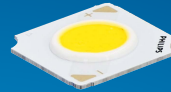


PHILIPS

Fortimo

LED

Fortimo SLM C 9xx 1201
L06 1313 G8N HE



Datasheet

Best combination of quality of light and efficacy with industry standard footprint

Fortimo LED SLM CRI90 G8N HE

Philips continues to develop its tried and trusted high efficiency COB range of products (since 2020) by introducing the third generation Fortimo SLM G8 HE. The Fortimo SLM CRI90 G8 HE range boasts an impressive 5% increase in efficacy and maintains color consistency of 2 SDCM similar to its predecessor, Fortimo SLM CRI90 G7HE+. Drawing on our four years of industry and R&D experience with high efficacy COB platforms, we have further optimized the quality of light and enhanced the product's robustness.

With the superior efficiency and color consistency, Fortimo SLM G8 HE helps unlock the extraordinary potential of light, facilitating innovation and inspiring the next generation of luminaire design for our OEM customers. Check out the online Easy Design-in Tool for your perfect system combination (www.easydesignintool.com).

Key features and benefits

- Most widely used footprint to enable ease of use
- Best quality of light available for all applications
- ~5% efficacy improvement vs. current Fortimo SLM G7 HE+ range
- Excellent color consistency management (2 SDCM)
- System proposition (Module + Driver + Holder)
- Flexibility to optimize luminaire performance (high efficacy or high lm output)
- 50,000 hours lifetime

October 2024



Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
Fortimo SLM C 927 1201 L06 1313 G8N HE	8720169 380028 00	9290 038 96180	2093727	20
Fortimo SLM C 930 1201 L06 1313 G8N HE	8720169 380059 00	9290 038 96280	2093661	20
Fortimo SLM C 935 1201 L06 1313 G8N HE	8720169 380080 00	9290 038 96380	2093717	20
Fortimo SLM C 940 1201 L06 1313 G8N HE	8720169 380110 00	9290 038 96480	2093743	20
Fortimo SLM C 950 1201 L06 1313 G8N HE	8720169 380141 00	9290 038 96580	2093720	20
Fortimo SLM C 930 PW 1201 L06 1313 G8N HE	8720169 380172 00	9290 038 96680	2093853	20
Fortimo SLM C 935 PW 1201 L06 1313 G8N HE	8720169 380202 00	9290 038 96780	2093858	20
Fortimo SLM C 940 PW 1201 L06 1313 G8N HE	8720169 380233 00	9290 038 96880	2093759	20

Not all products are globally available by default.

Please contact your local sales representative for local availability and activation conditions.

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 9xx 1201 L06 1313 G8N HE	90	180	180	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	65	95	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)

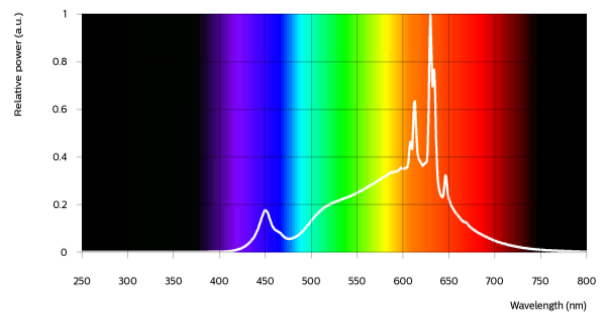
Fortimo SLM C 927 1201 L06 1313 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	461	485	534	lm
Efficacy		156		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		927/259		
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	927	lm	lm/W
80% I-nom 72mA	Tc 25 °C	417	167
	Tc-nom 65 °C	394	164
	Tc-max 95 °C	375	156
I-nom 90mA	Tc 25 °C	513	165
	Tc-nom 65 °C	485	156
	Tc-max 95 °C	461	149
I-max 180mA	Tc 25 °C	958	141
	Tc-nom 65 °C	904	135
	Tc-max 95 °C	858	130



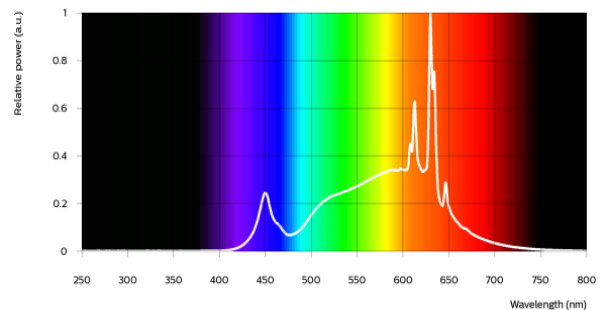
Fortimo SLM C 930 1201 L06 1313 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	489	515	566	lm
Efficacy		166		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		930/259		
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	930	lm	lm/W
80% I-nom 72mA	Tc 25 °C	443	177
	Tc-nom 65 °C	419	174
	Tc-max 95 °C	398	166
I-nom 90mA	Tc 25 °C	545	176
	Tc-nom 65 °C	515	166
	Tc-max 95 °C	490	158
I-max 180mA	Tc 25 °C	1017	150
	Tc-nom 65 °C	960	143
	Tc-max 95 °C	911	138

