PHILIPS

Fortimo

LED

Fortimo SLM 1208 L15 2024 G7



Datasheet

Experience bright and vivid colors

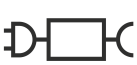
Fortimo LED SLM 1208 L15 2024 G7

Fortimo LED SLM Gen7 continues to focus on the combination of Quality of Light and performance. By offering the CoB separate from the holder, even more flexibility in possible system combinations and specifications is achieved. This results in an extensive portfolio of lumen ranges, CCTs and spectra. Please also check the online Easy Design-in Tool for your perfect system combination (www.easydesignintool.com)

Key features and benefits

Best quality of light available for all applications
Extensive range of CCTs
Small LES for narrow beam angles and small reflector designs
Flexibility to select a different lumen output between 800 and 10000 lm
State of the art Chip-on-Board (CoB) technology, enabling highest system efficacy
System proposition (CoB + Holder + driver)
Flexibility to optimize luminaire performance (lm/W or high lm output)
Xitanium window drivers with SimpleSet for maximum flexibility
Mini drivers for smallest possible luminaire designs
Five years system warranty with over 50,000 hours lifetime
Instant full light

September 2021







Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo SLM C 827 1208 L15 2024 G7	8718699 590055 00	9290 015 89806	20
Fortimo SLM C 830 1208 L15 2024 G7	8718699 590086 00	9290 015 89906	20
Fortimo SLM C 835 1208 L15 2024 G7	8718699 590116 00	9290 015 90006	20
Fortimo SLM C 840 1208 L15 2024 G7	8718699 590147 00	9290 015 90106	20
Fortimo SLM C 850 1208 L15 2024 G7	8718699 590178 00	9290 015 90206	20
Fortimo SLM C 857 1208 L15 2024 G7	8718699 590208 00	9290 015 90306	20
Fortimo SLM C 927 1208 L15 2024 G7	8718699 590239 00	9290 015 90406	20
Fortimo SLM C 930 1208 L15 2024 G7	8718699 590260 00	9290 015 90506	20

Not all products are globally available by default.
Please contact your local Philips Lighting representative for local availability and activation.

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM 1208 L15 2024 G7	750	see performance window	1500	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	85	see performance window	95	°C

* Nominal value at which typical performance is specified

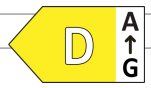
** Value at which life time is specified

*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

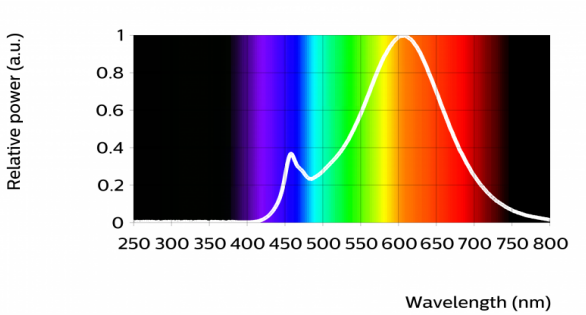
Fortimo SLM C 827 1208 L15 2024 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	3420	3800	4180	lm
Module efficacy	135	149		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		827/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI +/- 1.5

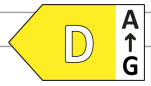
Operation point	827	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3399	164
	Tc-nom 85 °C	3122	156
	Tc-max 95 °C	3073	155
I-nom 750mA	Tc 25 °C	4163	157
	Tc-nom 85 °C	3800	149
	Tc-max 95 °C	3736	148
I-max 1500mA	Tc 25 °C	7513	131
	Tc-nom 85 °C	6748	122
	Tc-max 95 °C	6614	120



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
79	92	94	76	79	90	82	59	12	82	72	73	82	97

