

# PHILIPS

## Fortimo

### LED

Fortimo SLM C 8xx 1202  
L06 1215 G8 HE



## Datasheet

# Best combination of quality of light and efficacy

## Fortimo LED SLM CRI80 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 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](http://www.easydesignintool.com)).

### Key features and benefits

- Best quality of light available for all applications
- 7%~12% efficacy improvement vs. current Fortimo SLM G7 CRI80 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 1202 L06 1215 G8 HE	8720169 376243 00	9290 038 83580	2093670	20
Fortimo SLM C 830 1202 L06 1215 G8 HE	8720169 376274 00	9290 038 83680	2093665	20
Fortimo SLM C 835 1202 L06 1215 G8 HE	8720169 376304 00	9290 038 83780	2093676	20
Fortimo SLM C 840 1202 L06 1215 G8 HE	8720169 376335 00	9290 038 83880	2093682	20
Fortimo SLM C 850 1202 L06 1215 G8 HE	8720169 376366 00	9290 038 83980	2093667	20
Fortimo SLM C 830 PW 1202 L06 1215 G8 HE	8720169 376397 00	9290 038 84080	2093673	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 1202 L06 1215 G8 HE	200	360	360	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> 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)

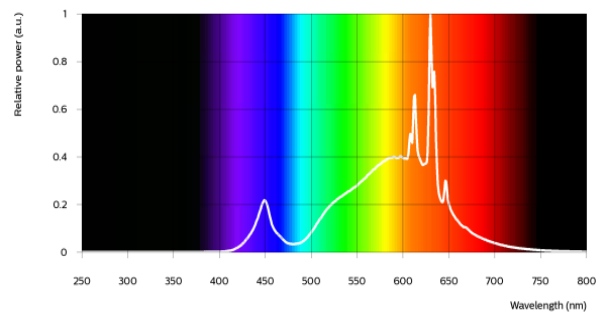
### Fortimo SLM C 827 1202 L06 1215 G8 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1050	1105	1216	lm
Efficacy		160		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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$ .

Operation point	827	lm	lm/W
80% I-nom 160mA	Tc 25 °C	957	174
	Tc-nom 65 °C	901	167
	Tc-max 95 °C	851	158
I-nom 200mA	Tc 25 °C	1174	168
	Tc-nom 65 °C	1105	160
	Tc-max 95 °C	1043	151
I-max 360mA	Tc 25 °C	1976	146
	Tc-nom 65 °C	1854	139
	Tc-max 95 °C	1743	132



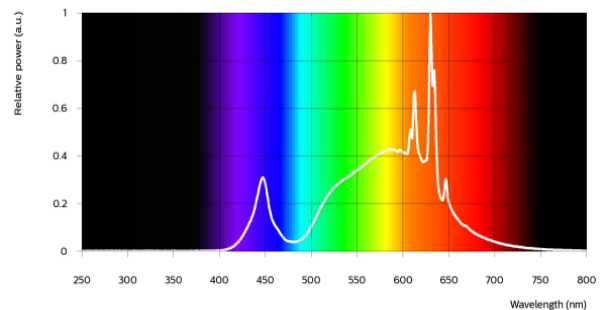
### Fortimo SLM C 830 1202 L06 1215 G8 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1083	1140	1254	lm
Efficacy		165		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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$ .

Operation point	830	lm	lm/W
80% I-nom 160mA	Tc 25 °C	987	179
	Tc-nom 65 °C	930	172
	Tc-max 95 °C	878	163
I-nom 200mA	Tc 25 °C	1211	173
	Tc-nom 65 °C	1140	165
	Tc-max 95 °C	1076	156
I-max 360mA	Tc 25 °C	2038	151
	Tc-nom 65 °C	1913	144
	Tc-max 95 °C	1799	136

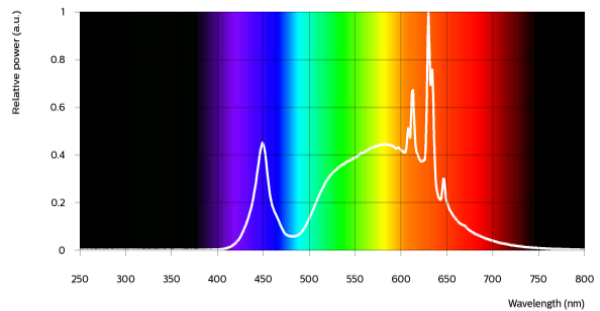


Fortimo SLM C 835 1202 L06 1215 G8 HE


Parameter	Min	Typ	Max	Unit
Luminous flux	1112	1170	1287	lm
Efficacy		170		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.392)		-
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 160mA	Tc 25 °C	1013	184
	Tc-nom 65 °C	954	177
	Tc-max 95 °C	901	167
I-nom 200mA	Tc 25 °C	1243	178
	Tc-nom 65 °C	1170	170
	Tc-max 95 °C	1104	160
I-max 360mA	Tc 25 °C	2092	155
	Tc-nom 65 °C	1964	148
	Tc-max 95 °C	1847	140

