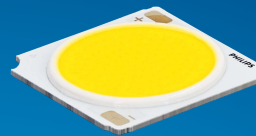


PHILIPS

Fortimo

LED

Fortimo SLM C 8xx 1205
L15 1919 G8N HE



Datasheet

Best combination of quality of light and efficacy with industry standard footprint

Fortimo LED SLM CRI80 G8N 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 with an expanded offer featuring CRI 80 products. The Fortimo SLM CRI80 G8 HE range boasts an impressive 7% - 12% increase in efficacy and enhanced color consistency of 2 SDCM compared to its predecessor, the Fortimo SLM CRI80 G7. 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 Color Rendering Index extension, 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

- Most widely used footprint to enable ease of use
- Best quality of light available for all applications
- 7%~12% efficacy improvement vs. current Fortimo SLM CRI80 G7N 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 827 1205 L15 1919 G8N HE	8720169 381520 00	9290 039 01180	2093736	20
Fortimo SLM C 830 1205 L15 1919 G8N HE	8720169 381551 00	9290 039 01280	2093815	20
Fortimo SLM C 835 1205 L15 1919 G8N HE	8720169 381582 00	9290 039 01380	2093783	20
Fortimo SLM C 840 1205 L15 1919 G8N HE	8720169 381612 00	9290 039 01480	2093789	20
Fortimo SLM C 850 1205 L15 1919 G8N HE	8720169 381643 00	9290 039 01580	2093735	20
Fortimo SLM C 830 PW 1205 L15 1919 G8N HE	8720169 381674 00	9290 039 01680	2093791	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 8xx 1205 L15 1919 G8N HE	450	900	900	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)

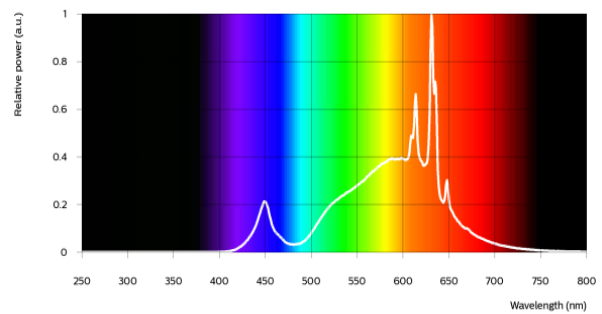
Fortimo SLM C 827 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2527	2660	2926	lm
Efficacy		172		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			2	SDCM
CRI	80			
R9	>0			
Photometric code		827/259		
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	827	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2265	183
	Tc-nom 65 °C	2152	176
	Tc-max 95 °C	2036	168
I-nom 450mA	Tc 25 °C	2784	176
	Tc-nom 65 °C	2640	169
	Tc-max 95 °C	2500	162
I-max 900mA	Tc 25 °C	5181	151
	Tc-nom 65 °C	4903	144
	Tc-max 95 °C	4618	137



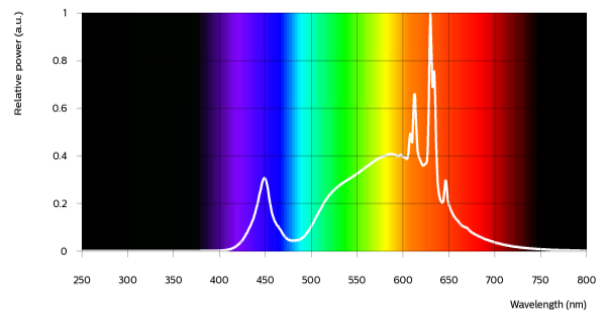
Fortimo SLM C 830 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2594	2730	3003	lm
Efficacy		176		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			2	SDCM
CRI	80			
R9	>0			
Photometric code		830/259		
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	830	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2316	187
	Tc-nom 65 °C	2200	180
	Tc-max 95 °C	2082	172
I-nom 450mA	Tc 25 °C	2847	180
	Tc-nom 65 °C	2700	173
	Tc-max 95 °C	2557	166
I-max 900mA	Tc 25 °C	5298	154
	Tc-nom 65 °C	5014	147
	Tc-max 95 °C	4723	140