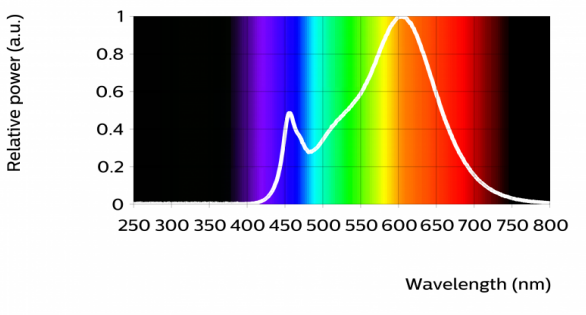
Fortimo SLM C 830 1208 L15 2024 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	3555	3950	4345	lm
Module efficacy	140	155		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		830/359		
Photobiological safety			RG1 unlimited	



At currents higher than 1479 mA the module might be classified as RG2
Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI +/- 1.5

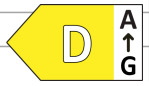
Operation point	830	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3532	170
	Tc-nom 85 °C	3245	163
	Tc-max 95 °C	3194	161
I-nom 750mA	Tc 25 °C	4328	164
	Tc-nom 85 °C	3950	155
	Tc-max 95 °C	3884	154
I-max 1500mA	Tc 25 °C	7811	136
	Tc-nom 85 °C	7016	127
	Tc-max 95 °C	6877	125



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
83	94	93	80	84	94	81	59	12	87	80	76	86	97

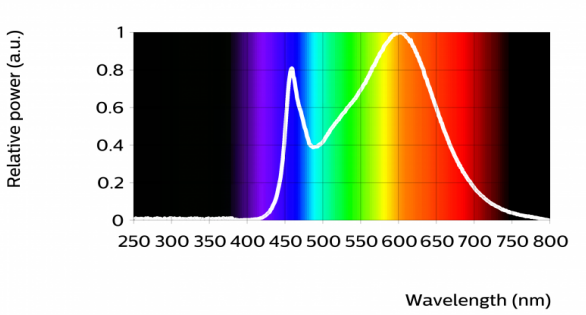
Fortimo SLM C 835 1208 L15 2024 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	3627	4030	4433	lm
Module efficacy	143	159		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.392)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		835/359		
Photobiological safety			RG1 unlimited	



At currents higher than 1143 mA the module might be classified as RG2
Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI +/- 1.5

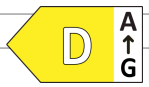
Operation point	835	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3603	173
	Tc-nom 85 °C	3310	166
	Tc-max 95 °C	3259	164
I-nom 750mA	Tc 25 °C	4415	167
	Tc-nom 85 °C	4030	159
	Tc-max 95 °C	3962	157
I-max 1500mA	Tc 25 °C	7970	139
	Tc-nom 85 °C	7160	129
	Tc-max 95 °C	7018	128



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
86	96	93	80	85	94	83	65	22	90	79	70	89	97

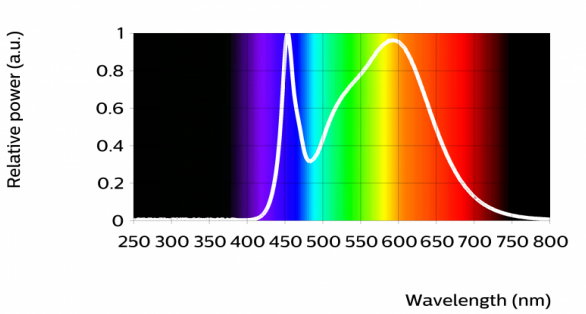
Fortimo SLM C 840 1208 L15 2024 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	3699	4110	4521	lm
Module efficacy	145	162		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		840/359		
Photobiological safety			RG1 unlimited	



At currents higher than 918 mA the module might be classified as RG2
Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI +/- 1.5

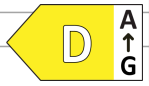
Operation point	840	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3675	177
	Tc-nom 85 °C	3376	169
	Tc-max 95 °C	3323	168
I-nom 750mA	Tc 25 °C	4503	170
	Tc-nom 85 °C	4110	162
	Tc-max 95 °C	4041	160
I-max 1500mA	Tc 25 °C	8131	142
	Tc-nom 85 °C	7304	132
	Tc-max 95 °C	7160	130