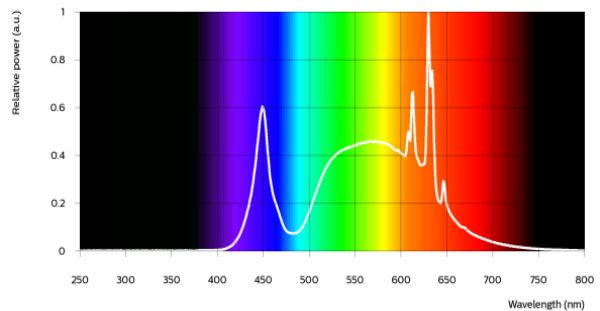


Fortimo SLM C 840 1202 L06 1215 G8 HE


Parameter	Min	Typ	Max	Unit
Luminous flux	1116	1175	1292	lm
Efficacy		170		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 160mA	Tc 25 °C	1017	185
	Tc-nom 65 °C	958	177
	Tc-max 95 °C	905	168
I-nom 200mA	Tc 25 °C	1248	178
	Tc-nom 65 °C	1175	170
	Tc-max 95 °C	1109	161
I-max 360mA	Tc 25 °C	2101	156
	Tc-nom 65 °C	1972	148
	Tc-max 95 °C	1855	141

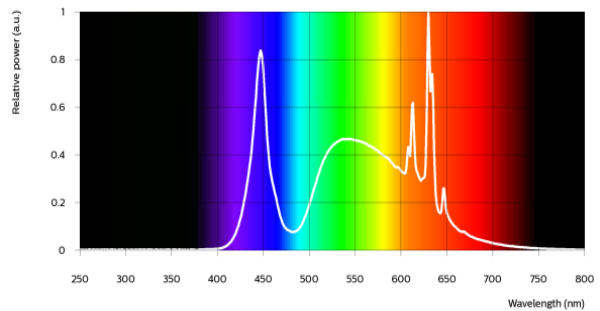


Fortimo SLM C 850 1202 L06 1215 G8 HE


Parameter	Min	Typ	Max	Unit
Luminous flux	1112	1170	1287	lm
Efficacy		170		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 160mA	Tc 25 °C	1013	184
	Tc-nom 65 °C	954	177
	Tc-max 95 °C	901	167
I-nom 200mA	Tc 25 °C	1243	178
	Tc-nom 65 °C	1170	170
	Tc-max 95 °C	1104	160
I-max 360mA	Tc 25 °C	2092	155
	Tc-nom 65 °C	1964	148
	Tc-max 95 °C	1847	140

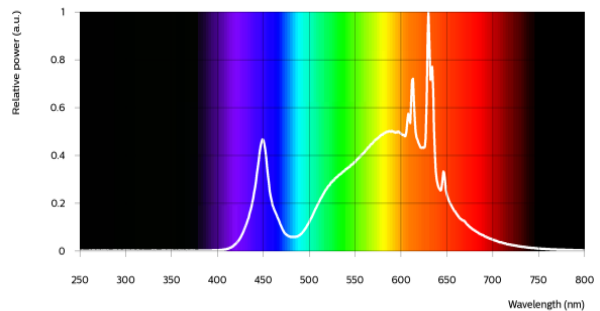


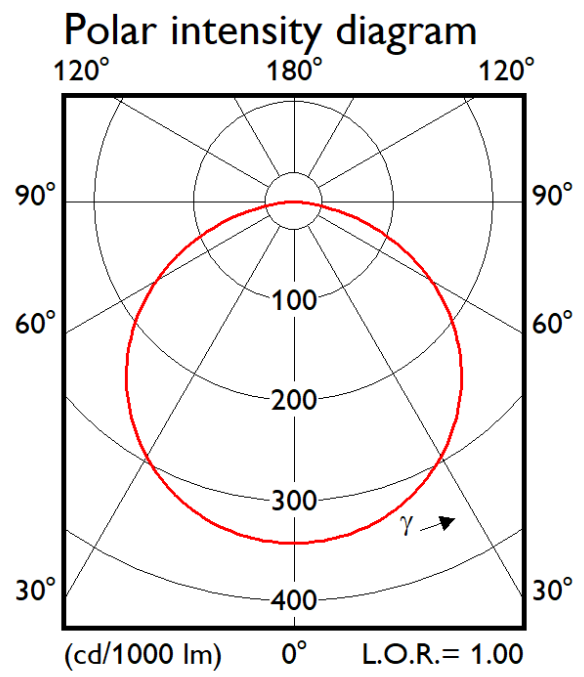
Fortimo SLM C 830 PW 1202 L06 1215 G8 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1069	1125	1238	lm
Efficacy		163		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 160mA	Tc 25 °C	974	177
	Tc-nom 65 °C	918	170
	Tc-max 95 °C	866	160
I-nom 200mA	Tc 25 °C	1195	171
	Tc-nom 65 °C	1125	163
	Tc-max 95 °C	1062	154
I-max 360mA	Tc 25 °C	2012	149
	Tc-nom 65 °C	1888	142
	Tc-max 95 °C	1775	135