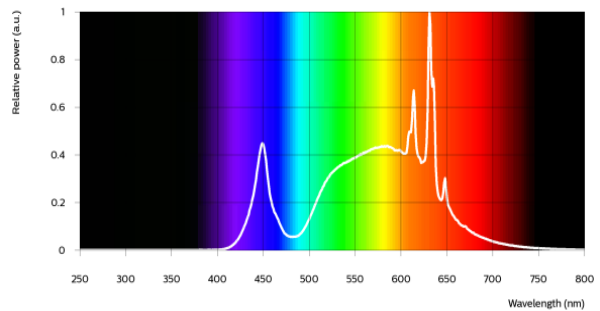


Fortimo SLM C 835 1205 L15 1919 G8N HE


Parameter	Min	Typ	Max	Unit
Luminous flux	2655	2795	3074	lm
Efficacy		180		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.408, 0.393)		-
Color consistency			2	SDCM
CRI	80			
R9	>0			
Photometric code		835/259		
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	835	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2376	192
	Tc-nom 65 °C	2257	185
	Tc-max 95 °C	2136	177
I-nom 450mA	Tc 25 °C	2921	185
	Tc-nom 65 °C	2770	178
	Tc-max 95 °C	2623	170
I-max 900mA	Tc 25 °C	5436	158
	Tc-nom 65 °C	5145	151
	Tc-max 95 °C	4847	144

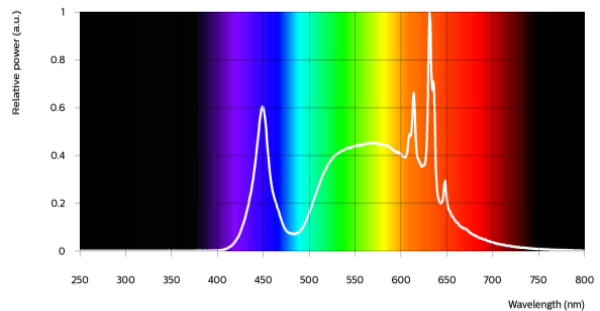


Fortimo SLM C 840 1205 L15 1919 G8N HE


Parameter	Min	Typ	Max	Unit
Luminous flux	2670	2810	3091	lm
Efficacy		181		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			2	SDCM
CRI	80			
R9	>0			
Photometric code		840/259		
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	840	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2385	192
	Tc-nom 65 °C	2266	186
	Tc-max 95 °C	2144	177
I-nom 450mA	Tc 25 °C	2932	186
	Tc-nom 65 °C	2780	178
	Tc-max 95 °C	2633	171
I-max 900mA	Tc 25 °C	5456	159
	Tc-nom 65 °C	5165	152
	Tc-max 95 °C	4865	144

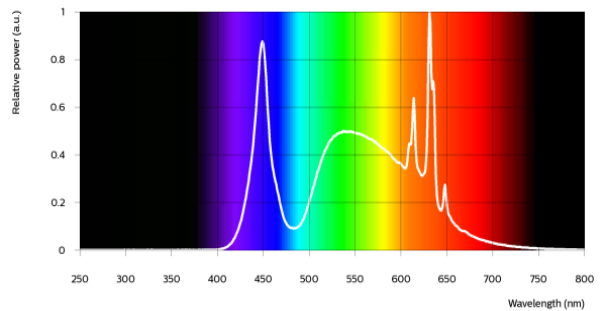


Fortimo SLM C 850 1205 L15 1919 G8N HE


Parameter	Min	Typ	Max	Unit
Luminous flux	2670	2810	3091	lm
Efficacy		181		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			2	SDCM
CRI	80			
R9	>0			
Photometric code		850/259		
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	850	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2376	192
	Tc-nom 65 °C	2257	185
	Tc-max 95 °C	2136	177
I-nom 450mA	Tc 25 °C	2921	185
	Tc-nom 65 °C	2770	178
	Tc-max 95 °C	2623	170
I-max 900mA	Tc 25 °C	5436	158
	Tc-nom 65 °C	5145	151
	Tc-max 95 °C	4847	144

