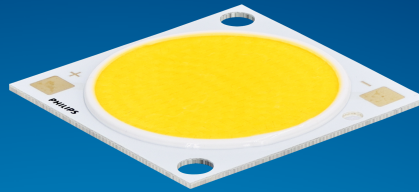


**PHILIPS**

**Fortimo**

**LED**

Fortimo SLM C 8xx 1216  
L23 2828 G8



Datasheet

# Best offer of performance and value

## Fortimo LED SLM CRI80 G8 Standard

The Fortimo SLM family is Signify's core portfolio, now in its latest generation - Gen 8. This new generation boasts improved efficacy compared to the previous one and an expanded portfolio that includes specific spectrums such as Premium White, Premium Color, and standard color for all applications. It maintains the same two footprints as the previous generation, enabling easy upgrades. Together with other Fortimo SLM G8 product lines, our Fortimo SLM G8 will continuously unlock the extraordinary potential of light, facilitate innovation, and inspire the next generation of luminaire design for our OEM customers. Please also visit the online Easy Design-in Tool for your perfect system combination at [www.easydesignintool.com](http://www.easydesignintool.com).

### Key features and benefits

- +5% efficacy further improvement Vs G7
- Best quality of light available for all applications
- More complete portfolio for easy choice
- Same footprint for easy upgrade
- System proposition

March 2025



## Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
Fortimo SLM C 827 1216 L23 2828 G8	8721103 078018 00	9290 039 52101	2270311	10
Fortimo SLM C 830 1216 L23 2828 G8	8721103 078049 00	9290 039 52201	2270326	10
Fortimo SLM C 835 1216 L23 2828 G8	8721103 078070 00	9290 039 52301	2270299	10
Fortimo SLM C 840 1216 L23 2828 G8	8721103 078100 00	9290 039 52401	2270268	10
Fortimo SLM C 850 1216 L23 2828 G8	8721103 078131 00	9290 039 52501	2270343	10
Fortimo SLM C 857 1216 L23 2828 G8	8721103 078162 00	9290 039 52601	2270348	10
Fortimo SLM C 830 PW 1216 L23 2828 G8	8721103 078193 00	9290 039 52701	2270286	10

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 8xx 1216 L23 2828 G8	1600	see performance window	3680	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> point)	65	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)

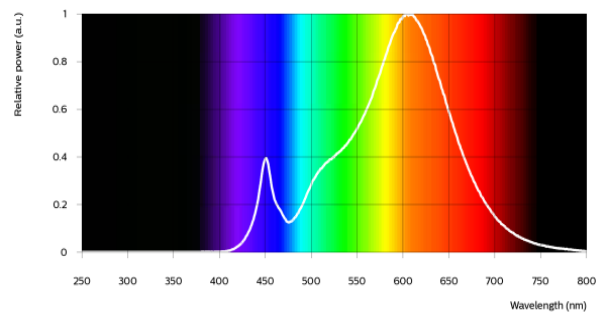
### Fortimo SLM C 827 1216 L23 2828 G8

Parameter	Min	Typ	Max	Unit
Luminous flux	8127	8555	9410	lm
Efficacy		151		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	80			
R9	>0			
Photometric code		827/359		
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 1280mA	Tc 25 °C	7303	163
	Tc-nom 65 °C	6957	157
	Tc-max 95 °C	6623	151
I-nom 1600mA	Tc 25 °C	8987	157
	Tc-nom 65 °C	8555	151
	Tc-max 95 °C	8139	145
I-max 3680mA	Tc 25 °C	18968	127
	Tc-nom 65 °C	17958	121
	Tc-max 95 °C	16981	115



