

PHILIPS

Fortimo

LED

Fortimo SLM 1211
L19 2828 G7



Datasheet

Experience bright and vivid colors

Fortimo LED SLM 1211 L19 2828 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

March 2018

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo SLM C 827 1211 L19 2828 G7	8718699 590413 00	9290 015 91806	10
Fortimo SLM C 830 1211 L19 2828 G7	8718699 590444 00	9290 015 91906	10
Fortimo SLM C 835 1211 L19 2828 G7	8718699 590475 00	9290 015 92006	10
Fortimo SLM C 840 1211 L19 2828 G7	8718699 590505 00	9290 015 92106	10
Fortimo SLM C 850 1211 L19 2828 G7	8718699 590536 00	9290 015 92206	10
Fortimo SLM C 857 1211 L19 2828 G7	8718699 590567 00	9290 015 92306	10
Fortimo SLM C 927 1211 L19 2828 G7	8718699 590598 00	9290 015 92406	10
Fortimo SLM C 930 1211 L19 2828 G7	8718699 590628 00	9290 015 92506	10

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 1211 L19 2828 G7	1200	2000	2000	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	85	85	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

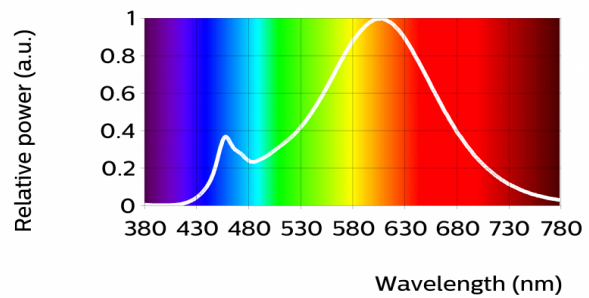
Optical characteristics - table per color (CCT)

Fortimo SLM C 827 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	5499	6110	6721	lm
Module efficacy	132	147		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	80	82		
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

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 960mA	Tc 25 °C	5507	165
	Tc-nom 85 °C	5036	155
	Tc-max 95 °C	4945	152
I-nom 1200mA	Tc 25 °C	6723	158
	Tc-nom 85 °C	6110	147
	Tc-max 95 °C	5991	145
I-life 2000mA	Tc 25 °C	10355	136
	Tc-nom 85 °C	9279	125
	Tc-max 95 °C	9070	123



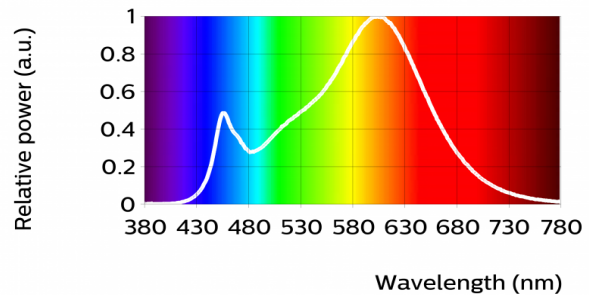
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
79	92	94	76	79	90	82	59	12	82	72	73	82	97

Fortimo SLM C 830 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	5652	6280	6908	lm
Module efficacy	136	151		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	80	82		
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

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 960mA	Tc 25 °C	5660	170
	Tc-nom 85 °C	5176	159
	Tc-max 95 °C	5082	157
I-nom 1200mA	Tc 25 °C	6909	162
	Tc-nom 85 °C	6280	151
	Tc-max 95 °C	6158	149
I-life 2000mA	Tc 25 °C	10643	140
	Tc-nom 85 °C	9538	129
	Tc-max 95 °C	9323	126



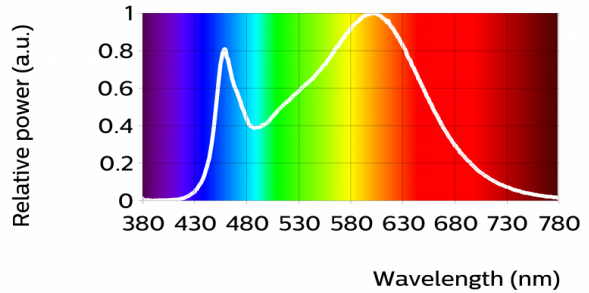
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
83	94	93	80	84	94	81	59	12	87	80	76	86	97

Fortimo SLM C 835 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	5769	6410	7051	lm
Module efficacy	139	154		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.392)		-
Color consistency			3	SDCM
CRI	80	82		
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

