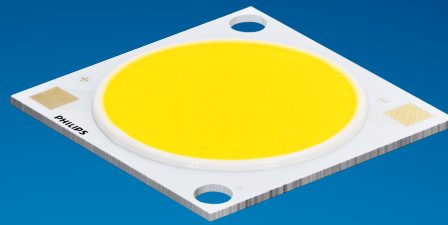


PHILIPS

Fortimo

LED

Fortimo SLM C 8xx 1216
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 1216 L22 2828 G8N	8721103 084088 00	9290 048 23301	2270485	10
Fortimo SLM C 830 1216 L22 2828 G8N	8721103 084118 00	9290 048 23401	2270161	10
Fortimo SLM C 835 1216 L22 2828 G8N	8721103 084149 00	9290 048 23501	2270179	10
Fortimo SLM C 840 1216 L22 2828 G8N	8721103 084170 00	9290 048 23601	2270172	10
Fortimo SLM C 850 1216 L22 2828 G8N	8721103 084200 00	9290 048 23701	2270177	10
Fortimo SLM C 857 1216 L22 2828 G8N	8721103 084231 00	9290 048 23801	2270128	10

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 8xx 1216 L22 2828 G8N	1440	see performance window	3680	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)

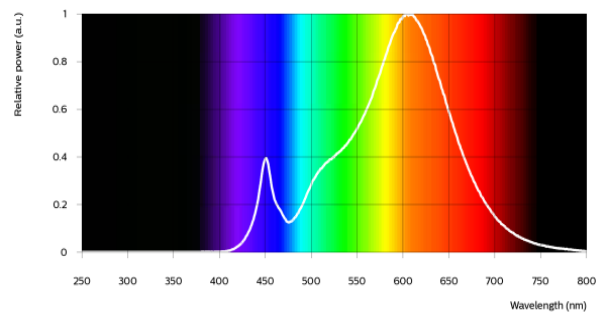
Fortimo SLM C 827 1216 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	7438	7830	8613	lm
Efficacy		157		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 1152mA	Tc 25 °C	6656	168
	Tc-nom 65 °C	6364	163
	Tc-max 95 °C	6076	157
I-nom 1440mA	Tc 25 °C	8192	162
	Tc-nom 65 °C	7830	157
	Tc-max 95 °C	7472	151
I-max 3680mA	Tc 25 °C	18950	127
	Tc-nom 65 °C	18050	122
	Tc-max 95 °C	17158	117



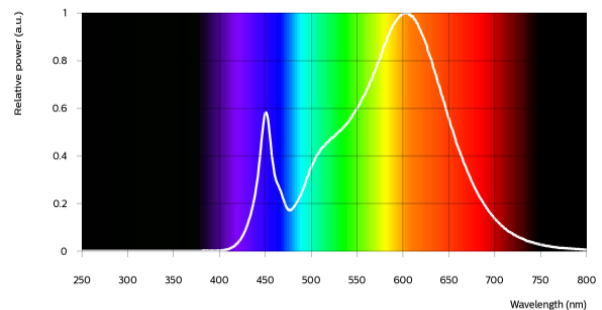
Fortimo SLM C 830 1216 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	7914	8330	9163	lm
Efficacy		167		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 1152mA	Tc 25 °C	7081	179
	Tc-nom 65 °C	6770	173
	Tc-max 95 °C	6464	167
I-nom 1440mA	Tc 25 °C	8715	172
	Tc-nom 65 °C	8330	167
	Tc-max 95 °C	7950	161
I-max 3680mA	Tc 25 °C	20164	135
	Tc-nom 65 °C	19208	130
	Tc-max 95 °C	18261	125

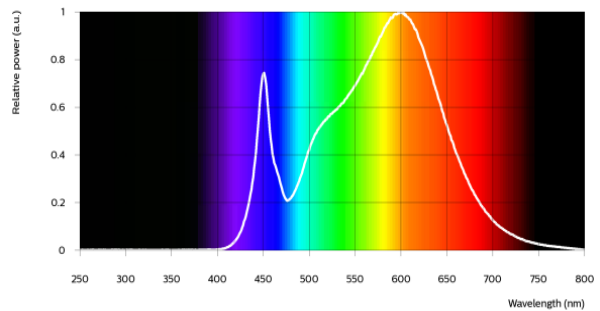


Fortimo SLM C 835 1216 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	8113	8540	9394	lm
Efficacy		171		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 1152mA	Tc 25 °C	7259	183
	Tc-nom 65 °C	6941	178
	Tc-max 95 °C	6626	171
I-nom 1440mA	Tc 25 °C	8934	177
	Tc-nom 65 °C	8540	171
	Tc-max 95 °C	8150	165
I-max 3680mA	Tc 25 °C	20673	138
	Tc-nom 65 °C	19693	133
	Tc-max 95 °C	18723	128

