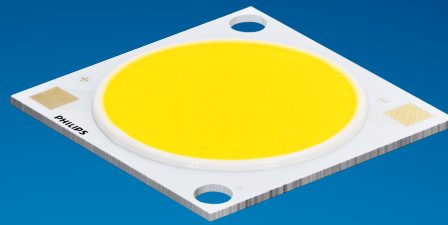


**PHILIPS**

**Fortimo**

**LED**

Fortimo SLM C 8xx 1818  
L22 2828 G8N



Datasheet

# Best offer of performance and value

## Fortimo LED SLM CRI80 G8N 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 1818 L22 2828 G8N	8721103 085221 00	9290 048 27101	2270131	10
Fortimo SLM C 830 1818 L22 2828 G8N	8721103 085252 00	9290 048 27201	2270154	10
Fortimo SLM C 835 1818 L22 2828 G8N	8721103 085283 00	9290 048 27301	2270144	10
Fortimo SLM C 840 1818 L22 2828 G8N	8721103 085313 00	9290 048 27401	2270162	10
Fortimo SLM C 850 1818 L22 2828 G8N	8721103 085344 00	9290 048 27501	2270132	10
Fortimo SLM C 857 1818 L22 2828 G8N	8721103 085375 00	9290 048 27601	2270152	10

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 8xx 1818 L22 2828 G8N	1620	see performance window	4140	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)

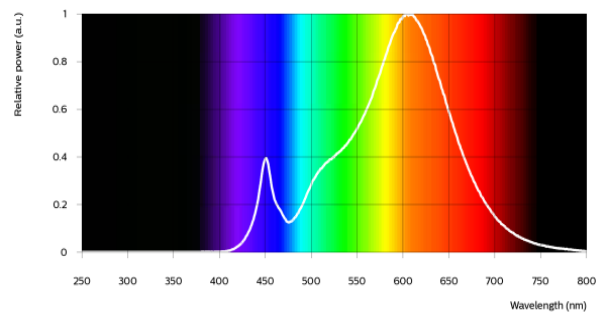
### Fortimo SLM C 827 1818 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	11922	12550	13805	lm
Efficacy		149		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 1296mA	Tc 25 °C	10655	159
	Tc-nom 65 °C	10226	154
	Tc-max 95 °C	9762	149
I-nom 1620mA	Tc 25 °C	13081	153
	Tc-nom 65 °C	12550	149
	Tc-max 95 °C	11975	144
I-max 4140mA	Tc 25 °C	29890	123
	Tc-nom 65 °C	28567	119
	Tc-max 95 °C	27131	114



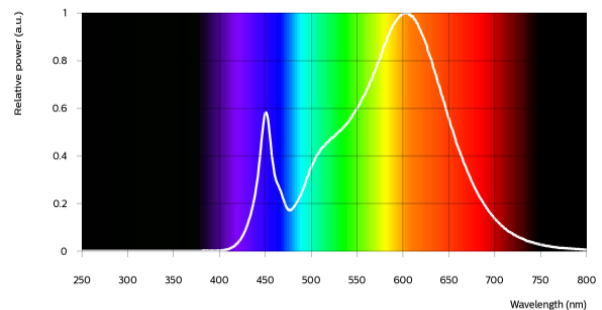
### Fortimo SLM C 830 1818 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	12687	13355	14690	lm
Efficacy		159		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 1296mA	Tc 25 °C	11337	169
	Tc-nom 65 °C	10882	164
	Tc-max 95 °C	10388	159
I-nom 1620mA	Tc 25 °C	13919	163
	Tc-nom 65 °C	13355	159
	Tc-max 95 °C	12744	153
I-max 4140mA	Tc 25 °C	31811	130
	Tc-nom 65 °C	30407	126
	Tc-max 95 °C	28884	121

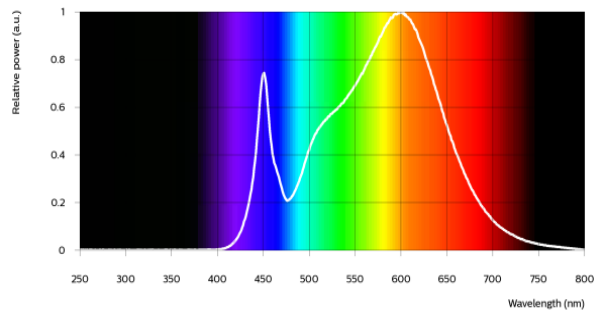


Fortimo SLM C 835 1818 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	13006	13690	15059	lm
Efficacy		163		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.408, 0.393)		-
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 1296mA	Tc 25 °C	11621	173
	Tc-nom 65 °C	11154	168
	Tc-max 95 °C	10649	163
I-nom 1620mA	Tc 25 °C	14268	167
	Tc-nom 65 °C	13690	163
	Tc-max 95 °C	13064	157
I-max 4140mA	Tc 25 °C	32610	134
	Tc-nom 65 °C	31172	130
	Tc-max 95 °C	29611	124