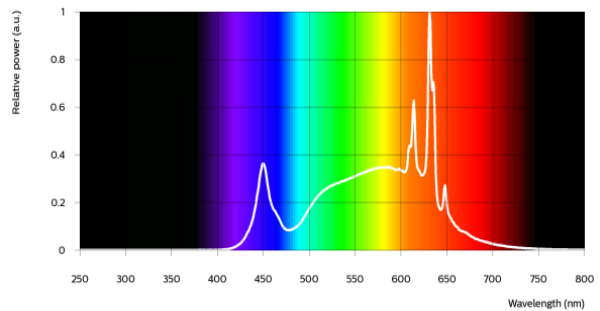


Fortimo SLM C 935 1201 L06 1313 G8N HE


Parameter	Min	Typ	Max	Unit
Luminous flux	499	525	578	lm
Efficacy		169		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.408, 0.393)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		935/259		
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	935	lm	lm/W
80% I-nom 72mA	Tc 25 °C	451	180
	Tc-nom 65 °C	427	178
	Tc-max 95 °C	406	169
I-nom 90mA	Tc 25 °C	555	179
	Tc-nom 65 °C	525	169
	Tc-max 95 °C	499	161
I-max 180mA	Tc 25 °C	1037	153
	Tc-nom 65 °C	979	146
	Tc-max 95 °C	929	141

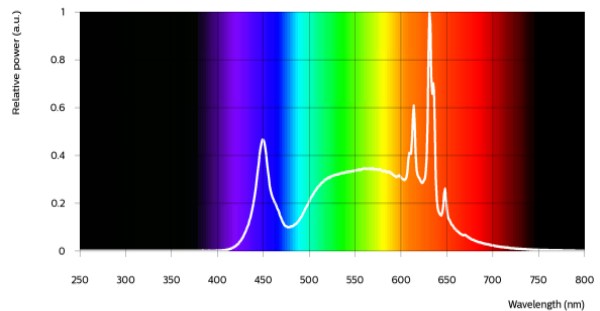


Fortimo SLM C 940 1201 L06 1313 G8N HE


Parameter	Min	Typ	Max	Unit
Luminous flux	504	530	583	lm
Efficacy		171		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		940/259		
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	940	lm	lm/W
80% I-nom 72mA	Tc 25 °C	455	182
	Tc-nom 65 °C	431	179
	Tc-max 95 °C	410	171
I-nom 90mA	Tc 25 °C	560	181
	Tc-nom 65 °C	530	171
	Tc-max 95 °C	504	163
I-max 180mA	Tc 25 °C	1047	154
	Tc-nom 65 °C	988	148
	Tc-max 95 °C	938	142

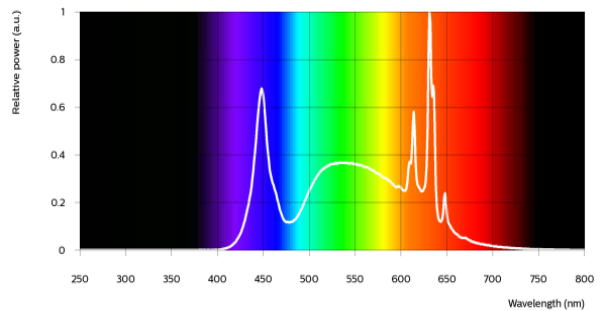


Fortimo SLM C 950 1201 L06 1313 G8N HE


Parameter	Min	Typ	Max	Unit
Luminous flux	499	525	578	lm
Efficacy		169		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		950/259		
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	950	lm	lm/W
80% I-nom 72mA	Tc 25 °C	451	180
	Tc-nom 65 °C	427	178
	Tc-max 95 °C	406	169
I-nom 90mA	Tc 25 °C	555	179
	Tc-nom 65 °C	525	169
	Tc-max 95 °C	499	161
I-max 180mA	Tc 25 °C	1037	153
	Tc-nom 65 °C	979	146
	Tc-max 95 °C	929	141

