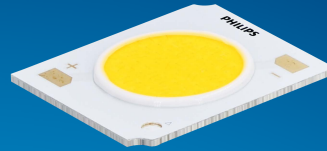


PHILIPS

Fortimo

LED

Fortimo SLM C 9xx 1206
L13 2024 G8 HE



Datasheet

Best combination of quality of light and efficacy

Fortimo LED SLM CRI90 G8 HE

Philips continues to develop its tried and trusted high efficiency COB range of products (since 2020) by introducing the third generation Fortimo SLM G8 HE. The Fortimo SLM CRI90 G8 HE range boasts an impressive 5% increase in efficacy and maintains color consistency of 2 SDCM similar to its predecessor, Fortimo SLM CRI90 G7HE+. Drawing on our four years of industry and R&D experience with high efficacy COB platforms, we have further optimized the quality of light and enhanced the product's robustness.

With the superior efficiency and color consistency, Fortimo SLM G8 HE helps unlock the extraordinary potential of light, facilitating innovation and inspiring the next generation of luminaire design for our OEM customers. Check out 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
- ~5% efficacy improvement vs. current Fortimo SLM G7 HE+ range
- Excellent color consistency management (2 SDCM)
- System proposition (Module + Driver + Holder)
- Flexibility to optimize luminaire performance (high efficacy or high lm output)
- 50,000 hours lifetime

October 2024



Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
Fortimo SLM C 927 1206 L13 2024 G8 HE	8720169 378223 00	9290 038 90180	2093702	20
Fortimo SLM C 930 1206 L13 2024 G8 HE	8720169 378254 00	9290 038 90280	2093696	20
Fortimo SLM C 935 1206 L13 2024 G8 HE	8720169 378285 00	9290 038 90380	2093700	20
Fortimo SLM C 940 1206 L13 2024 G8 HE	8720169 378315 00	9290 038 90480	2093687	20
Fortimo SLM C 950 1206 L13 2024 G8 HE	8720169 378346 00	9290 038 90580	2093701	20
Fortimo SLM C 930 PW 1206 L13 2024 G8 HE	8720169 378377 00	9290 038 90680	2093876	20
Fortimo SLM C 935 PW 1206 L13 2024 G8 HE	8720169 378407 00	9290 038 90780	2093864	20
Fortimo SLM C 940 PW 1206 L13 2024 G8 HE	8720169 378438 00	9290 038 90880	2093879	20
Fortimo SLM C 930 PC 1206 L13 2024 G8 HE	8720169 378469 00	9290 038 90980	2093699	20

Not all products are globally available by default.

Please contact your local sales representative for local availability and activation conditions.

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 9xx 1206 L13 2024 G8 HE	600	1080	1080	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	65	95	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)

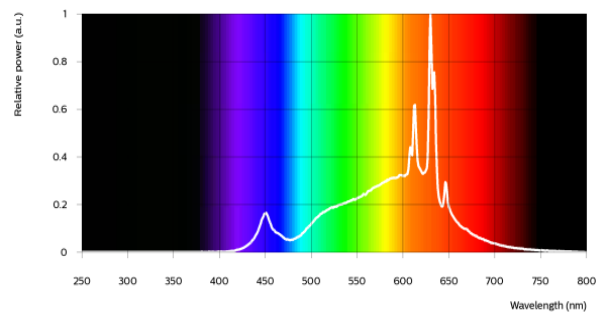
Fortimo SLM C 927 1206 L13 2024 G8 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3073	3235	3558	lm
Efficacy		156		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		927/259		
Photobiological safety		RG1 unlimited		



Measurement precision $\pm 5\%$ for the flux data and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement precision for CRI ± 1.5 .

Operation point	927	lm	lm/W
80% I-nom 480mA	Tc 25 °C	2781	169
	Tc-nom 65 °C	2632	161
	Tc-max 95 °C	2497	155
I-nom 600mA	Tc 25 °C	3420	163
	Tc-nom 65 °C	3235	156
	Tc-max 95 °C	3067	149
I-max 1080mA	Tc 25 °C	5802	142
	Tc-nom 65 °C	5476	136
	Tc-max 95 °C	5179	129



