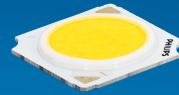


PHILIPS

Fortimo

LED

Fortimo SLM C 8xx 1204
L09 1313 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 1204 L09 1313 G8N	8721103 080097 00	9290 039 58901	2270452	20
Fortimo SLM C 830 1204 L09 1313 G8N	8721103 080127 00	9290 039 59001	2270359	20
Fortimo SLM C 835 1204 L09 1313 G8N	8721103 080158 00	9290 039 59101	2270371	20
Fortimo SLM C 840 1204 L09 1313 G8N	8721103 080189 00	9290 039 59201	2270373	20
Fortimo SLM C 850 1204 L09 1313 G8N	8721103 080219 00	9290 039 59301	2270095	20
Fortimo SLM C 857 1204 L09 1313 G8N	8721103 080240 00	9290 039 59401	2270468	20

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 8xx 1204 L09 1313 G8N	360	see performance window	920	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)

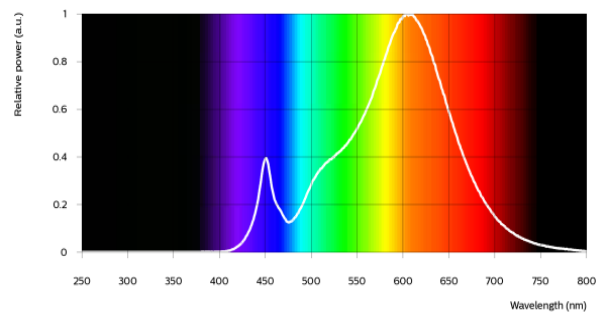
Fortimo SLM C 827 1204 L09 1313 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	1753	1845	2030	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 ± 0.005 . Measurement precision for CRI ± 1.5 .

Operation point	827	lm	lm/W
80% I-nom 288mA	Tc 25 °C	1569	159
	Tc-nom 65 °C	1501	155
	Tc-max 95 °C	1431	149
I-nom 360mA	Tc 25 °C	1930	153
	Tc-nom 65 °C	1845	149
	Tc-max 95 °C	1758	143
I-max 920mA	Tc 25 °C	4444	123
	Tc-nom 65 °C	4222	119
	Tc-max 95 °C	3994	113



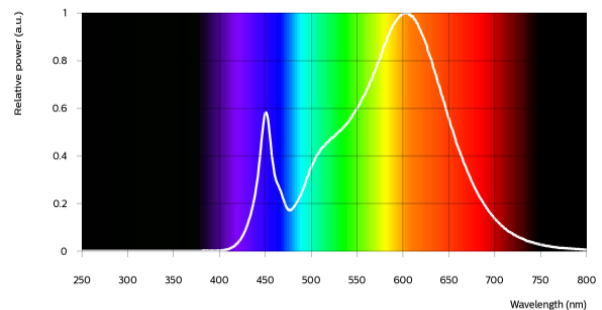
Fortimo SLM C 830 1204 L09 1313 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	1867	1965	2162	lm
Efficacy		158		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 288mA	Tc 25 °C	1671	169
	Tc-nom 65 °C	1598	165
	Tc-max 95 °C	1524	159
I-nom 360mA	Tc 25 °C	2055	163
	Tc-nom 65 °C	1965	158
	Tc-max 95 °C	1873	152
I-max 920mA	Tc 25 °C	4734	132
	Tc-nom 65 °C	4499	127
	Tc-max 95 °C	4257	121

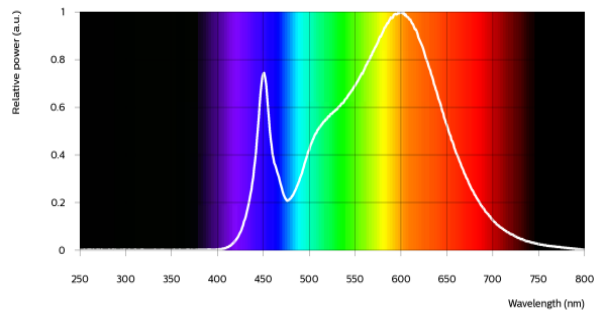


Fortimo SLM C 835 1204 L09 1313 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	1914	2015	2216	lm
Efficacy		162		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 288mA	Tc 25 °C	1713	173
	Tc-nom 65 °C	1639	169
	Tc-max 95 °C	1563	163
I-nom 360mA	Tc 25 °C	2108	167
	Tc-nom 65 °C	2015	163
	Tc-max 95 °C	1921	156
I-max 920mA	Tc 25 °C	4855	135
	Tc-nom 65 °C	4614	130
	Tc-max 95 °C	4366	124