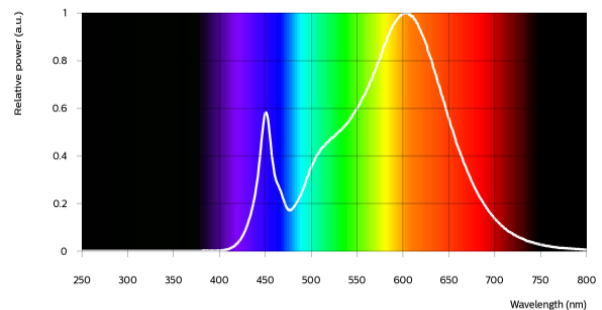
### Fortimo SLM C 830 1216 L23 2828 G8

Parameter	Min	Typ	Max	Unit
Luminous flux	8650	9105	10016	lm
Efficacy		161		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	80			
R9	>0			
Photometric code		830/359		
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 1280mA	Tc 25 °C	7772	174
	Tc-nom 65 °C	7404	168
	Tc-max 95 °C	7048	161
I-nom 1600mA	Tc 25 °C	9564	167
	Tc-nom 65 °C	9105	161
	Tc-max 95 °C	8663	155
I-max 3680mA	Tc 25 °C	20193	135
	Tc-nom 65 °C	19122	129
	Tc-max 95 °C	18085	123

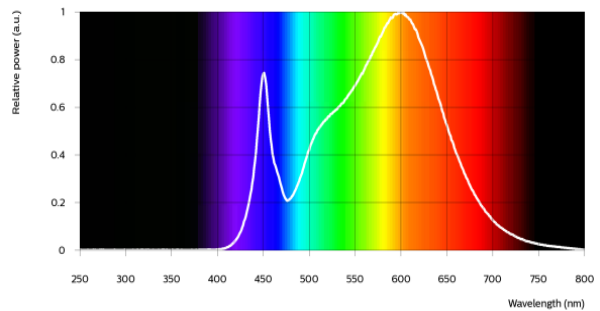


Fortimo SLM C 835 1216 L23 2828 G8


Parameter	Min	Typ	Max	Unit
Luminous flux	8868	9335	10268	lm
Efficacy		165		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.392)		-
Color consistency			3	SDCM
CRI	80			
R9	>0			
Photometric code		835/359		
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 1280mA	Tc 25 °C	7968	178
	Tc-nom 65 °C	7590	172
	Tc-max 95 °C	7227	165
I-nom 1600mA	Tc 25 °C	9805	171
	Tc-nom 65 °C	9335	165
	Tc-max 95 °C	8882	158
I-max 3680mA	Tc 25 °C	20704	138
	Tc-nom 65 °C	19607	132
	Tc-max 95 °C	18545	126

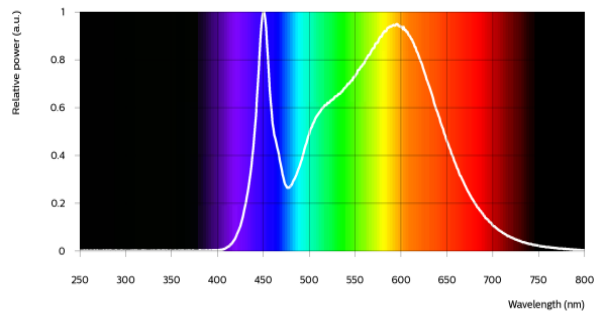


Fortimo SLM C 840 1216 L23 2828 G8


Parameter	Min	Typ	Max	Unit
Luminous flux	8996	9470	10417	lm
Efficacy		167		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			3	SDCM
CRI	80			
R9	>0			
Photometric code		840/359		
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 1280mA	Tc 25 °C	8083	181
	Tc-nom 65 °C	7700	174
	Tc-max 95 °C	7331	167
I-nom 1600mA	Tc 25 °C	9946	174
	Tc-nom 65 °C	9470	167
	Tc-max 95 °C	9010	161
I-max 3680mA	Tc 25 °C	21006	140
	Tc-nom 65 °C	19895	134
	Tc-max 95 °C	18819	128