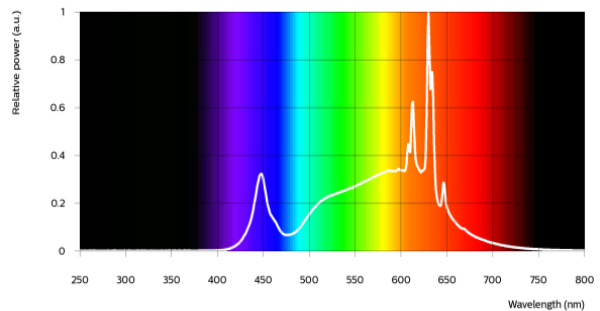


Fortimo SLM C 930 PW 1201 L06 1313 G8N HE


Parameter	Min	Typ	Max	Unit
Luminous flux	484	510	561	lm
Efficacy		165		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		930/259		
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	930	lm	lm/W
80% I-nom 72mA	Tc 25 °C	438	175
	Tc-nom 65 °C	415	173
	Tc-max 95 °C	394	164
I-nom 90mA	Tc 25 °C	539	174
	Tc-nom 65 °C	510	165
	Tc-max 95 °C	485	156
I-max 180mA	Tc 25 °C	1008	148
	Tc-nom 65 °C	951	142
	Tc-max 95 °C	903	137

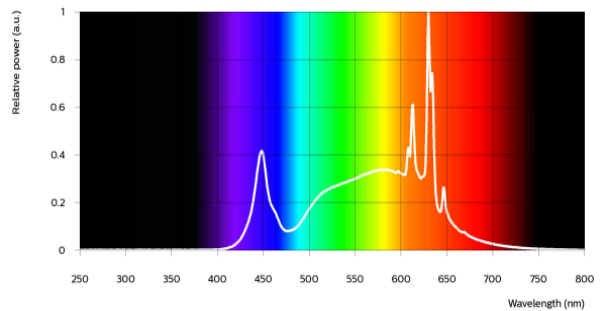


Fortimo SLM C 935 PW 1201 L06 1313 G8N HE


Parameter	Min	Typ	Max	Unit
Luminous flux	499	525	578	lm
Efficacy		169		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.398, 0.376)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		935/259		
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	935	lm	lm/W
80% I-nom 72mA	Tc 25 °C	451	180
	Tc-nom 65 °C	427	178
	Tc-max 95 °C	406	169
I-nom 90mA	Tc 25 °C	555	179
	Tc-nom 65 °C	525	169
	Tc-max 95 °C	499	161
I-max 180mA	Tc 25 °C	1037	153
	Tc-nom 65 °C	979	146
	Tc-max 95 °C	929	141

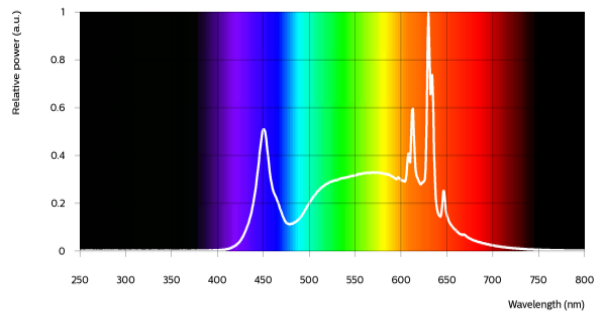


Fortimo SLM C 940 PW 1201 L06 1313 G8N HE

Parameter	Min	Typ	Max	Unit
Luminous flux	499	525	578	lm
Efficacy		169		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.374, 0.364)		-
Color consistency			2	SDCM
CRI	90			
R9	>50			
Photometric code		940/259		
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	940	lm	lm/W
80% I-nom 72mA	Tc 25 °C	451	180
	Tc-nom 65 °C	427	178
	Tc-max 95 °C	406	169
I-nom 90mA	Tc 25 °C	555	179
	Tc-nom 65 °C	525	169
	Tc-max 95 °C	499	161
I-max 180mA	Tc 25 °C	1037	153
	Tc-nom 65 °C	979	146
	Tc-max 95 °C	929	141