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 960mA	Tc 25 °C	5777	173
	Tc-nom 85 °C	5283	162
	Tc-max 95 °C	5187	160
I-nom 1200mA	Tc 25 °C	7052	165
	Tc-nom 85 °C	6410	154
	Tc-max 95 °C	6286	152
I-life 2000mA	Tc 25 °C	10865	143
	Tc-nom 85 °C	9738	131
	Tc-max 95 °C	9519	129



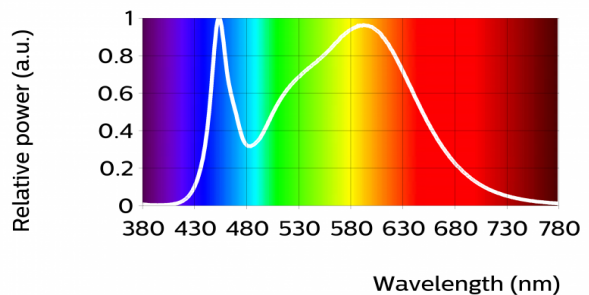
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
86	96	93	80	85	94	83	65	22	90	79	70	89	97

Fortimo SLM C 840 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	5967	6630	7293	lm
Module efficacy	143	159		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			3	SDCM
CRI	80	82		
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

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 960mA	Tc 25 °C	5974	179
	Tc-nom 85 °C	5463	168
	Tc-max 95 °C	5364	165
I-nom 1200mA	Tc 25 °C	7293	171
	Tc-nom 85 °C	6630	159
	Tc-max 95 °C	6501	157
I-life 2000mA	Tc 25 °C	11240	148
	Tc-nom 85 °C	10076	136
	Tc-max 95 °C	9850	133



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

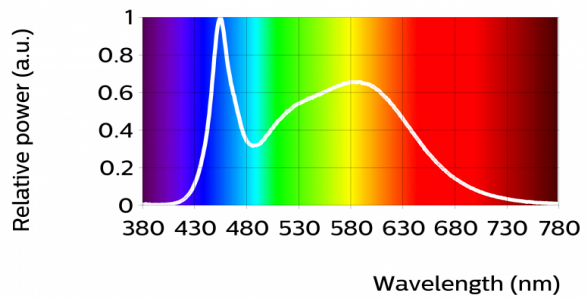
Fortimo SLM C 850 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	5967	6630	7293	lm
Module efficacy	143	159		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			3	SDCM
CRI	80	82		
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

At currents higher than 1528 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	850	lm	lm/W
80% I-nom 960mA	Tc 25 °C	5974	179
	Tc-nom 85 °C	5463	168
	Tc-max 95 °C	5364	165
I-nom 1200mA	Tc 25 °C	7293	171
	Tc-nom 85 °C	6630	159
	Tc-max 95 °C	6501	157
I-life 2000mA	Tc 25 °C	11240	148
	Tc-nom 85 °C	10076	136
	Tc-max 95 °C	9850	133



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

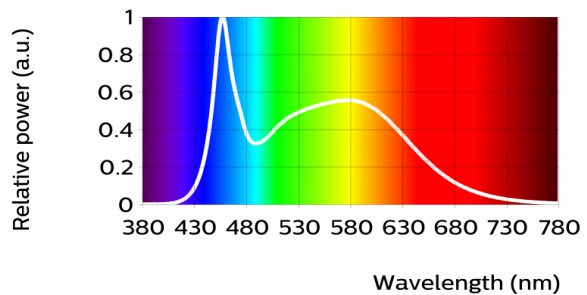
Fortimo SLM C 857 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	5949	6610	7271	lm
Module efficacy	143	159		lm/W
Correlated color temperature (CCT)		5700		K
Color coordinates (CIEx, CIEy)		(0.329, 0.342)		-
Color consistency			3	SDCM
CRI	80	82		
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

At currents higher than 1349 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	857	lm	lm/W
80% I-nom 960mA	Tc 25 °C	5954	178
	Tc-nom 85 °C	5446	167
	Tc-max 95 °C	5347	165
I-nom 1200mA	Tc 25 °C	7270	171
	Tc-nom 85 °C	6610	159
	Tc-max 95 °C	6482	156
I-life 2000mA	Tc 25 °C	11208	148
	Tc-nom 85 °C	10050	135
	Tc-max 95 °C	9825	133