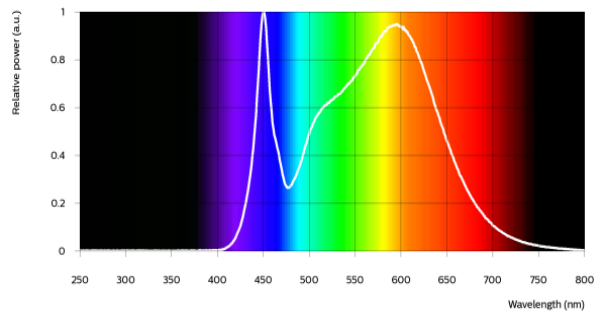


Fortimo SLM C 840 1204 L09 1313 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	1943	2045	2250	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 288mA	Tc 25 °C	1739	176
	Tc-nom 65 °C	1663	171
	Tc-max 95 °C	1587	165
I-nom 360mA	Tc 25 °C	2139	170
	Tc-nom 65 °C	2045	165
	Tc-max 95 °C	1949	158
I-max 920mA	Tc 25 °C	4928	137
	Tc-nom 65 °C	4684	132
	Tc-max 95 °C	4433	126

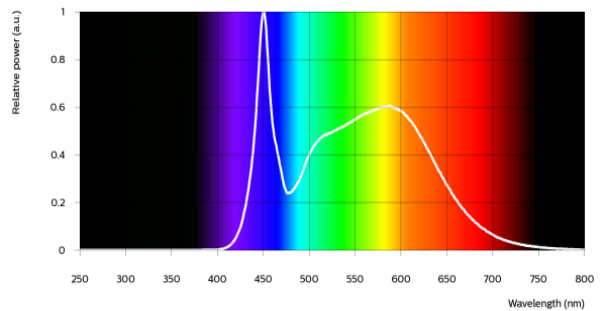


Fortimo SLM C 850 1204 L09 1313 G8N


Parameter	Min	Typ	Max	Unit
Luminous flux	1943	2045	2250	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 288mA	Tc 25 °C	1739	176
	Tc-nom 65 °C	1663	171
	Tc-max 95 °C	1587	165
I-nom 360mA	Tc 25 °C	2139	170
	Tc-nom 65 °C	2045	165
	Tc-max 95 °C	1949	158
I-max 920mA	Tc 25 °C	4928	137
	Tc-nom 65 °C	4684	132
	Tc-max 95 °C	4433	126

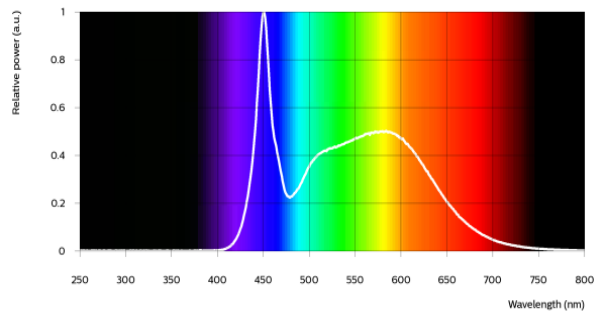


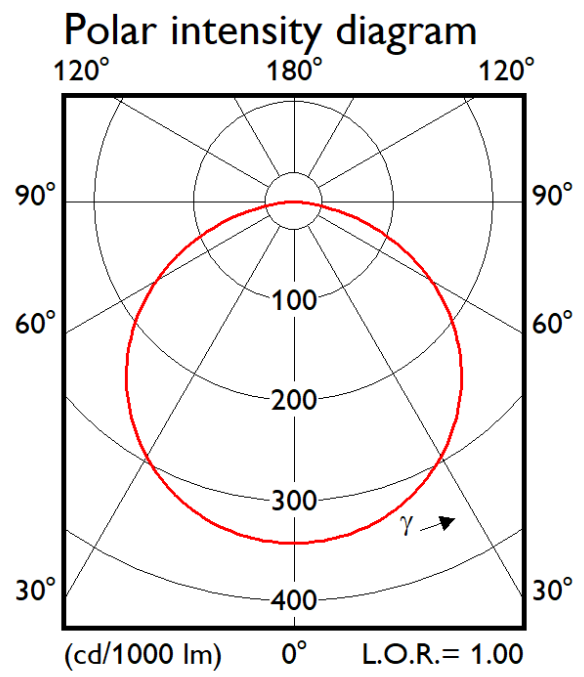
Fortimo SLM C 857 1204 L09 1313 G8N

Parameter	Min	Typ	Max	Unit
Luminous flux	1943	2045	2250	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 288mA	Tc 25 °C	1739	176
	Tc-nom 65 °C	1663	171
	Tc-max 95 °C	1587	165
I-nom 360mA	Tc 25 °C	2139	170
	Tc-nom 65 °C	2045	165
	Tc-max 95 °C	1949	158
I-max 920mA	Tc 25 °C	4928	137
	Tc-nom 65 °C	4684	132
	Tc-max 95 °C	4433	126