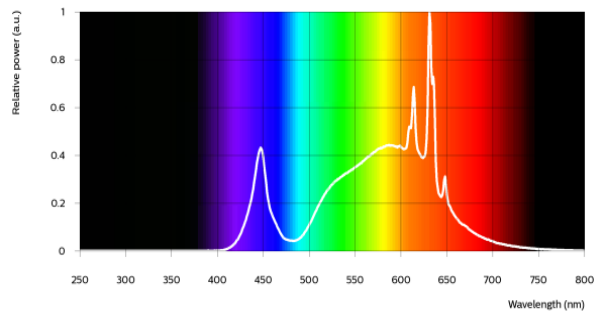


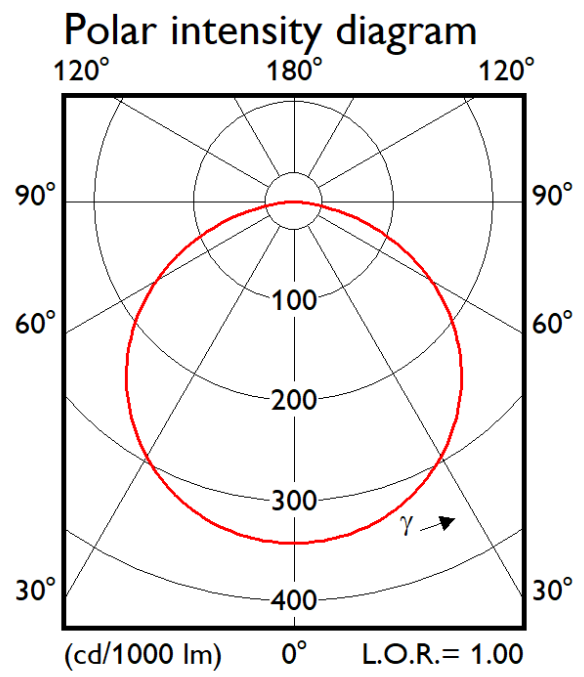
Fortimo SLM C 830 PW 1205 L15 1919 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2556	2690	2959	lm
Efficacy		174		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	80			
R9	>0			
Photometric code		830/259		
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	830	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2282	184
	Tc-nom 65 °C	2168	178
	Tc-max 95 °C	2052	170
I-nom 450mA	Tc 25 °C	2806	178
	Tc-nom 65 °C	2660	171
	Tc-max 95 °C	2519	164
I-max 900mA	Tc 25 °C	5221	152
	Tc-nom 65 °C	4942	145
	Tc-max 95 °C	4655	138





Electrical characteristics

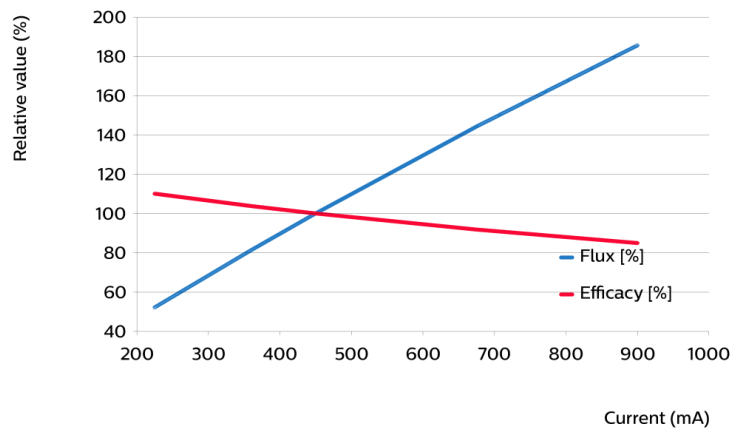
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.5	37.0	V
Power consumption	14.6	15.5	16.7	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

