W
30 °C	65 °C	1,400 mA	0.87 K/W
40 °C	65 °C	1,400 mA	0.59 K/W
50 °C	65 °C	1,400 mA	0.31 K/W

SLE G5 23mm 6000lm 8xx ADVANCED

ta	tp	Operating current	$R_{th, hs-a}$
25 °C	65 °C	700 mA	3.23 K/W
30 °C	65 °C	700 mA	2.81 K/W
40 °C	65 °C	700 mA	1.98 K/W
50 °C	65 °C	700 mA	1.14 K/W
25 °C	65 °C	1,400 mA	1.21 K/W
30 °C	65 °C	1,400 mA	1.05 K/W
40 °C	65 °C	1,400 mA	0.71 K/W
50 °C	65 °C	1,400 mA	0.38 K/W
25 °C	65 °C	1,750 mA	0.85 K/W
30 °C	65 °C	1,750 mA	0.73 K/W
40 °C	65 °C	1,750 mA	0.49 K/W
50 °C	65 °C	1,750 mA	0.25 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 $\lambda > 1$ W/mK and layer thickness of interface material with max. 50 µm or a similar interface material where the quotient of layer thickness and thermal conductivity b < 50 µmmK/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 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.

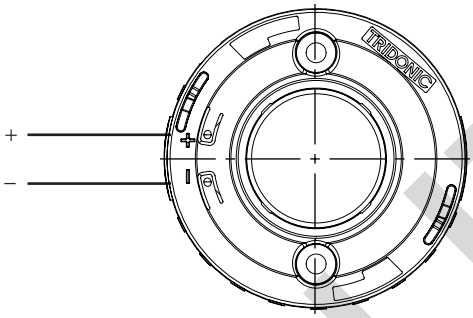
If a LED Driver other than Tridonic is used, it must provide the following protection:
- Short-circuit protection
- Overload protection
- Overtemperature protection

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.

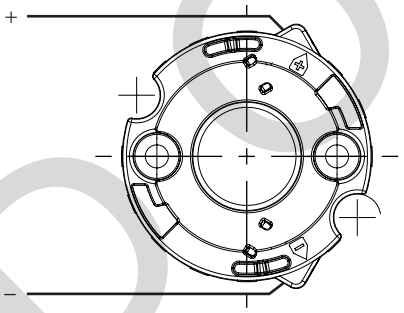
SLE G5 are basic isolated up to 75 V SELV (LES19 and LES23) / 60 V SELV (LES10, LES15 and LES17) / 50 V nonSELV against ground and can be mounted directly on earthed metal parts of the luminaire. If the max. output voltage of the LED Driver (also against earth) is above 75 V SELV (LES19 and LES23) / 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 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)

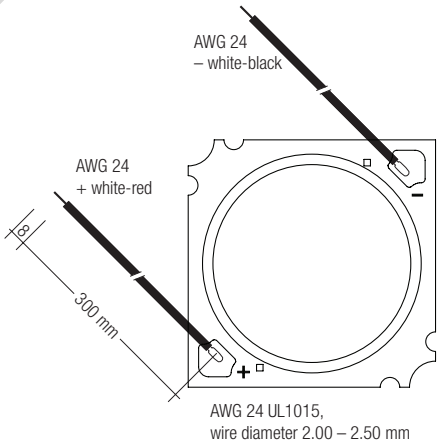


Wiring with housing (LES15)