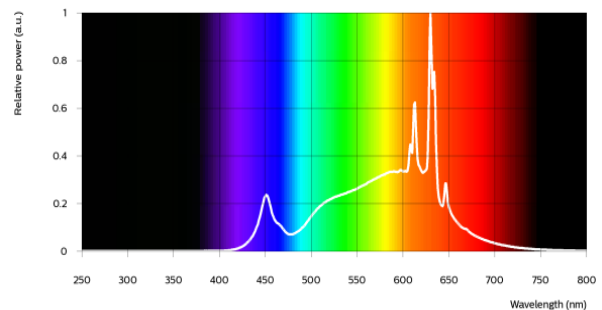
Fortimo SLM C 930 1206 L13 2024 G8 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3235	3405	3746	lm
Efficacy		164		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		930/259		
Photobiological safety		RG1 unlimited		




Measurement precision $\pm 5\%$ for the flux data and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement precision for CRI ± 1.5 .

Operation point	930	lm	lm/W
80% I-nom 480mA	Tc 25 °C	2927	177
	Tc-nom 65 °C	2770	170
	Tc-max 95 °C	2628	163
I-nom 600mA	Tc 25 °C	3599	171
	Tc-nom 65 °C	3405	164
	Tc-max 95 °C	3229	157
I-max 1080mA	Tc 25 °C	6107	149
	Tc-nom 65 °C	5764	143
	Tc-max 95 °C	5453	136

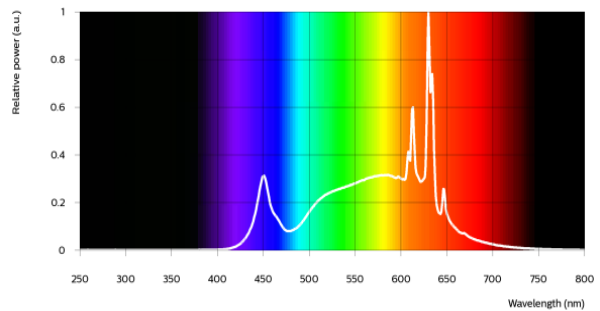


Fortimo SLM C 935 1206 L13 2024 G8 HE


Parameter	Min	Typ	Max	Unit
Luminous flux	3301	3475	3822	lm
Efficacy		167		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.392)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		935/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	935	lm	lm/W
80% I-nom 480mA	Tc 25 °C	2987	181
	Tc-nom 65 °C	2827	173
	Tc-max 95 °C	2682	167
I-nom 600mA	Tc 25 °C	3673	175
	Tc-nom 65 °C	3475	167
	Tc-max 95 °C	3295	160
I-max 1080mA	Tc 25 °C	6233	152
	Tc-nom 65 °C	5883	146
	Tc-max 95 °C	5566	139

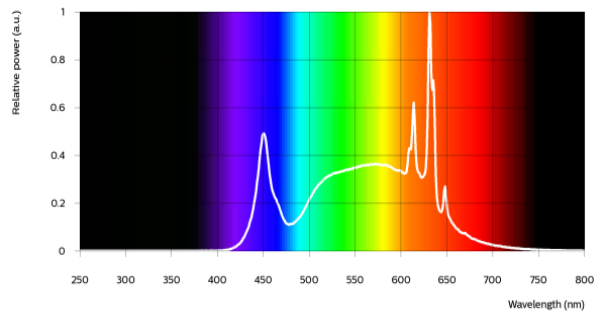


Fortimo SLM C 940 1206 L13 2024 G8 HE


Parameter	Min	Typ	Max	Unit
Luminous flux	3349	3525	3878	lm
Efficacy		169		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		940/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	940	lm	lm/W
80% I-nom 480mA	Tc 25 °C	3030	184
	Tc-nom 65 °C	2868	176
	Tc-max 95 °C	2721	169
I-nom 600mA	Tc 25 °C	3726	177
	Tc-nom 65 °C	3525	169
	Tc-max 95 °C	3343	162
I-max 1080mA	Tc 25 °C	6323	155
	Tc-nom 65 °C	5969	148
	Tc-max 95 °C	5647	141