Electrical characteristics

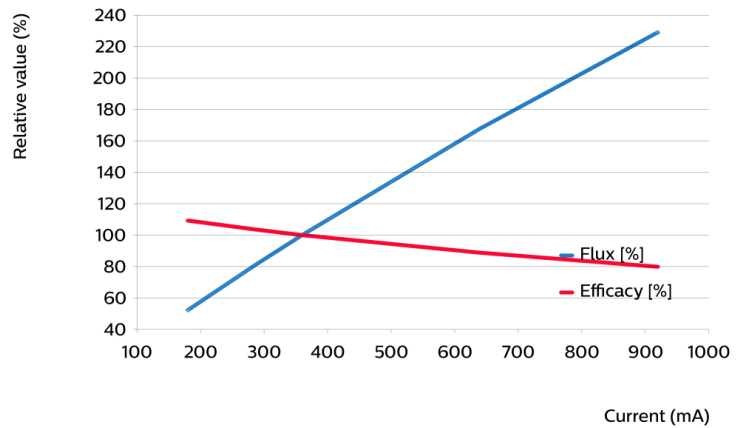
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.5	37.0	V
Power consumption	11.7	12.4	13.3	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

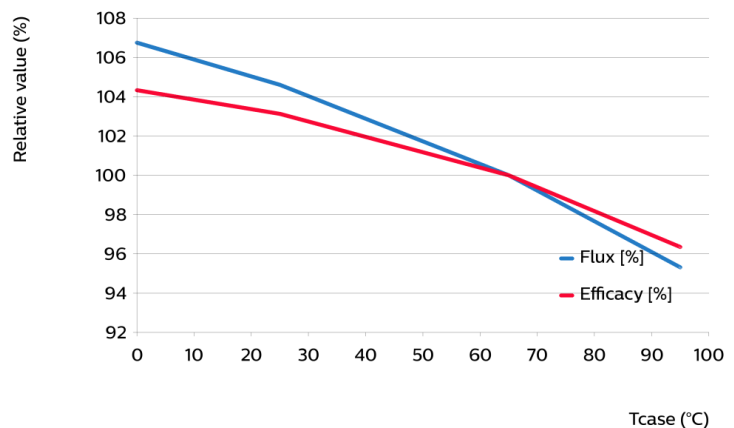
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
920	229	80
640	168	89
360	100	100
288	81	103
180	52	109



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	104



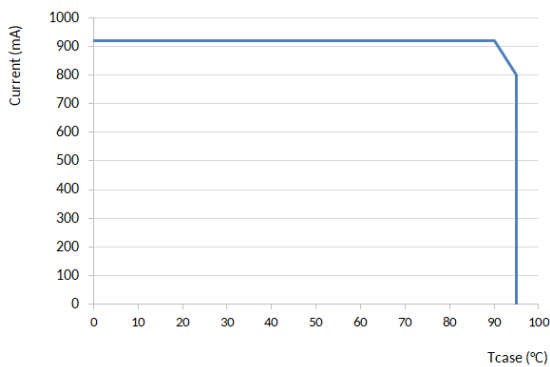
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 288mA	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 360mA	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 920mA	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

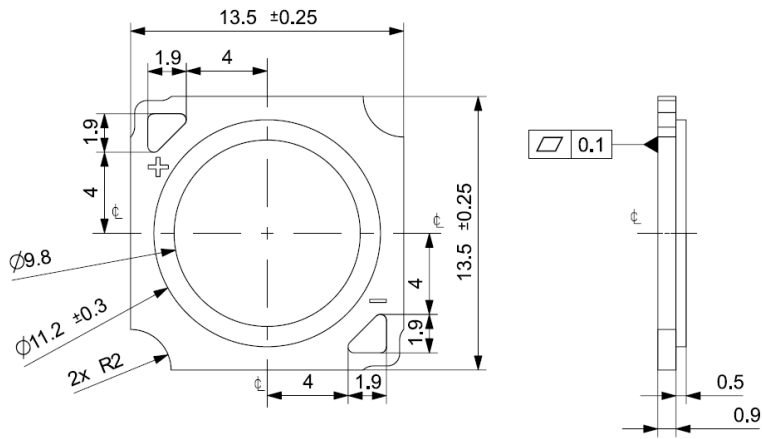
Parameter	Value	Unit
M70F50 nominal	>66000	hours

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	13.25	13.5	13.75	mm
Width	13.25	13.5	13.75	mm
Height PCB	0.8	0.9	1	mm
Height including dam	1.1	1.4	1.7	mm
Product mass		0.48		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		920	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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10/03/2025