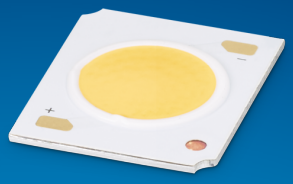
PHILIPS

Fortimo

LED

Fortimo SLM PW
1206 L13 2024 G7 S



Datasheet

Experience bright and vivid colors

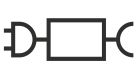
Fortimo SLM PW 1206 L13 2024 G7 S

Fortimo LED SLM Gen 7 continues to focus on the combination of Quality of Light and performance. Fortimo LED SLM 1206 Gen 7 is newly added line up in Fortimo SLM G7 family, which help to further extend the product range for more wide application. Please also check the online Easy Design-in Tool for your perfect system combination (www.easydesignintool.com)

Key features and benefits

- Best quality of light available for all application
- Extensive ranges of CCTs
- State of the art Chip-on-Board (CoB) technology, enable highest system efficacy
- System proposition (Module + Driver + Holder)
- Flexibility to optimize luminaire performance (high efficacy or high lm output)
- 50,000 hours lifetime
- Instant full light

December 2019



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo SLM C 935 PW 1206 L13 2024 G7 S	8718699 766535 00	9290 021 97406	100

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM PW 1206 L13 2024 G7 S	600	see performance window	1200	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	85	see performance window	95	°C

* Nominal value at which typical performance is specified

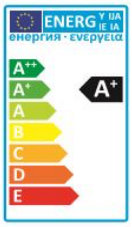
** Value at which life time is specified

*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

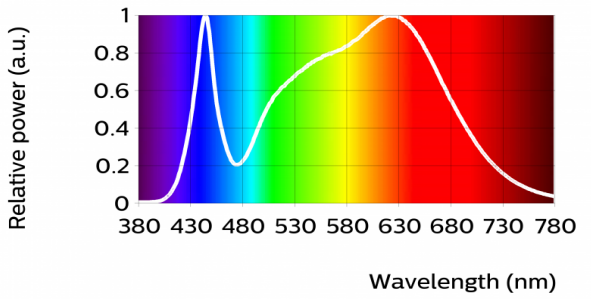
Fortimo SLM C 935 PW 1206 L13 2024 G7 S

Parameter	Min	Typ	Max	Unit
Luminous flux	2339	2515	2766	lm
Module efficacy	115	123		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.393, 0.366)		-
Color consistency			3	SDCM
CRI	91	93		
R9	70			
Photometric code		935/359		
Photobiological safety			RG1 unlimited	



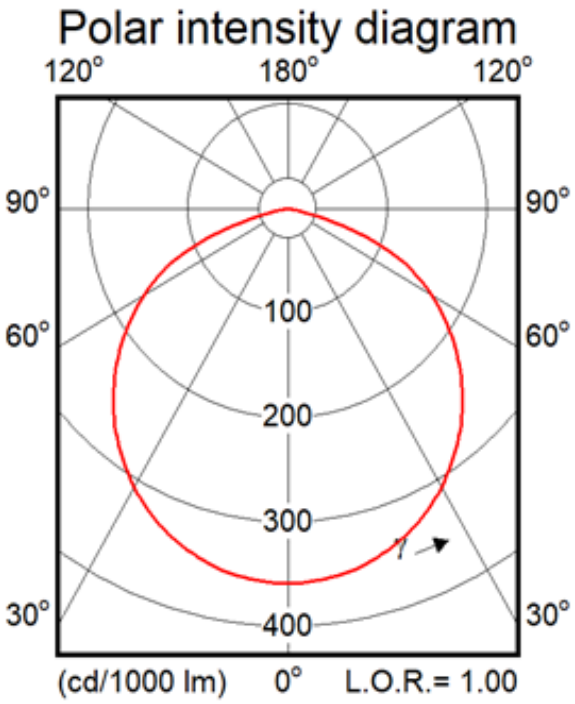
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	935	lm	lm/W
50% I-nom 300mA	Tc 25 °C	1467	149
	Tc-nom 85 °C	1368	142
	Tc-max 95 °C	1354	141
I-nom 600mA	Tc 25 °C	2792	135
	Tc-nom 85 °C	2515	123
	Tc-max 95 °C	2475	122
I-max 1200mA	Tc 25 °C	4996	111
	Tc-nom 85 °C	4439	100
	Tc-max 95 °C	4360	99