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
84	96	91	77	83	93	81	62	13	90	77	67	88	96

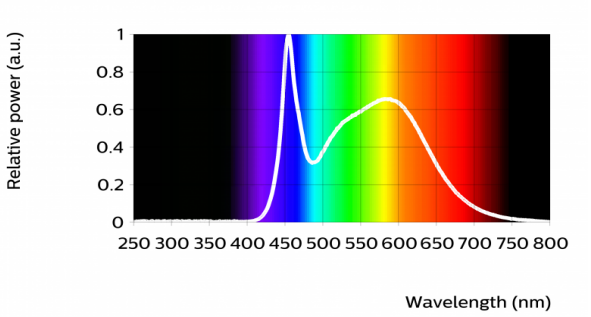
Fortimo SLM C 850 1208 L15 2024 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	3708	4120	4532	lm
Module efficacy	146	162		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		850/359		
Photobiological safety			RG1 unlimited	



Threshold illuminance for RG2 is 1494 lux
Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

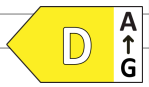
Operation point	850	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3683	177
	Tc-nom 85 °C	3383	169
	Tc-max 95 °C	3331	168
I-nom 750mA	Tc 25 °C	4513	170
	Tc-nom 85 °C	4120	162
	Tc-max 95 °C	4051	160
I-max 1500mA	Tc 25 °C	8154	142
	Tc-nom 85 °C	7326	132
	Tc-max 95 °C	7181	130



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
83	92	95	80	82	87	86	68	14	79	78	58	86	98

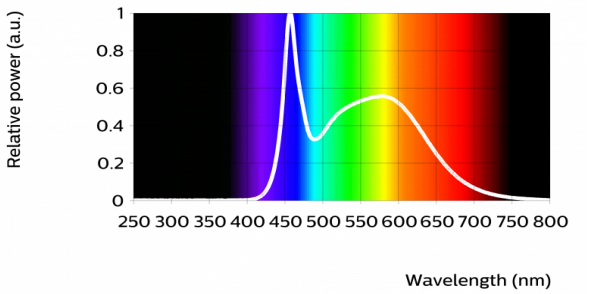
Fortimo SLM C 857 1208 L15 2024 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	3690	4100	4510	lm
Module efficacy	145	161		lm/W
Correlated color temperature (CCT)		5700		K
Color coordinates (CIEx, CIEy)		(0.329, 0.342)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		857/359		
Photobiological safety			RG1 unlimited	



Threshold illuminance for RG2 is 1312 lux
Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	857	lm	lm/W
80% I-nom 600mA	Tc 25 °C	3665	176
	Tc-nom 85 °C	3367	169
	Tc-max 95 °C	3315	167
I-nom 750mA	Tc 25 °C	4492	170
	Tc-nom 85 °C	4100	161
	Tc-max 95 °C	4032	159
I-max 1500mA	Tc 25 °C	8116	141
	Tc-nom 85 °C	7291	132
	Tc-max 95 °C	7147	130



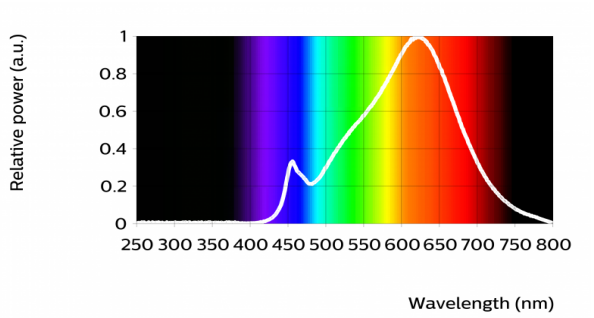
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
83	93	95	79	83	88	86	68	14	82	78	61	87	98

Fortimo SLM C 927 1208 L15 2024 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	2835	3150	3465	lm
Module efficacy	112	124		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		927/359		
Photobiological safety			RG1 unlimited	

Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI +/- 1.5

Operation point	927	lm	lm/W
80% I-nom 600mA	Tc 25 °C	2818	136
	Tc-nom 85 °C	2588	130
	Tc-max 95 °C	2548	129
I-nom 750mA	Tc 25 °C	3451	130
	Tc-nom 85 °C	3150	124
	Tc-max 95 °C	3097	123
I-max 1500mA	Tc 25 °C	6223	108
	Tc-nom 85 °C	5588	101
	Tc-max 95 °C	5477	100



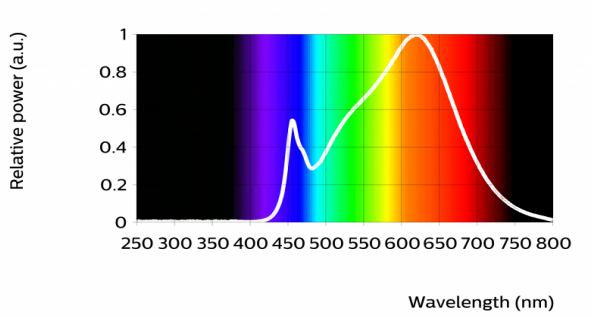
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92	98	98	92	93	97	91	81	60	94	93	83	95	100

Fortimo SLM C 930 1208 L15 2024 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	2943	3270	3597	lm
Module efficacy	116	129		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		930/359		
Photobiological safety			RG1 unlimited	

Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

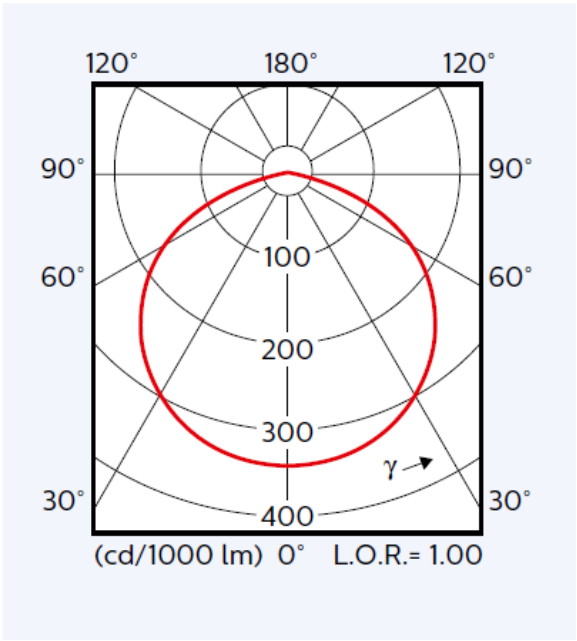
Operation point	930	lm	lm/W
80% I-nom 600mA	Tc 25 °C	2925	141
	Tc-nom 85 °C	2687	135
	Tc-max 95 °C	2645	133
I-nom 750mA	Tc 25 °C	3583	135
	Tc-nom 85 °C	3270	129
	Tc-max 95 °C	3215	127
I-max 1500mA	Tc 25 °C	6461	113
	Tc-nom 85 °C	5802	105
	Tc-max 95 °C	5687	103



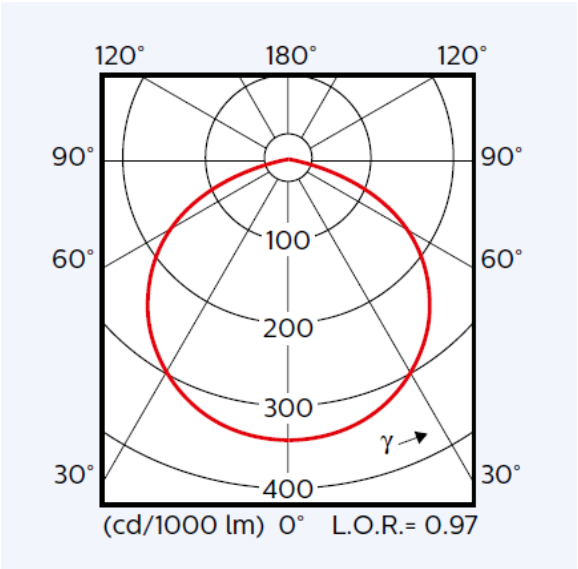
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
94	98	99	92	93	96	91	83	62	94	92	79	95	99