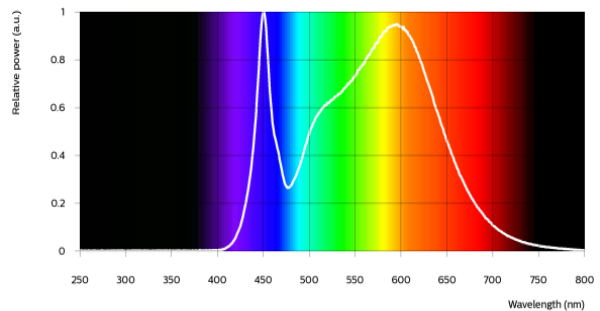


Fortimo SLM C 840 1818 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	13196	13890	15279	lm
Efficacy		165		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 1296mA	Tc 25 °C	11791	175
	Tc-nom 65 °C	11317	171
	Tc-max 95 °C	10805	165
I-nom 1620mA	Tc 25 °C	14476	170
	Tc-nom 65 °C	13890	165
	Tc-max 95 °C	13255	159
I-max 4140mA	Tc 25 °C	33088	136
	Tc-nom 65 °C	31631	131
	Tc-max 95 °C	30050	126

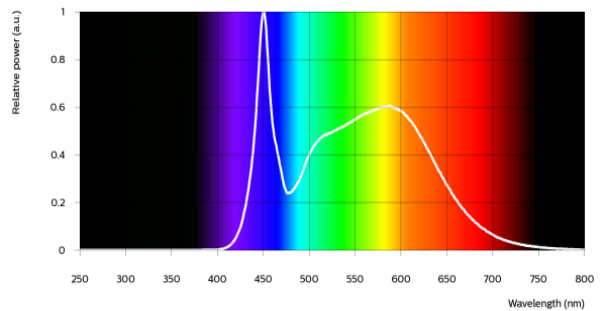


Fortimo SLM C 850 1818 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	13200	13895	15284	lm
Efficacy		165		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 1296mA	Tc 25 °C	11794	176
	Tc-nom 65 °C	11321	171
	Tc-max 95 °C	10809	165
I-nom 1620mA	Tc 25 °C	14481	170
	Tc-nom 65 °C	13895	165
	Tc-max 95 °C	13261	159
I-max 4140mA	Tc 25 °C	33103	136
	Tc-nom 65 °C	31650	131
	Tc-max 95 °C	30072	126

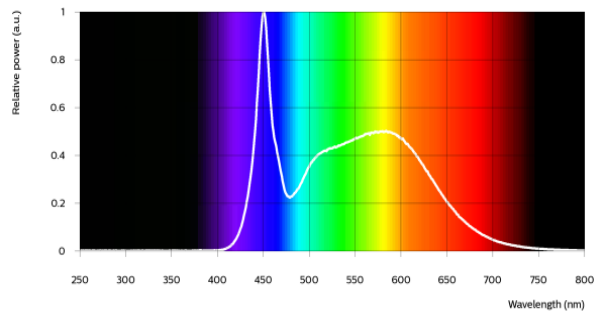


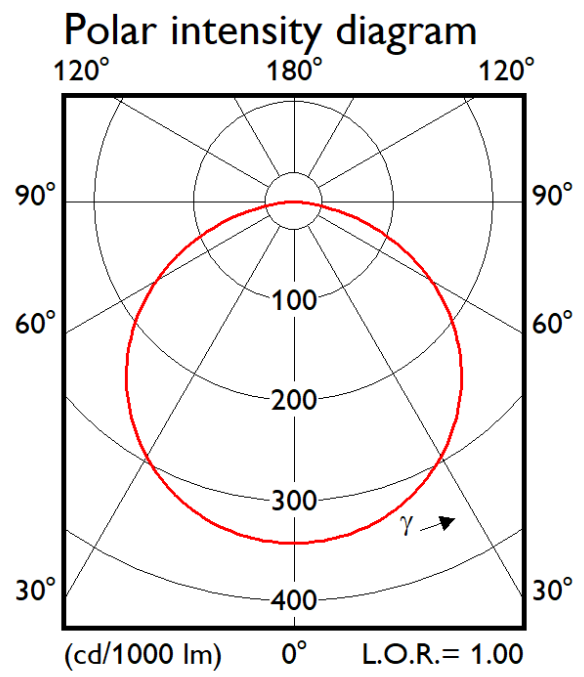
Fortimo SLM C 857 1818 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	13200	13895	15284	lm
Efficacy		165		lm/W
Correlated color temperature (CCT)		5700		K
Color coordinates (CIEx, CIEy)		(0.329, 0.343)		-
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 1296mA	Tc 25 °C	11794	176
	Tc-nom 65 °C	11321	171
	Tc-max 95 °C	10809	165
I-nom 1620mA	Tc 25 °C	14481	170
	Tc-nom 65 °C	13895	165
	Tc-max 95 °C	13261	159
I-max 4140mA	Tc 25 °C	33103	136
	Tc-nom 65 °C	31650	131
	Tc-max 95 °C	30072	126