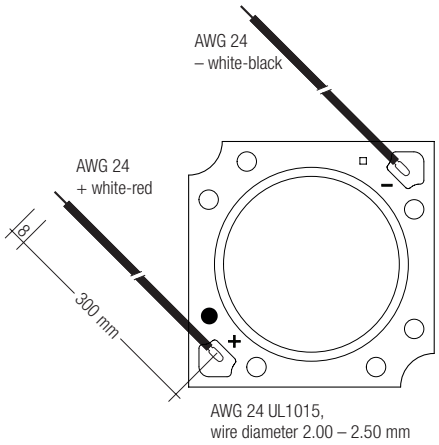


Wiring without housing

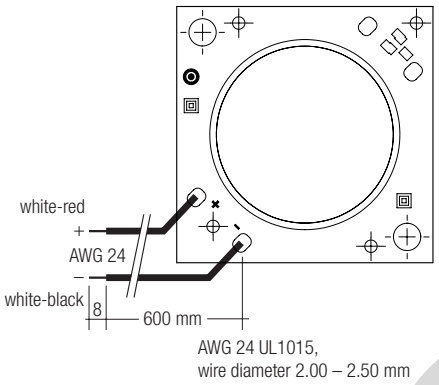
LES10



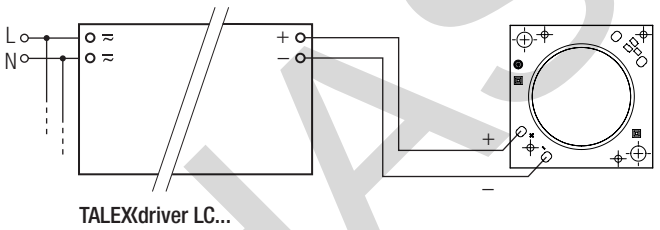
LES15



LES19 and LES23



Wiring example

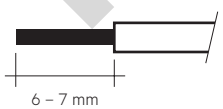


3.3 Wiring type and cross section

The wiring has to be solid cable with a cross section of 0.5 to 0.75 mm² or with stranded wire with soldered ends with a cross section of 0.5 mm².
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 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 guidlines 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 maintenace 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 inital luminous flux, respectivly 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 8xx ADVANCED

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 8xx ADVANCED

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 8xx ADVANCED

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 8xx ADVANCED

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 8xx ADVANCED

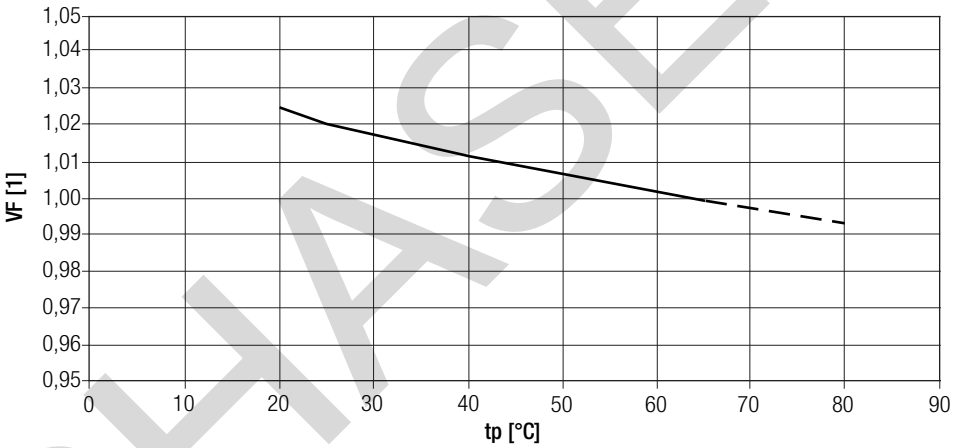
Operating current	tp temperature	L80 / F10	L80 / F50	L70 / F10	L70 / F50
500 mA	65 °C	51,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	44,000 h	>60,000 h	>60,000 h	>60,000 h
	85 °C	39,000 h	58,000 h	>60,000 h	>60,000 h
1,050 mA	65 °C	42,000 h	>60,000 h	>60,000 h	>60,000 h
	75 °C	37,000 h	55,000 h	59,000 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 8xx ADVANCED

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 charcteristics

6.1 Coordinates and tolerances according to CIE 1931

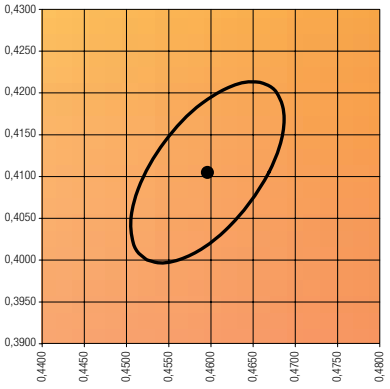
The specified colour coordinates are measured integral after a settling time of 100 ms. The current impuls depends on the module type.