Beam shape

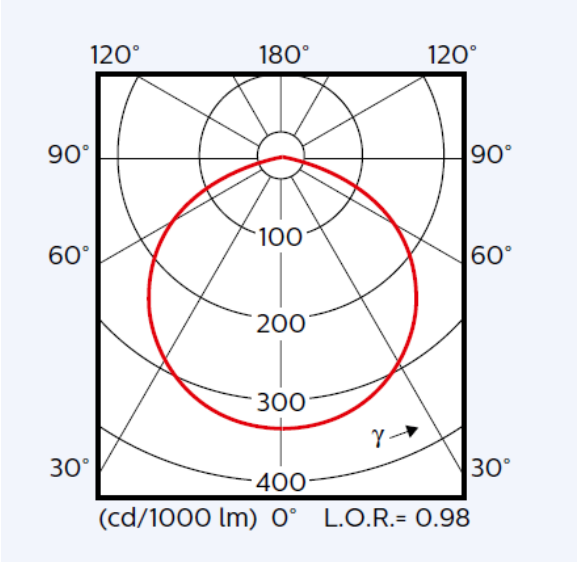
Bare CoB



CoB with a standard/ down-light/ Zhaga poke-in holder



CoB with a poke-in holder



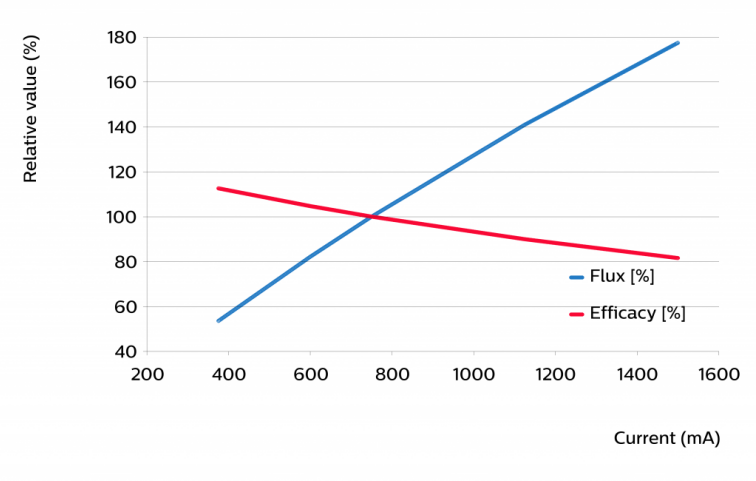
Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	31.6	33.9	36.6	V
Power consumption	23.7	25.4	27.5	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

Tuning information

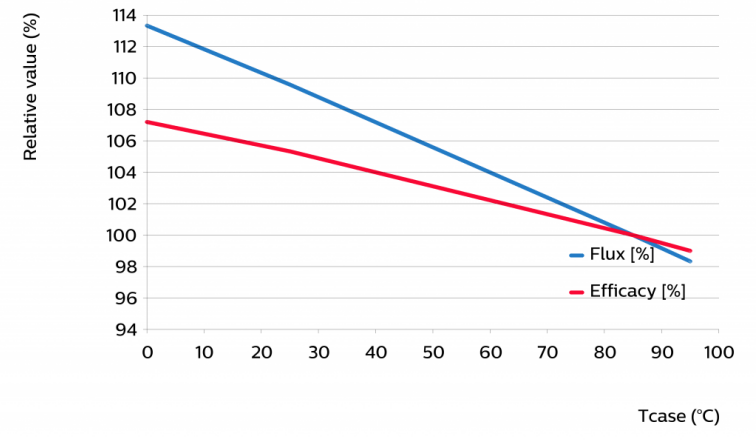
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1500	177	82
1125	141	90
750	100	100
600	82	105
375	54	113