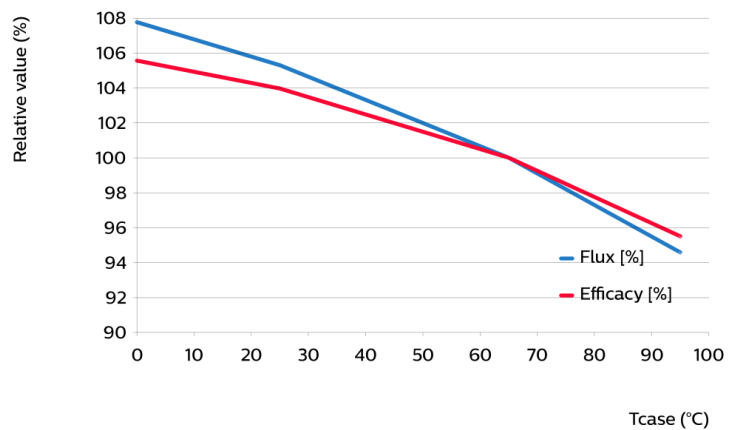
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
900	186	85
675	144	92
450	100	100
360	81	104
225	52	110



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

Tc [°C]	Flux [%]	Efficacy [%]
95	95	96
65	100	100
25	105	104
0	108	106



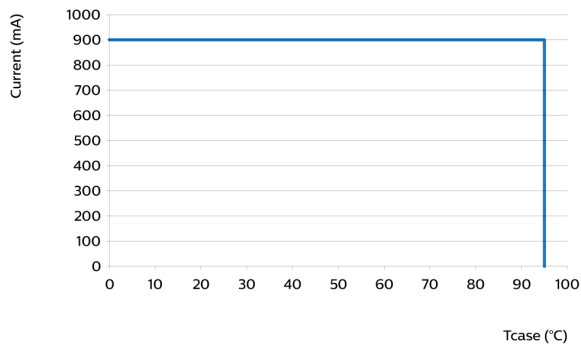
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 360mA	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 450mA	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	62
I-max 900mA	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

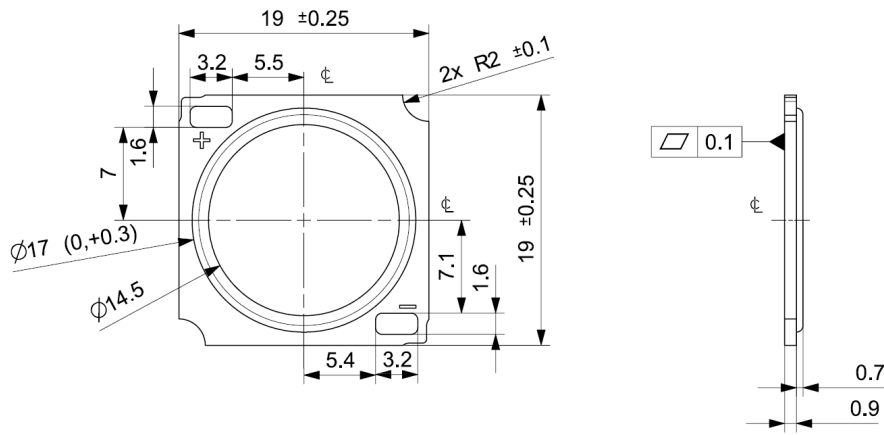
Parameter	Value	Unit
M70F50 nominal	>66000	hours

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	18.75	19	19.25	mm
Width	18.75	19	19.25	mm
Height	0.8	0.9	1	mm
Height	1.3	1.6	1.9	mm
Product mass		0.98		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		900	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
---------	-----



© 2024 Signify Holding, IBRS 10461, 5600VB, NL. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

www.philips.com/oem

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.
UK importer address: Signify Commercial UK Limited, 3 Guildford Business Park, GU2 8XG

11/10/2024