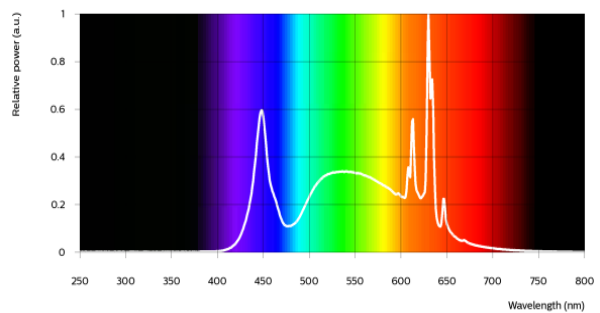


Fortimo SLM C 950 1206 L13 2024 G8 HE


Parameter	Min	Typ	Max	Unit
Luminous flux	3320	3495	3844	lm
Efficacy		168		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		950/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	950	lm	lm/W
80% I-nom 480mA	Tc 25 °C	3004	182
	Tc-nom 65 °C	2843	174
	Tc-max 95 °C	2698	168
I-nom 600mA	Tc 25 °C	3694	176
	Tc-nom 65 °C	3495	168
	Tc-max 95 °C	3314	161
I-max 1080mA	Tc 25 °C	6270	153
	Tc-nom 65 °C	5919	147
	Tc-max 95 °C	5600	140

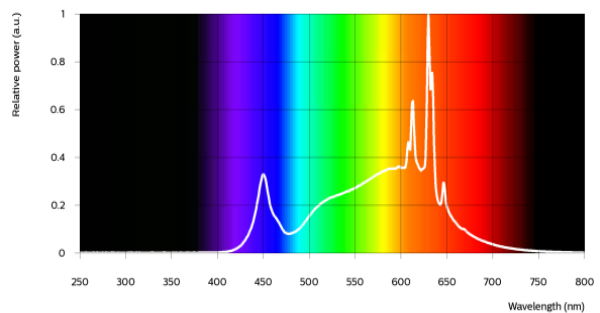


Fortimo SLM C 930 PW 1206 L13 2024 G8 HE


Parameter	Min	Typ	Max	Unit
Luminous flux	3206	3375	3712	lm
Efficacy		162		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		930/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	930	lm	lm/W
80% I-nom 480mA	Tc 25 °C	2901	176
	Tc-nom 65 °C	2746	168
	Tc-max 95 °C	2605	162
I-nom 600mA	Tc 25 °C	3568	170
	Tc-nom 65 °C	3375	162
	Tc-max 95 °C	3200	155
I-max 1080mA	Tc 25 °C	6054	148
	Tc-nom 65 °C	5714	141
	Tc-max 95 °C	5406	135

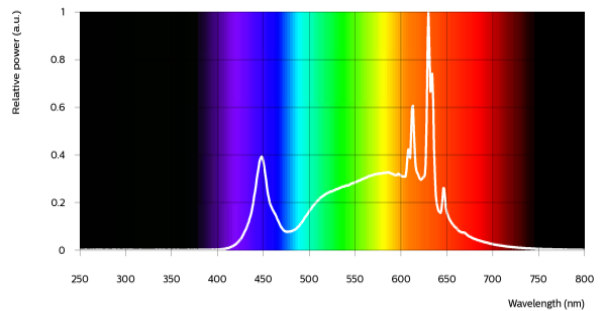


Fortimo SLM C 935 PW 1206 L13 2024 G8 HE


Parameter	Min	Typ	Max	Unit
Luminous flux	3254	3425	3768	lm
Efficacy		165		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.398, 0.376)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		935/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	935	lm	lm/W
80% I-nom 480mA	Tc 25 °C	2944	178
	Tc-nom 65 °C	2787	171
	Tc-max 95 °C	2644	164
I-nom 600mA	Tc 25 °C	3620	172
	Tc-nom 65 °C	3425	165
	Tc-max 95 °C	3248	158
I-max 1080mA	Tc 25 °C	6143	150
	Tc-nom 65 °C	5799	144
	Tc-max 95 °C	5486	137

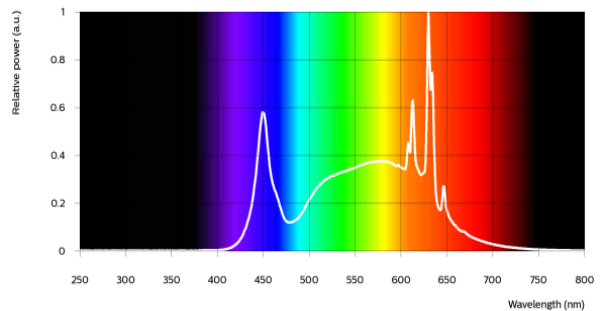



Fortimo SLM C 940 PW 1206 L13 2024 G8 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3287	3460	3806	lm
Efficacy		166		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.374, 0.364)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		940/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

