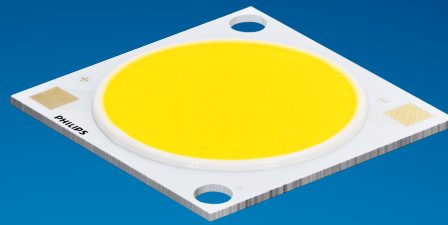


PHILIPS

Fortimo

LED

Fortimo SLM C 8xx 1212
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.

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 1212 L22 2828 G8N	8721103 083517 00	9290 048 21401	2270116	10
Fortimo SLM C 830 1212 L22 2828 G8N	8721103 083548 00	9290 048 21501	2270120	10
Fortimo SLM C 835 1212 L22 2828 G8N	8721103 083579 00	9290 048 21601	2270143	10
Fortimo SLM C 840 1212 L22 2828 G8N	8721103 083609 00	9290 048 21701	2270473	10
Fortimo SLM C 850 1212 L22 2828 G8N	8721103 083630 00	9290 048 21801	2270122	10
Fortimo SLM C 857 1212 L22 2828 G8N	8721103 083661 00	9290 048 21901	2270121	10

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 8xx 1212 L22 2828 G8N	1080	see performance window	2760	mA

Module temperatures

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

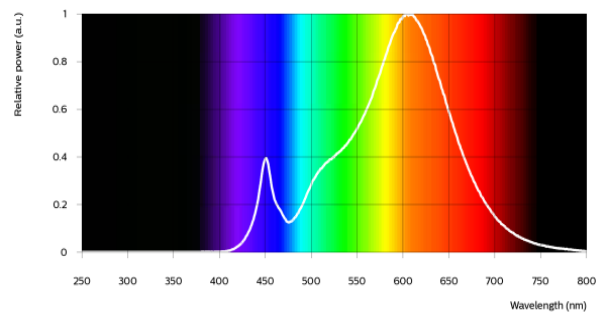
Fortimo SLM C 827 1212 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	5491	5780	6358	lm
Efficacy		154		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 ± 0.005 . Measurement precision for CRI ± 1.5 .

Operation point	827	lm	lm/W
80% I-nom 864mA	Tc 25 °C	4907	165
	Tc-nom 65 °C	4700	160
	Tc-max 95 °C	4484	155
I-nom 1080mA	Tc 25 °C	6037	159
	Tc-nom 65 °C	5780	154
	Tc-max 95 °C	5512	149
I-max 2760mA	Tc 25 °C	13967	125
	Tc-nom 65 °C	13317	121
	Tc-max 95 °C	12639	116



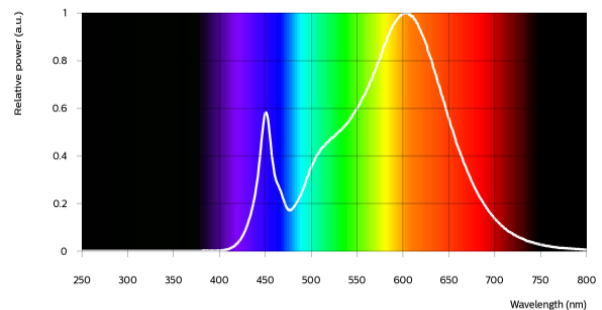
Fortimo SLM C 830 1212 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	5842	6150	6765	lm
Efficacy		164		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 ± 0.005 . Measurement precision for CRI ± 1.5 .

Operation point	830	lm	lm/W
80% I-nom 864mA	Tc 25 °C	5221	175
	Tc-nom 65 °C	5001	171
	Tc-max 95 °C	4771	165
I-nom 1080mA	Tc 25 °C	6423	169
	Tc-nom 65 °C	6150	164
	Tc-max 95 °C	5865	159
I-max 2760mA	Tc 25 °C	14863	134
	Tc-nom 65 °C	14174	129
	Tc-max 95 °C	13454	124

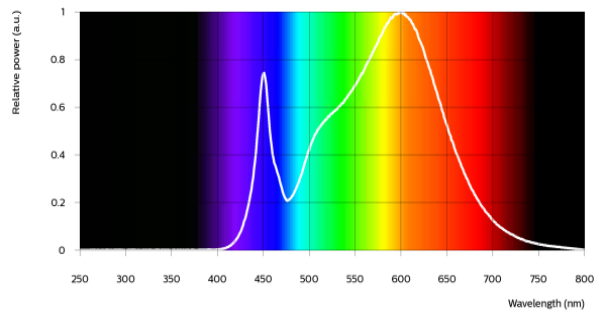


Fortimo SLM C 835 1212 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	5990	6305	6936	lm
Efficacy		168		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 864mA	Tc 25 °C	5352	180
	Tc-nom 65 °C	5127	175
	Tc-max 95 °C	4891	169
I-nom 1080mA	Tc 25 °C	6585	173
	Tc-nom 65 °C	6305	168
	Tc-max 95 °C	6013	163
I-max 2760mA	Tc 25 °C	15238	137
	Tc-nom 65 °C	14532	132
	Tc-max 95 °C	13795	127