## Electrical characteristics

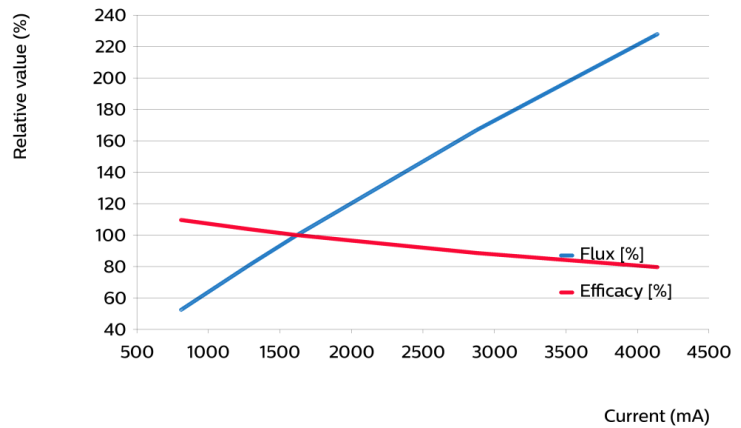
Parameter	Min	Typ	Max	Unit
Forward voltage	49.5	52.0	54.5	V
Power consumption	80.2	84.2	88.3	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

## Tuning information

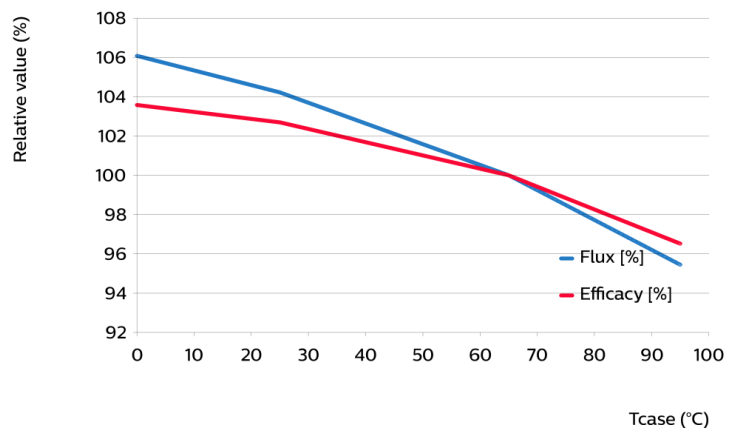
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
4140	228	80
2880	167	88
1620	100	100
1296	81	104
810	52	110



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

Tc [°C]	Flux [%]	Efficacy [%]
95	95	97
65	100	100
25	104	103
0	106	104



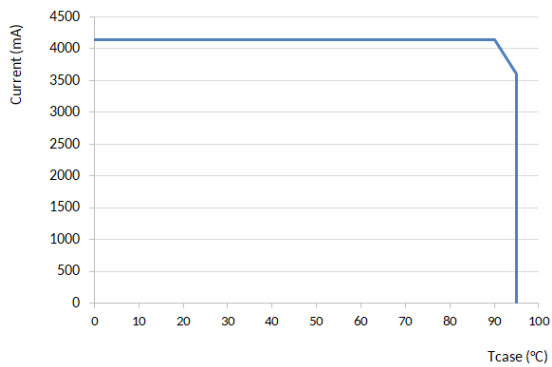
## Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 1296mA	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 1620mA	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 4140mA	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

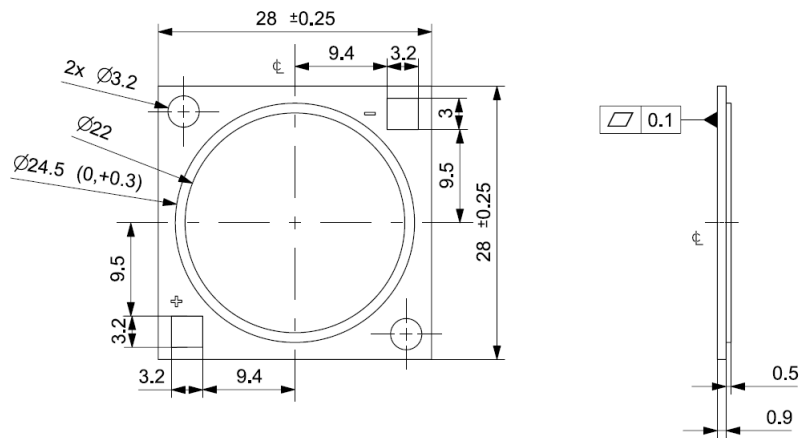
Parameter	Value	Unit
M70F50 nominal	>66000	hours

## Performance Window



## Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	27.75	28	28.25	mm
Width	27.75	28	28.25	mm
Height PCB	0.8	0.9	1	mm
Height including dam	1.1	1.4	1.7	mm
Product mass		2.12		gram



## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		4140	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/EN 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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