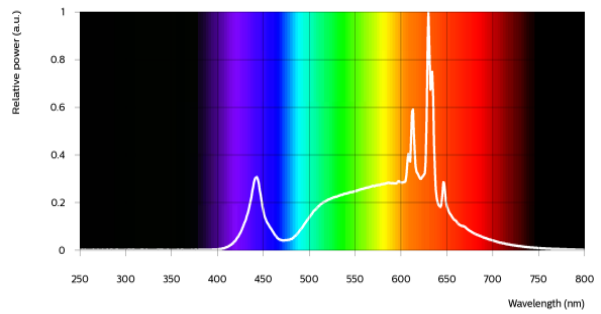
Operation point	940	lm	lm/W
80% I-nom 480mA	Tc 25 °C	2974	180
	Tc-nom 65 °C	2815	173
	Tc-max 95 °C	2671	166
I-nom 600mA	Tc 25 °C	3657	174
	Tc-nom 65 °C	3460	166
	Tc-max 95 °C	3281	159
I-max 1080mA	Tc 25 °C	6207	152
	Tc-nom 65 °C	5859	145
	Tc-max 95 °C	5543	138

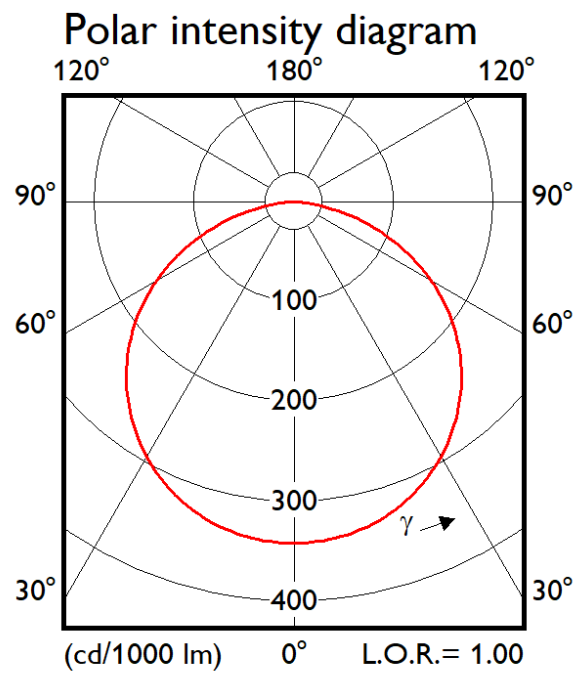


Parameter	Min	Typ	Max	Unit
Luminous flux	2978	3135	3448	lm
Efficacy		151		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	90			
R9	>70			
Photometric code		930/259		
Photobiological safety		RG1 unlimited		

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	930	lm	lm/W
80% I-nom 480mA	Tc 25 °C	2695	163
	Tc-nom 65 °C	2551	156
	Tc-max 95 °C	2420	150
I-nom 600mA	Tc 25 °C	3314	158
	Tc-nom 65 °C	3135	151
	Tc-max 95 °C	2973	144
I-max 1080mA	Tc 25 °C	5622	137
	Tc-nom 65 °C	5307	131
	Tc-max 95 °C	5020	125





Electrical characteristics

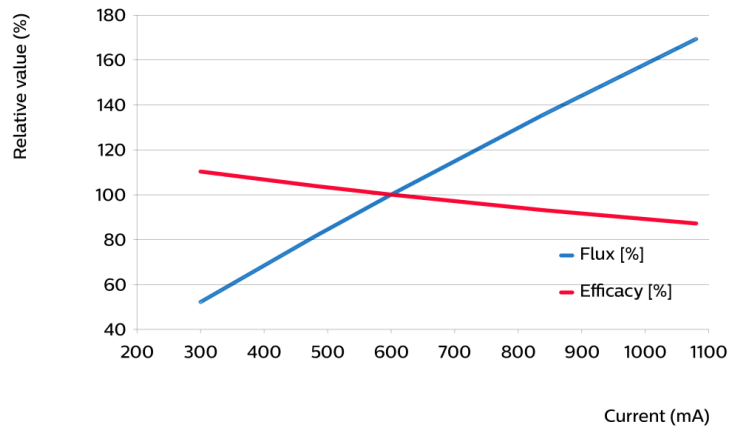
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.7	37.0	V
Power consumption	19.5	20.8	22.2	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