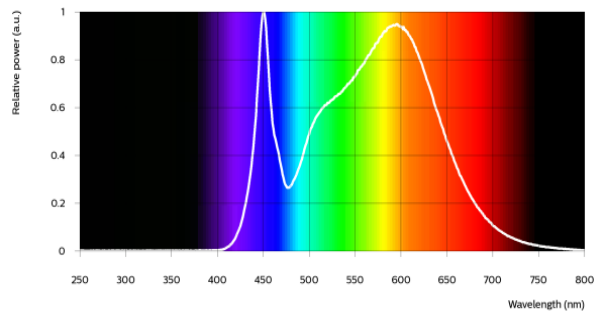


Fortimo SLM C 840 1216 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	8232	8665	9532	lm
Efficacy		173		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 1152mA	Tc 25 °C	7365	186
	Tc-nom 65 °C	7043	180
	Tc-max 95 °C	6723	174
I-nom 1440mA	Tc 25 °C	9065	179
	Tc-nom 65 °C	8665	173
	Tc-max 95 °C	8270	167
I-max 3680mA	Tc 25 °C	20977	141
	Tc-nom 65 °C	19985	135
	Tc-max 95 °C	19001	130

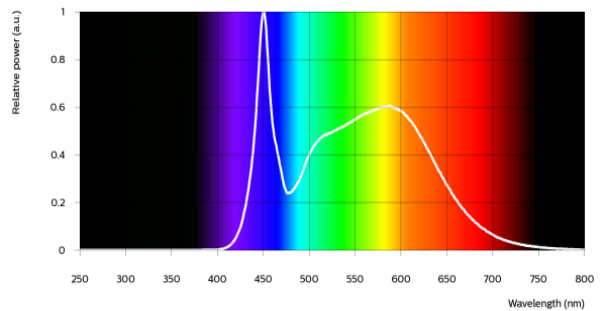


Fortimo SLM C 850 1216 L22 2828 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	8232	8665	9532	lm
Efficacy		173		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 1152mA	Tc 25 °C	7365	186
	Tc-nom 65 °C	7043	180
	Tc-max 95 °C	6723	174
I-nom 1440mA	Tc 25 °C	9065	179
	Tc-nom 65 °C	8665	173
	Tc-max 95 °C	8270	167
I-max 3680mA	Tc 25 °C	20977	141
	Tc-nom 65 °C	19985	135
	Tc-max 95 °C	19001	130

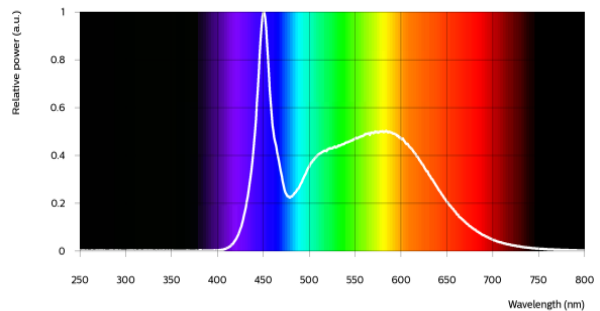


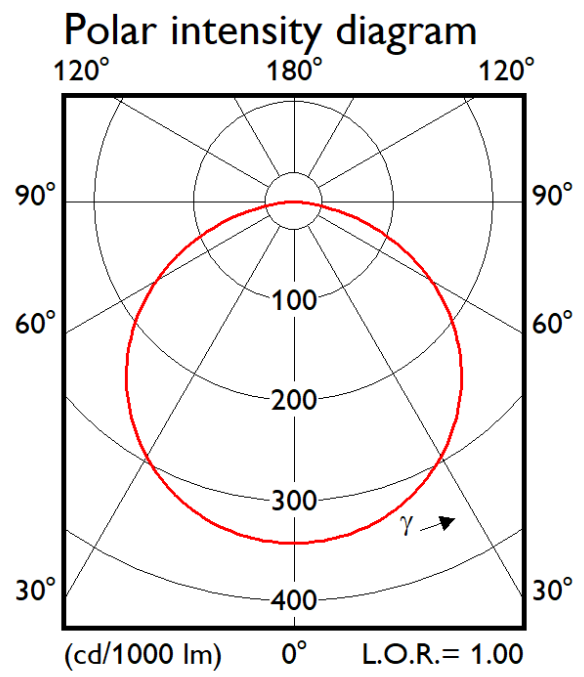
Fortimo SLM C 857 1216 L22 2828 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	8232	8665	9532	lm
Efficacy		173		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 1152mA	Tc 25 °C	7365	186
	Tc-nom 65 °C	7043	180
	Tc-max 95 °C	6723	174
I-nom 1440mA	Tc 25 °C	9065	179
	Tc-nom 65 °C	8665	173
	Tc-max 95 °C	8270	167
I-max 3680mA	Tc 25 °C	20977	141
	Tc-nom 65 °C	19985	135
	Tc-max 95 °C	19001	130