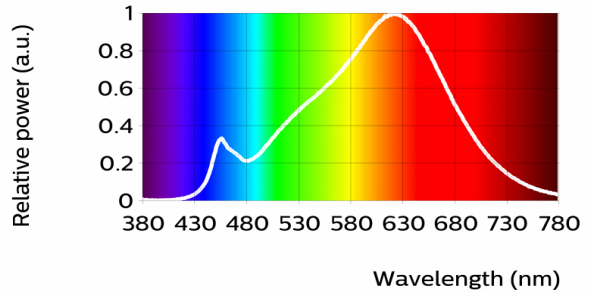
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
83	93	95	79	83	88	86	68	14	82	78	61	87	98

Fortimo SLM C 927 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	4563	5070	5577	lm
Module efficacy	110	122		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	90	92		
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

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 960mA	Tc 25 °C	4572	137
	Tc-nom 85 °C	4180	128
	Tc-max 95 °C	4104	127
I-nom 1200mA	Tc 25 °C	5580	131
	Tc-nom 85 °C	5070	122
	Tc-max 95 °C	4971	120
I-life 2000mA	Tc 25 °C	8590	113
	Tc-nom 85 °C	7694	104
	Tc-max 95 °C	7521	102



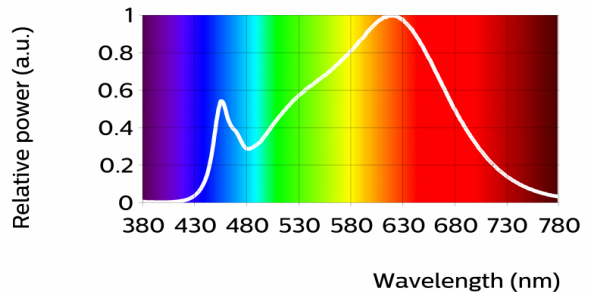
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92	98	98	92	93	97	91	81	60	94	93	83	95	100

Fortimo SLM C 930 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Luminous flux	4779	5310	5841	lm
Module efficacy	115	128		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	90	92		
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

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

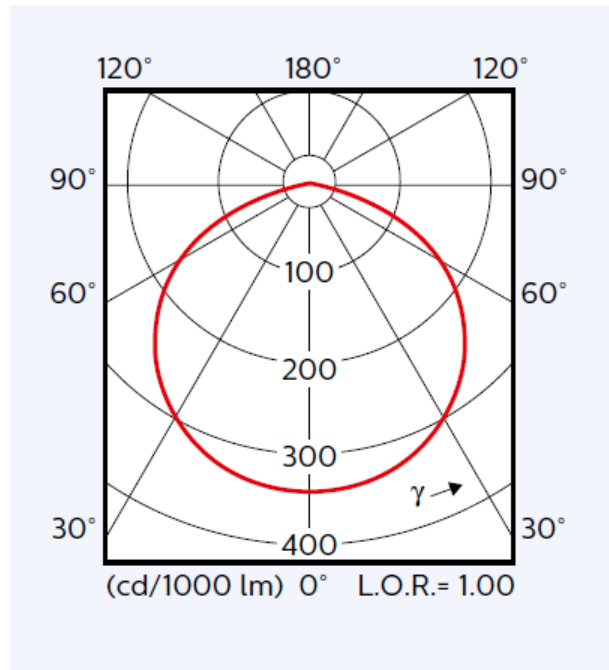
Operation point	930	lm	lm/W
80% I-nom 960mA	Tc 25 °C	4787	143
	Tc-nom 85 °C	4377	134
	Tc-max 95 °C	4298	133
I-nom 1200mA	Tc 25 °C	5843	137
	Tc-nom 85 °C	5310	128
	Tc-max 95 °C	5207	126
I-life 2000mA	Tc 25 °C	8997	119
	Tc-nom 85 °C	8060	109
	Tc-max 95 °C	7878	107