## Electrical characteristics

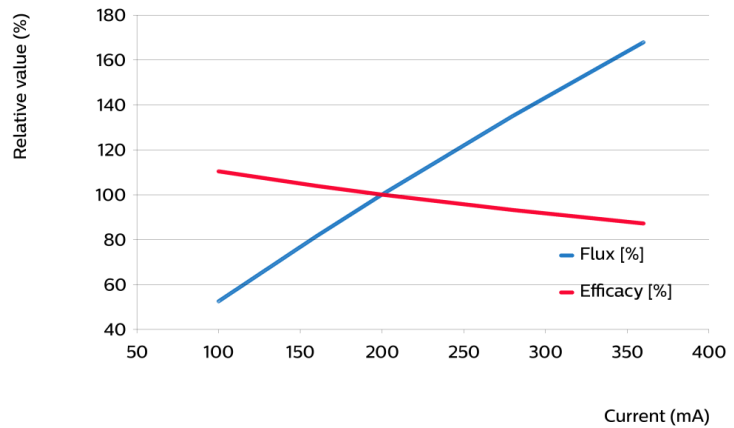
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.7	37.0	V
Power consumption	6.5	6.9	7.4	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

## Tuning information

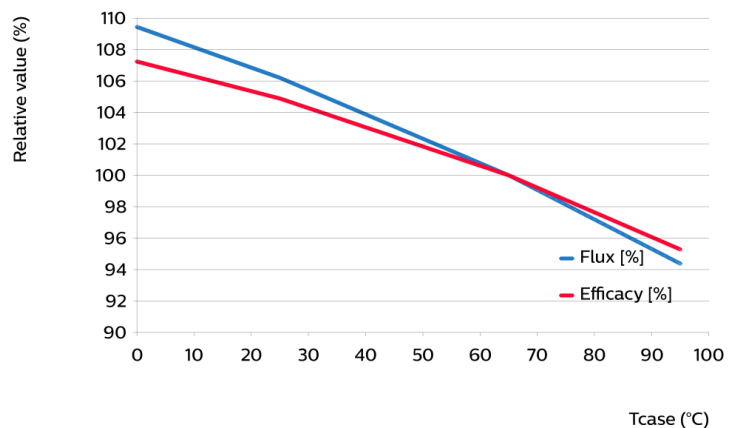
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
360	168	87
280	135	93
200	100	100
160	82	104
100	52	110



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

Tc [°C]	Flux [%]	Efficacy [%]
95	94	95
65	100	100
25	106	105
0	109	107



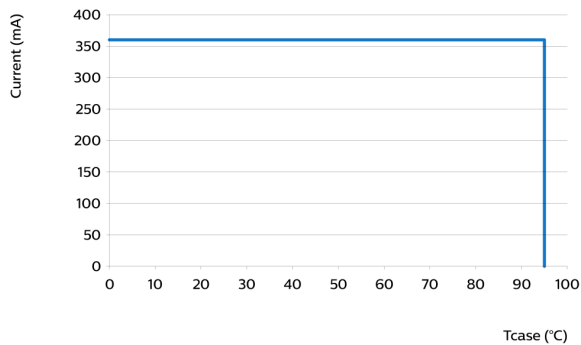
## Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 160mA	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 200mA	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 360mA	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

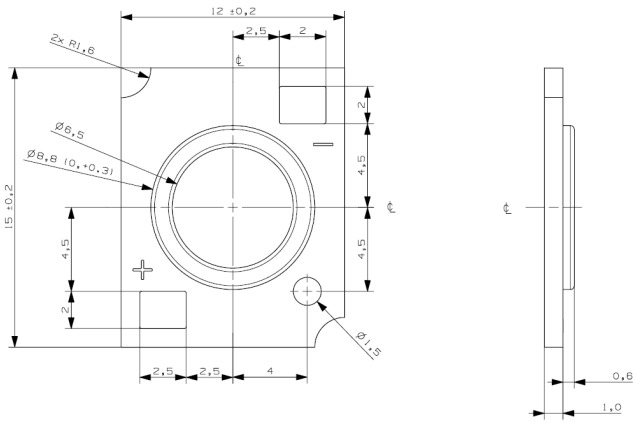
Parameter	Value	Unit
M70F50 nominal	>66000	hours

## Performance Window



## Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	14.8	15	15.2	mm
Width	11.8	12	12.2	mm
Height	0.9	1	1.1	mm
Height	1.3	1.6	1.9	mm
Product mass		0.46		gram



## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		360	mA
Case temperature (Tc-max)		95	°C
ESD (direct contact)	8		kV
Working voltage		60	V <sub>dc</sub>
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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