Electrical characteristics

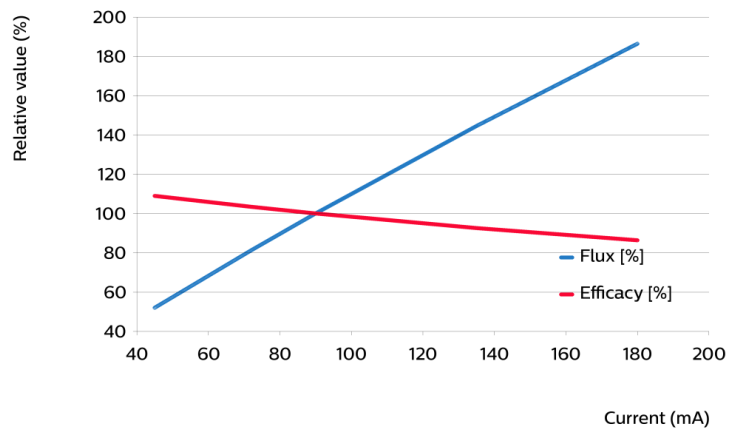
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	34.5	37.0	V
Power consumption	2.9	3.1	3.3	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

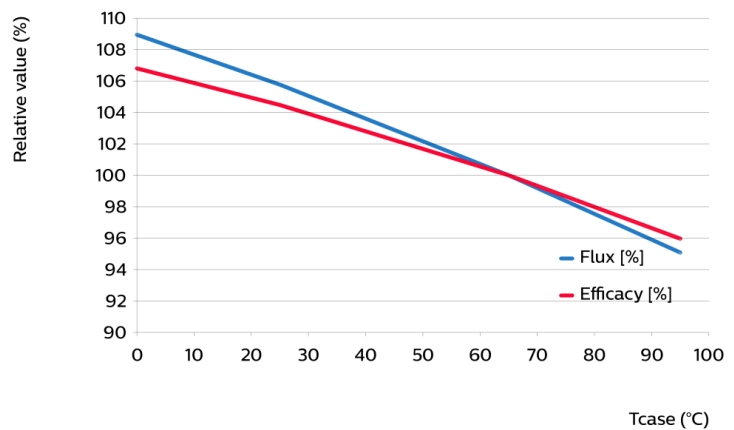
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
180	186	86
135	145	93
90	100	100
72	81	103
45	52	109



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

Tc [°C]	Flux [%]	Efficacy [%]
95	95	96
65	100	100
25	106	104
0	109	107



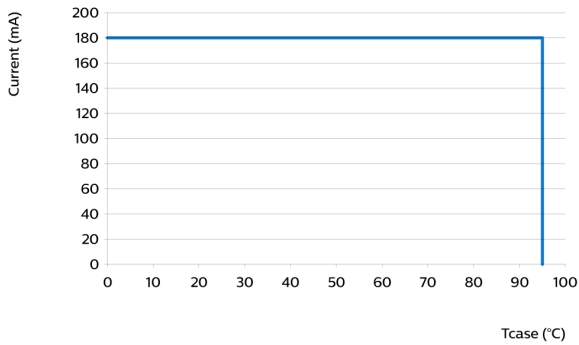
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 72mA	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 90mA	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 180mA	Tc 50°C	>66	>66	>66	>66	>66	>66	50	42	39
	Tc 65°C	>66	>66	>66	>66	>66	62	38	32	29
	Tc 95°C	>66	>66	60	49	41	38	23	19	17

Lifetime

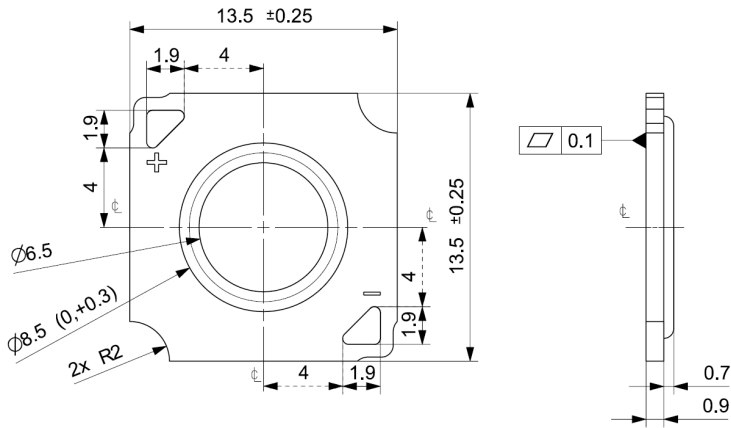
Parameter	Value	Unit
M70F50 nominal	>66000	hours

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	0.8	0.9	1	mm
Height	1.3	1.6	1.9	mm
Product mass		0.44		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		180	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 1342 lux risk group classification may be RG2.

Application information

Certificates and Standards

CB
 CE
 ENEC
 ENEC+
 EPRS 001
 IEC 62031
 UKCA
 UL
 UL 8750

Environmental

RoHS/REACH

Application

Dimming	Yes
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