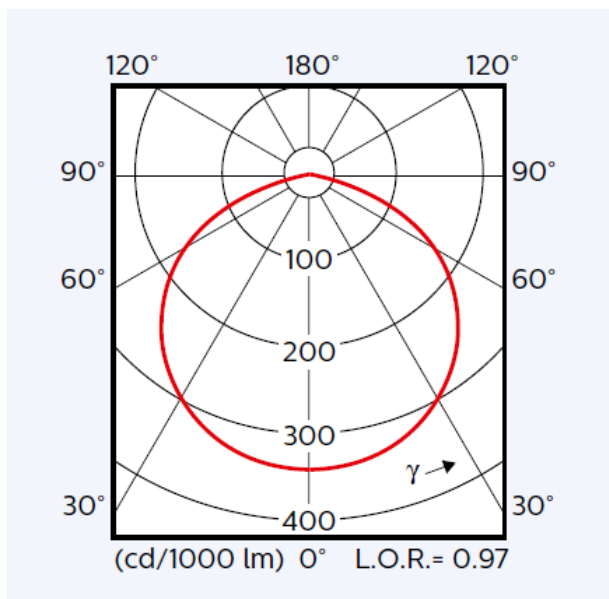
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
94	98	99	92	93	96	91	83	62	94	92	79	95	99

Beam shape

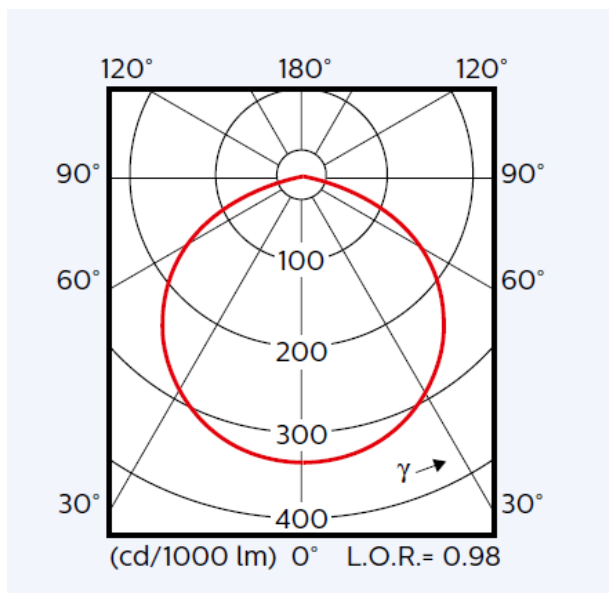
Bare CoB



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



CoB with a poke-in holder



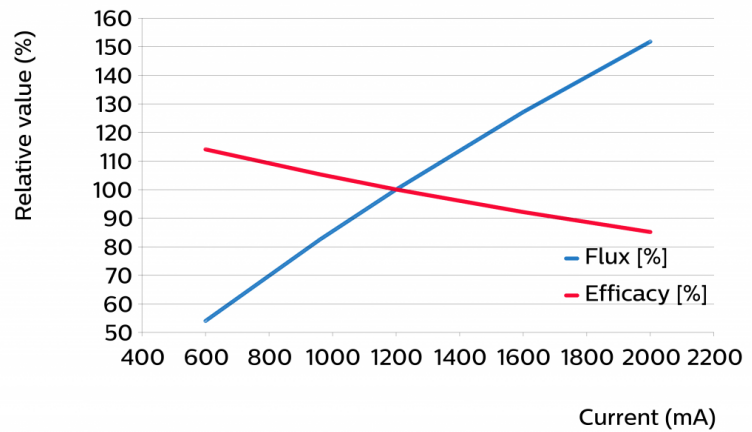
[Fortimo SLM C 827 1211 L19 2828 G7](#)
[Fortimo SLM C 830 1211 L19 2828 G7](#)
[Fortimo SLM C 835 1211 L19 2828 G7](#)
[Fortimo SLM C 840 1211 L19 2828 G7](#)
[Fortimo SLM C 850 1211 L19 2828 G7](#)
[Fortimo SLM C 857 1211 L19 2828 G7](#)
[Fortimo SLM C 927 1211 L19 2828 G7](#)
[Fortimo SLM C 930 1211 L19 2828 G7](#)

Parameter	Min	Typ	Max	Unit
Forward voltage	32.4	34.7	37.4	V
Power consumption	38.9	41.6	44.9	W