Module type	Current impulse
TALEX(module SLE G5 10mm 1200lm 8xx ADV	350 mA
TALEX(module SLE G5 15mm 2000lm 8xx ADV	500 mA
TALEX(module SLE G5 15mm 3000lm 8xx ADV	500 mA
TALEX(module SLE G5 15mm 4000lm 8xx ADV	900 mA
TALEX(module SLE G5 19mm 5000lm 8xx ADV	1,050 mA
TALEX(module SLE G5 23mm 6000lm 8xx ADV	1,400 mA

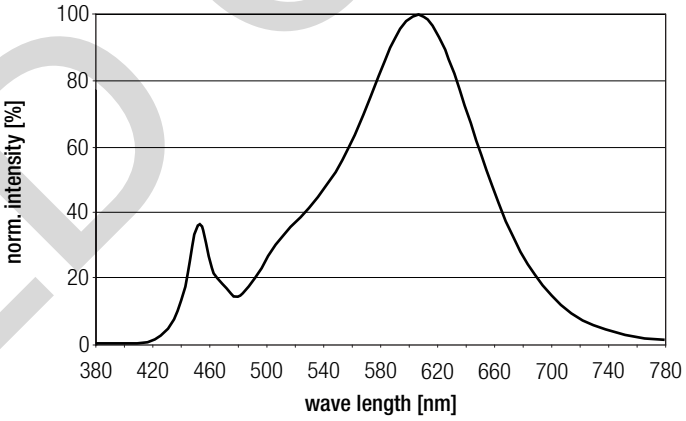
The ambient temperature of the measurement is ta = 25 °C.
The measurement tolerance of the colour coordinates are ± 0.01.