Flux and efficacy versus temperature at Tc (at I nominal)

Tc [°C]	Flux [%]	Efficacy [%]
95	98	99
85	100	100
25	110	105
0	113	107



Lumen maintenance

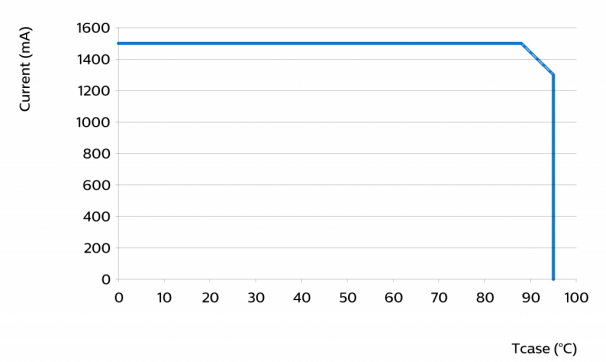
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 600 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	>50	40
	Tc nom 85°C	>50	>50	>50	>50	47	38	34	22	18
	Tc max 95°C	>50	>50	41	49	32	26	23	15	12
I nom 750 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	45	36
	Tc nom 85°C	>50	>50	>50	>50	43	34	31	20	16
	Tc max 95°C	>50	47	38	45	29	24	21	14	11
I max 1500 mA	Tc 65°C	>50	>50	>50	>50	>50	42	37	24	20
	Tc nom 85°C	>50	39	31	37	24	20	18	12	9
	Tc max 95°C	42	27	22	26	17	14	12	8	7

Lifetime

Parameter	Value	Unit
C10 at Tc life	50000	hours
M70F50 nominal	>50000	hours
M70F50 life	>50000	hours

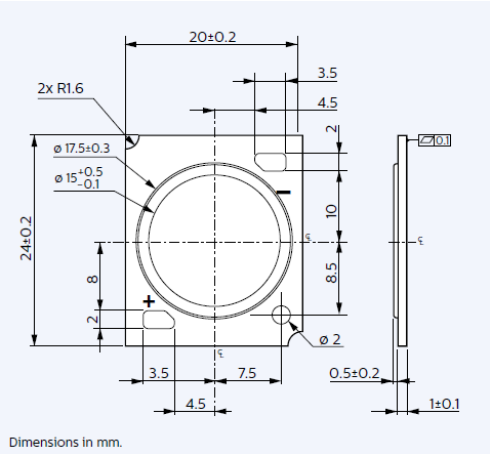
Switching cycles in accordance to EU 1194/2012: >15000
At I life L70B50>50000 hours.
Charts presenting module's lumen maintenance data are available via your sales representative.
Please refer to the performance window to ensure that your operati

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	23.8	24	24.2	mm
Width	19.8	20	20.2	mm
Height PCB	0.9	1	1.1	mm
Height including dam	1.2	1.5	1.8	mm
Product mass		1.23		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1500	mA
Case temperature (Tc-max)		95	°C
Power at rated Vf-max and I-max		55.5	W
ESD (direct contact)	8		kV
Ambient temperature	-20	40	°C
Storage temperature	-40	80	°C

Application information

Certificates and Standards
IEC 62031:2008/A1:2012/A2:2014
EN 62031:2008/A1:2013/A2:2015
Relevant clauses of IEC 62471:2006 (Incl. IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)
Relevant clauses of IEC 60838-1:2004/A1:2008/A2:2011 with IEC 60838-2-2:2006 /A1:2012
Relevant clauses of EN 62471:2008 (With IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)
Relevant clauses of EN 60838-1:2004/A1:2008/A2:2011 with EN 60838-2-2:2006/A1:2012
UL 8750
ENEC+
CE

Environmental
RoHS/REACH

Application	
IP rating	No IP-rating
Overheating protection	No
Luminaire class	IEC Class I and Class II
Dimming	Yes



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