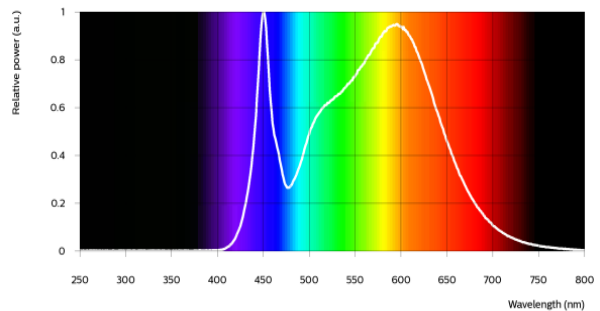


Fortimo SLM C 840 1212 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	6080	6400	7040	lm
Efficacy		171		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 864mA	Tc 25 °C	5433	182
	Tc-nom 65 °C	5204	178
	Tc-max 95 °C	4965	171
I-nom 1080mA	Tc 25 °C	6684	176
	Tc-nom 65 °C	6400	171
	Tc-max 95 °C	6104	165
I-max 2760mA	Tc 25 °C	15469	139
	Tc-nom 65 °C	14753	134
	Tc-max 95 °C	14006	129

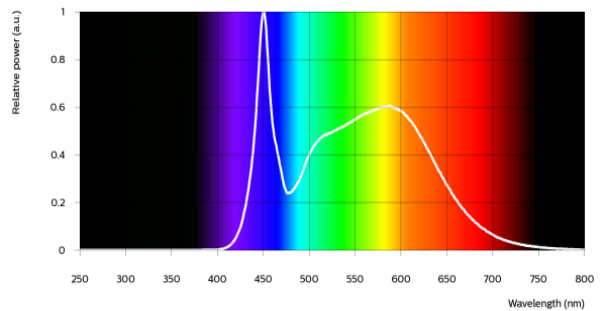


Fortimo SLM C 850 1212 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	6080	6400	7040	lm
Efficacy		171		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 864mA	Tc 25 °C	5433	182
	Tc-nom 65 °C	5204	178
	Tc-max 95 °C	4965	171
I-nom 1080mA	Tc 25 °C	6684	176
	Tc-nom 65 °C	6400	171
	Tc-max 95 °C	6104	165
I-max 2760mA	Tc 25 °C	15469	139
	Tc-nom 65 °C	14753	134
	Tc-max 95 °C	14006	129

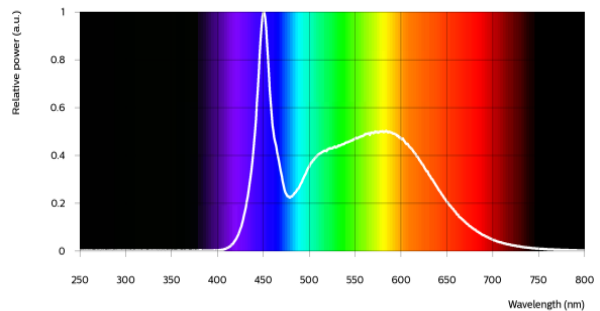


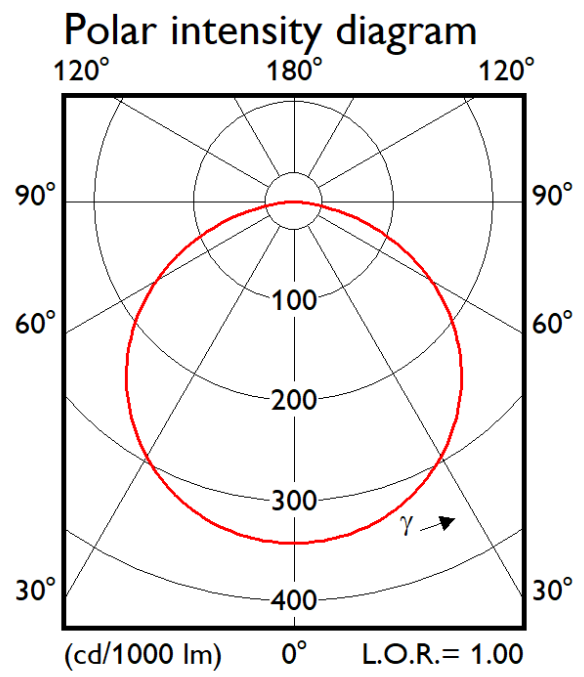
Fortimo SLM C 857 1212 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	6080	6400	7040	lm
Efficacy		171		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 864mA	Tc 25 °C	5433	182
	Tc-nom 65 °C	5204	178
	Tc-max 95 °C	4965	171
I-nom 1080mA	Tc 25 °C	6684	176
	Tc-nom 65 °C	6400	171
	Tc-max 95 °C	6104	165
I-max 2760mA	Tc 25 °C	15469	139
	Tc-nom 65 °C	14753	134
	Tc-max 95 °C	14006	129