2,700 K

	x0	y0
Centre	0.4599	0.4106

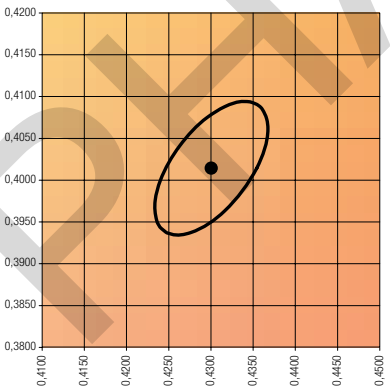


MacAdam ellipse: 3SDCM

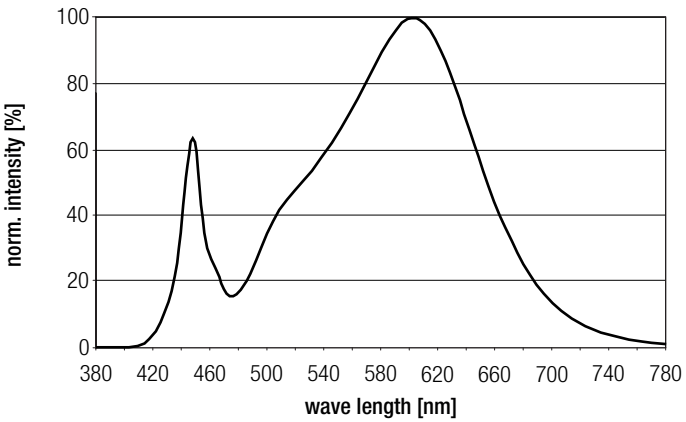


3,000 K

	x0	y0
Centre	0.4300	0.4016

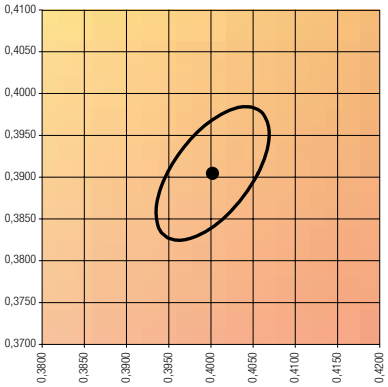


MacAdam ellipse: 3SDCM

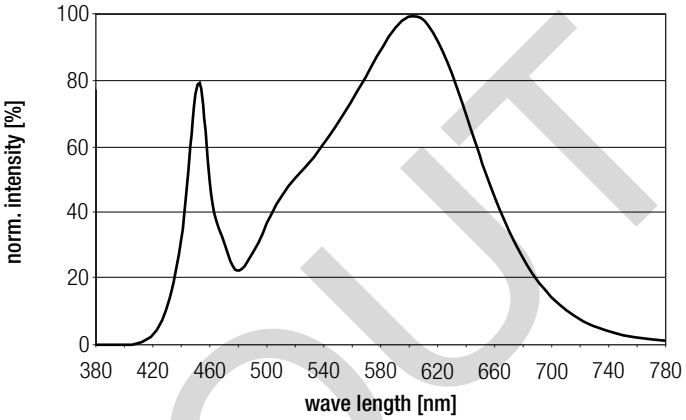


3,500 K

	x0	y0
Centre	0.4053	0.3907

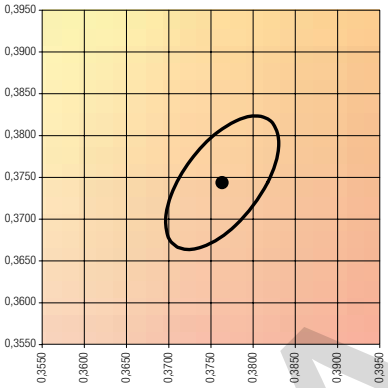


MacAdam ellipse: 3SDCM

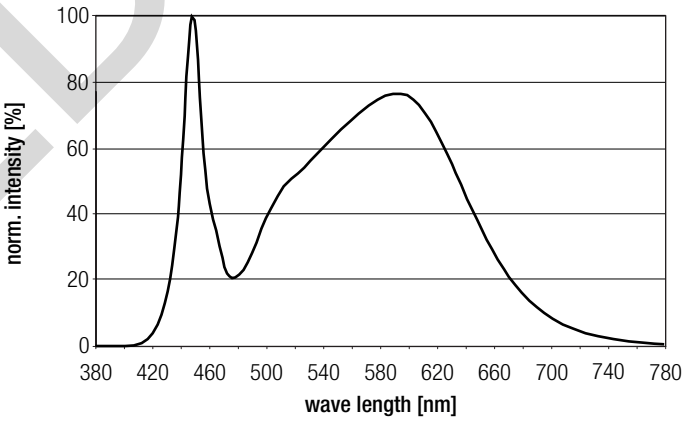


4,000 K

	x0	y0
Centre	0.3761	0.3740

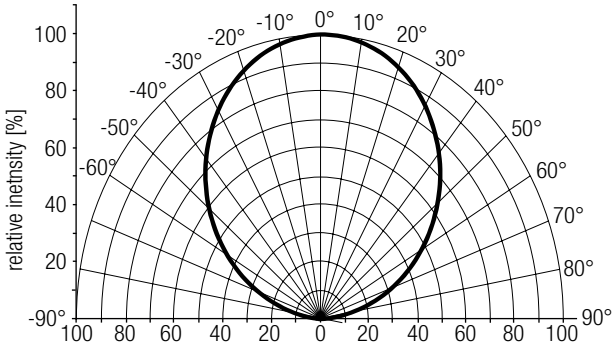


MacAdam ellipse: 3SDCM



6.2 Light distribution

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



For further information see Design-in Guide, 3D data and photometric data on www.tridonic.com or on request.

6.3 Relative luminous flux vs. tp temperature