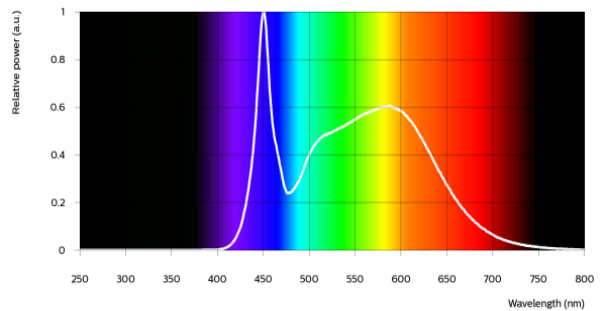


Fortimo SLM C 850 1216 L23 2828 G8


Parameter	Min	Typ	Max	Unit
Luminous flux	9001	9475	10422	lm
Efficacy		167		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			3	SDCM
CRI	80			
R9	>0			
Photometric code		850/359		
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 1280mA	Tc 25 °C	8086	181
	Tc-nom 65 °C	7704	174
	Tc-max 95 °C	7335	167
I-nom 1600mA	Tc 25 °C	9951	174
	Tc-nom 65 °C	9475	167
	Tc-max 95 °C	9016	161
I-max 3680mA	Tc 25 °C	21022	140
	Tc-nom 65 °C	19914	134
	Tc-max 95 °C	18840	128

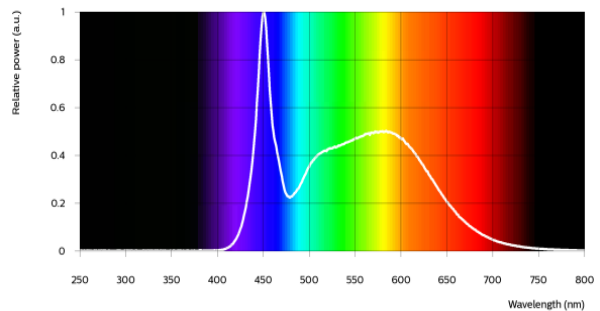



Fortimo SLM C 857 1216 L23 2828 G8

Parameter	Min	Typ	Max	Unit
Luminous flux	9001	9475	10422	lm
Efficacy		167		lm/W
Correlated color temperature (CCT)		5700		K
Color coordinates (CIEx, CIEy)		(0.329, 0.342)		-
Color consistency			3	SDCM
CRI	80			
R9	>0			
Photometric code		857/359		
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.

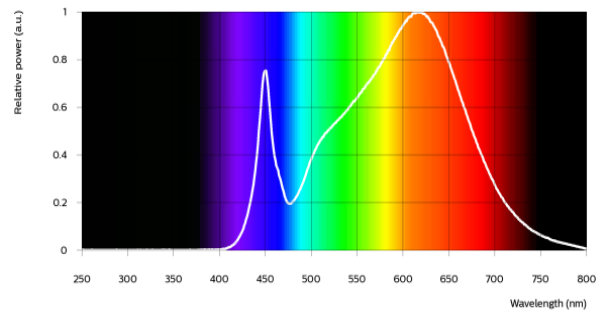
Operation point	857	lm	lm/W
80% I-nom 1280mA	Tc 25 °C	8086	181
	Tc-nom 65 °C	7704	174
	Tc-max 95 °C	7335	167
I-nom 1600mA	Tc 25 °C	9951	174
	Tc-nom 65 °C	9475	167
	Tc-max 95 °C	9016	161
I-max 3680mA	Tc 25 °C	21022	140
	Tc-nom 65 °C	19914	134
	Tc-max 95 °C	18840	128



Parameter	Min	Typ	Max	Unit
Luminous flux	8564	9015	9916	lm
Efficacy		159		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			3	SDCM
CRI	80			
R9	>0			
Photometric code		830/359		
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 1280mA	Tc 25 °C	7695	172
	Tc-nom 65 °C	7330	166
	Tc-max 95 °C	6979	159
I-nom 1600mA	Tc 25 °C	9469	166
	Tc-nom 65 °C	9015	159
	Tc-max 95 °C	8577	153
I-max 3680mA	Tc 25 °C	19994	133
	Tc-nom 65 °C	18934	128
	Tc-max 95 °C	17908	122





## Electrical characteristics

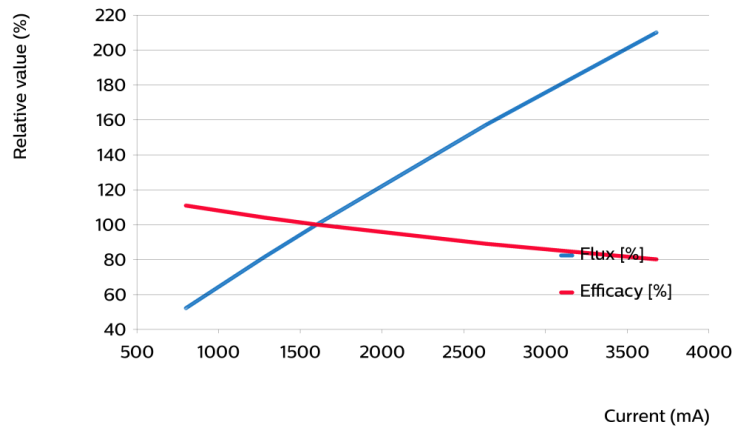
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	35.4	37.0	V
Power consumption	52.0	56.6	59.2	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