Electrical characteristics

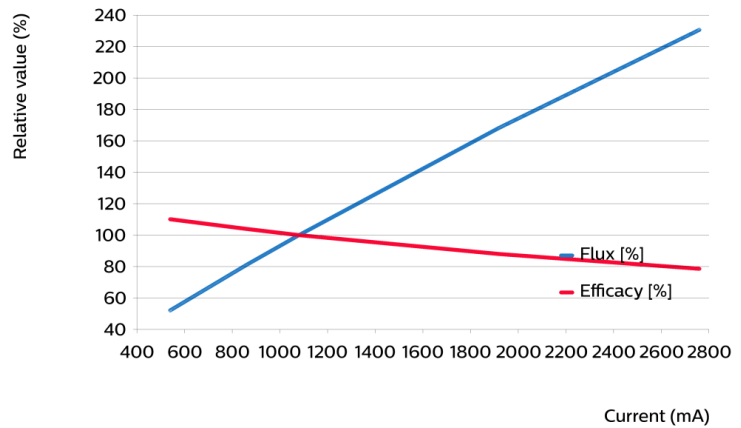
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.7	37.0	V
Power consumption	35.1	37.5	40.0	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

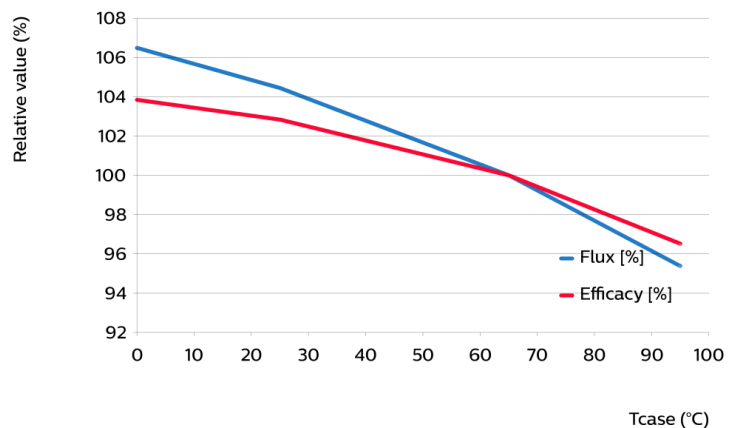
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
2760	231	79
1920	168	88
1080	100	100
864	81	104
540	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



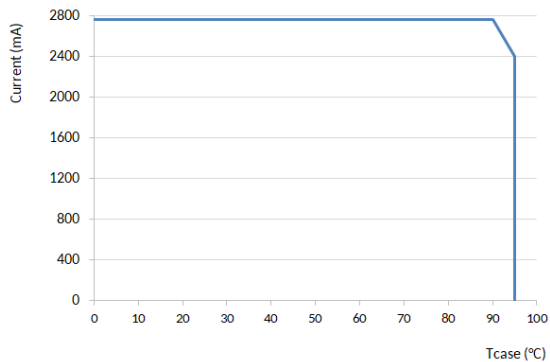
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 864mA	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 1080mA	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 2760mA	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

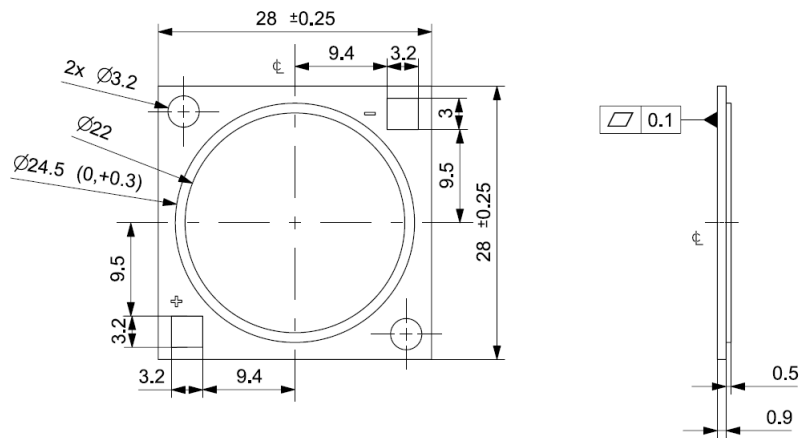
Parameter	Value	Unit
M70F50 nominal	>66000	hours

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		2.06		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		2760	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 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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