Electrical characteristics

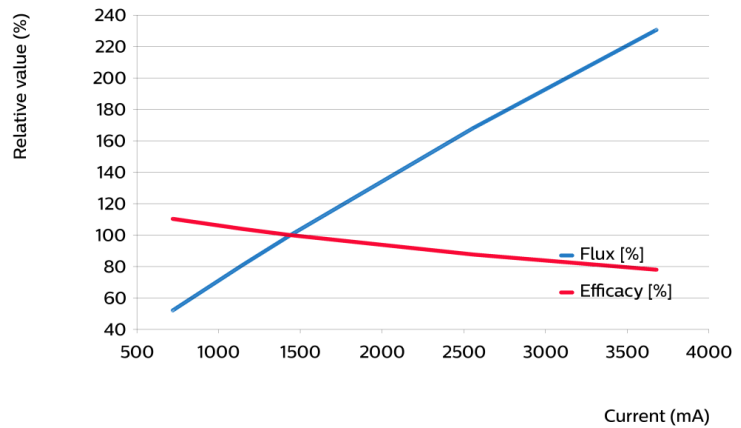
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.7	37.0	V
Power consumption	46.8	50.0	53.3	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

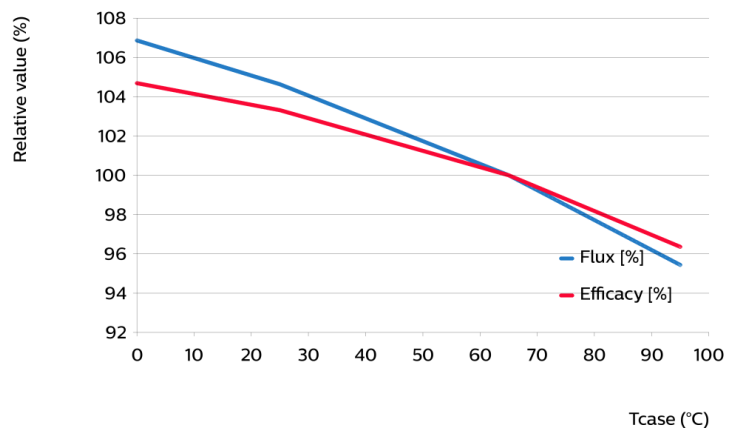
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
3680	231	78
2560	168	88
1440	100	100
1152	81	104
720	52	110



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

Tc [°C]	Flux [%]	Efficacy [%]
95	95	96
65	100	100
25	105	103
0	107	105



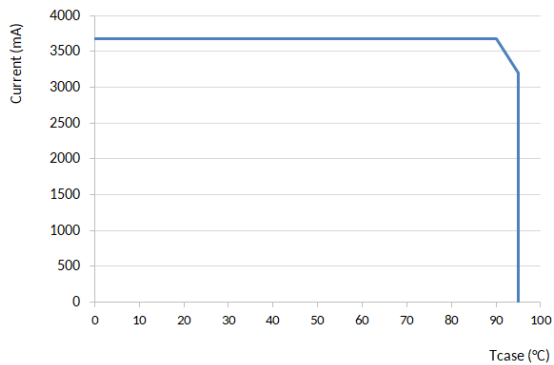
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 1152mA	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 1440mA	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 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

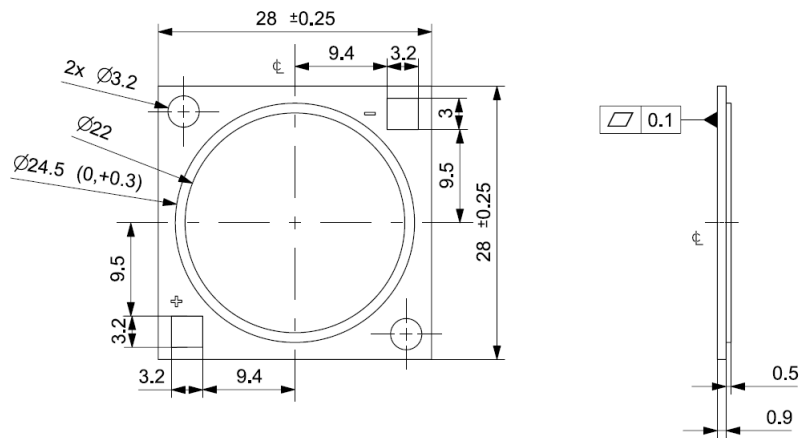
Parameter	Value	Unit
M70F50 nominal	>66000	hours

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	27.75	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		2.08		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 _{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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