Tuning information

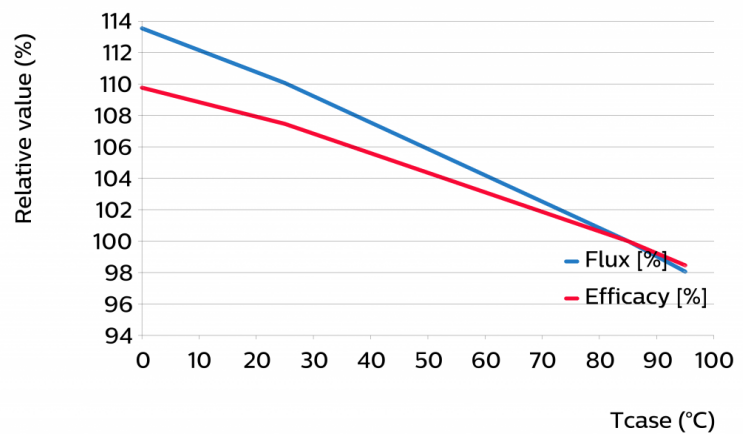
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
2000	152	85
1600	127	92
1200	100	100
960	82	105
600	54	114



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

Tcase [°C]	Flux [%]	Efficacy [%]
95	98	98
85	100	100
25	110	107
0	114	110



Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% i nom 960 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	>50	43
	Tc nom 85°C	>50	>50	>50	>50	50	40	36	24	19
	Tc max 95°C	>50	>50	44	>50	34	27	25	16	13
i nom 1200 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	50	40
	Tc nom 85°C	>50	>50	>50	>50	46	37	33	22	18
	Tc max 95°C	>50	>50	71	48	32	25	23	15	12
I life 2000 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	36	29
	Tc nom 85°C	>50	>50	45	>50	35	28	25	16	13
	Tc max 95°C	>50	39	31	37	24	19	17	11	9

Lifetime

Parameter	Value	Unit
C10 at Tc life	50000	hours

Please refer to the performance window to ensure that your operating conditions are covered.

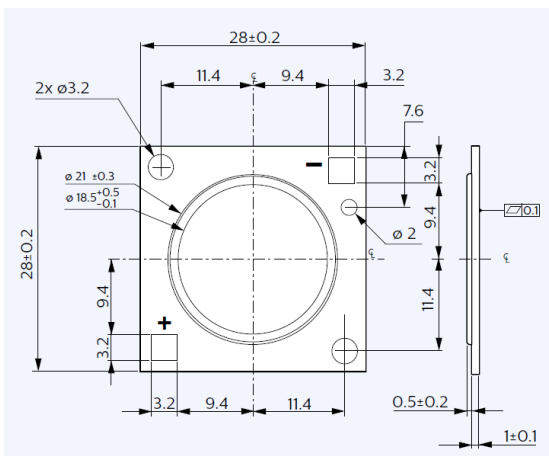
>50 k hours claim is based on extrapolating raw LM80-data by using statistical techniques.

Switching cycles in accordance to EU 1194/2012: >15000.

Mechanical characteristics

Fortimo SLM C 827 1211 L19 2828 G7
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 Fortimo SLM C 840 1211 L19 2828 G7
 Fortimo SLM C 850 1211 L19 2828 G7
 Fortimo SLM C 857 1211 L19 2828 G7
 Fortimo SLM C 927 1211 L19 2828 G7
 Fortimo SLM C 930 1211 L19 2828 G7

Parameter	Min	Typ	Max	Unit
Length	27.8	28	28.2	mm
Width	27.8	28	28.2	mm
Height PCB	0.9	1	1.1	mm
Height including dam	1.2	1.5	1.8	mm



Absolute ratings

Parameter	Min	Typ	Max	Unit
Current through the LED module (I-max)			2000	mA
Case temperature (Tc-max)			95	°C
Power at rated Vf-max and I-max			79.2	W
ESD (direct contact)			8	kV
Ambient temperature	-20		40	°C
Storage temperature	-40		80	°C

Application information

Certificates and Standards

IEC 62031:2008 (First Edition) + A1:2012 + A2:2014

EN 62031:2008 (First Edition) + 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

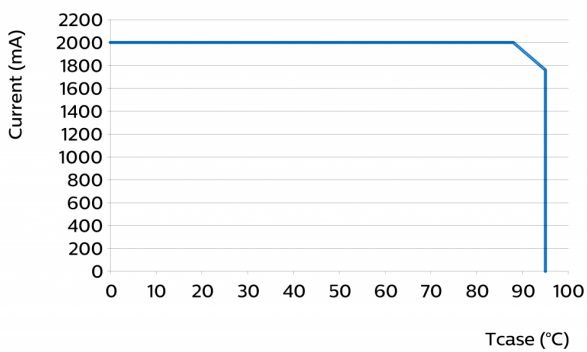
Environmental

RoHS/REACH

Application

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

Performance Window





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