## Tuning information

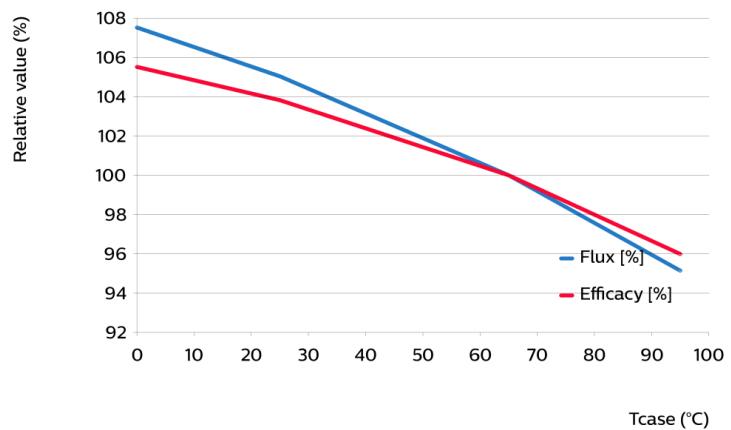
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
3680	210	80
2640	157	89
1600	100	100
1280	81	104
800	52	111



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



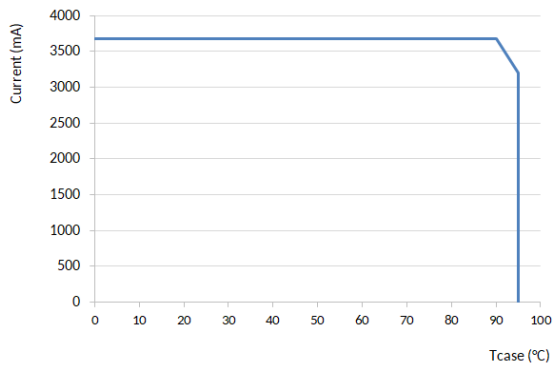
## Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 1280mA	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 1600mA	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 3680mA	Tc 50°C	>66	>66	>66	>66	58	53	32	27	25
	Tc 65°C	>66	>66	64	51	43	40	24	20	18
	Tc 95°C	50	42	39	31	26	24	14	12	11

## Lifetime

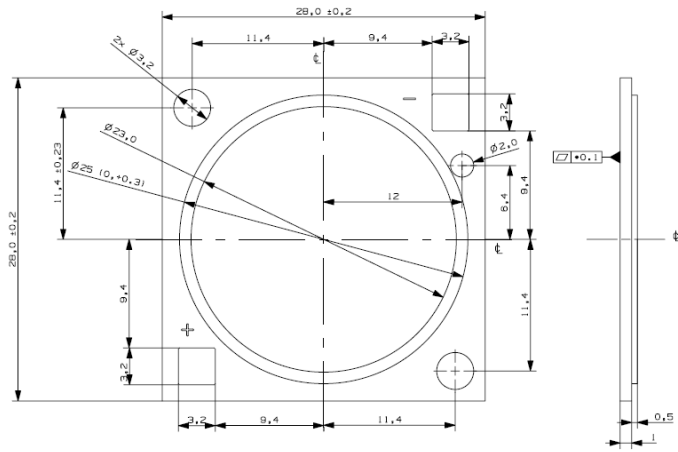
Parameter	Value	Unit
M70F50 nominal	>66000	hours

## Performance Window



## Mechanical characteristics

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
Product mass		2.2		gram



## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		3680	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 1372 lux risk group classification may be RG2.

## Application information

### Certificates and Standards

CB  
CE  
ENEC  
IEC 62031  
UKCA  
UL  
UL 8750

### 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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