Measurement precision for Vf +/- 3%. Measurement precision for power +/- 3.3%

Tuning information

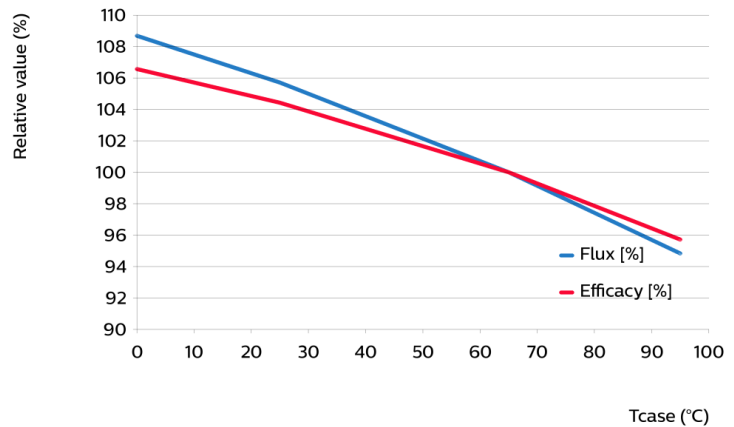
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1080	169	87
840	136	93
600	100	100
480	81	104
300	52	110



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

Tc [°C]	Flux [%]	Efficacy [%]
95	95	96
65	100	100
25	106	104
0	109	107



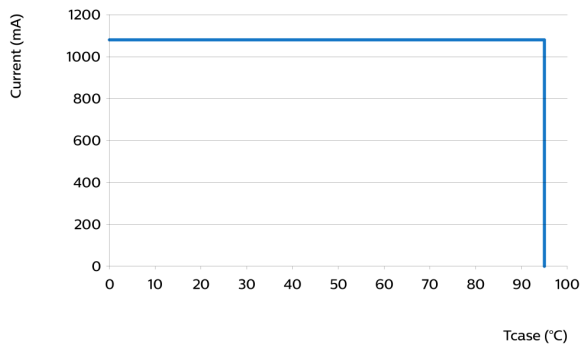
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 480mA	Tc 50°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 65°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 95°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
I-nom 600mA	Tc 50°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 65°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 95°C	>66	>66	>66	>66	>66	>66	>66	56	51
I-max 1080mA	Tc 50°C	>66	>66	>66	>66	>66	>66	50	42	39
	Tc 65°C	>66	>66	>66	>66	>66	62	38	32	29
	Tc 95°C	>66	>66	60	49	41	38	23	19	17

Lifetime

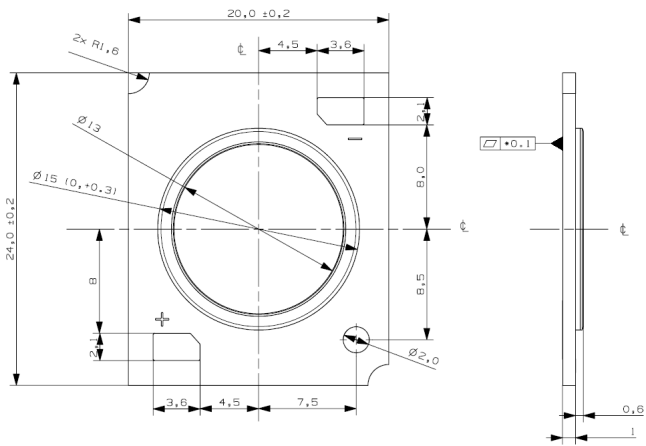
Parameter	Value	Unit
M70F50 nominal	>66000	hours

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	23.8	24	24.2	mm
Width	19.8	20	20.2	mm
Height	0.9	1	1.1	mm
Height	1.3	1.6	1.9	mm
Product mass		1.31		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1080	mA
Case temperature (Tc-max)		95	°C
ESD (direct contact)	8		kV
Working voltage		60	V _{dc}
Ambient temperature	-20	40	°C
Storage temperature	-40	80	°C

At illumination levels exceeding 1342 lux risk group classification may be RG2.

Application information

Certificates and Standards

CB
 CE
 ENEC
 ENEC+
 EPRS 001
 IEC 62031
 UKCA
 UL
 UL 8750

Environmental

RoHS/REACH

Application

Dimming	Yes
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11/10/2024