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
96	94	90	90	95	91	90	90	79	85	91	85	95	94	95

Beam shape


Polar intensity diagram
120°
180°
120°
90°
90°
60°
60°
100
200
300
400
30°
30°
(cd/1000 lm)
0°
L.O.R.= 1.00

Electrical characteristics

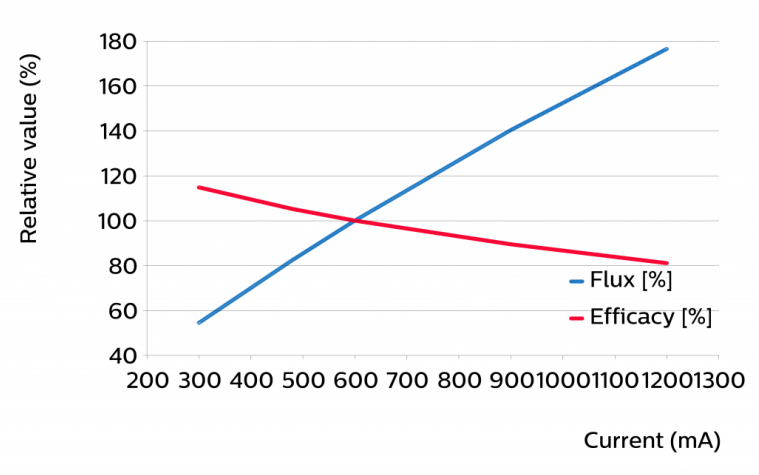
Parameter	Min	Typ	Max	Unit
Forward voltage	32.0	34.0	35.9	V
Power consumption	19.2	20.4	21.6	W = kWh/1000h
Number of modules in parallel			1	

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

Tuning information

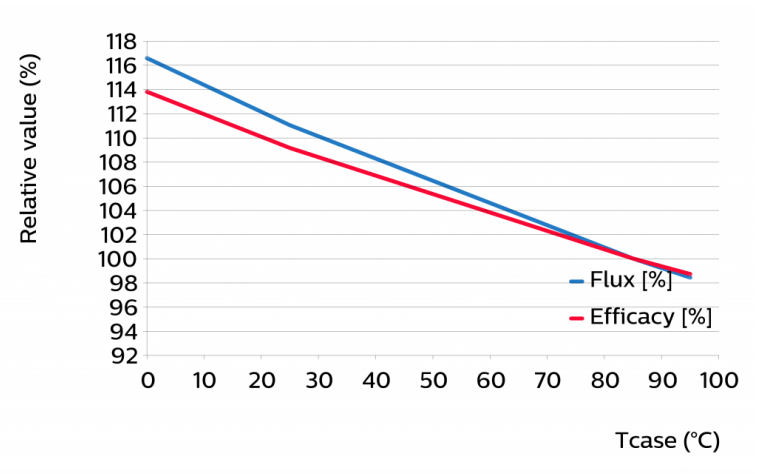
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1200	177	81
900	140	89
600	100	100
480	82	105
300	54	115



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

Tc [°C]	Flux [%]	Efficacy [%]
95	98	99
85	100	100
25	111	109
0	117	114



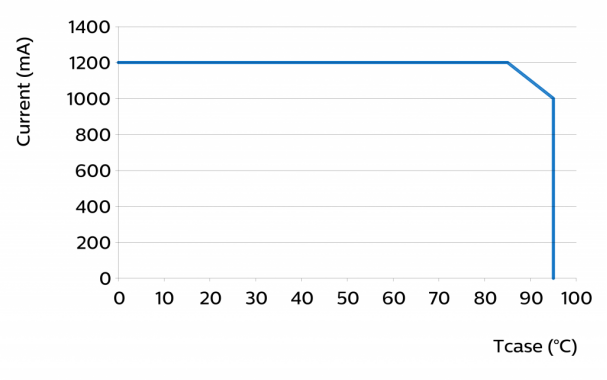
Lumen maintenance

Operation point	Lumen maintenance	L70			L80			L90		
	x 1000 hours	B50	B20	B10	B50	B20	B10	B50	B20	B10
80%I nom 480 mA	Tc 75°C	>50	>50	>50	>50	>50	>50	>50	37	29
	Tc nom 85°C	>50	>50	>50	>50	>50	42	38	25	20
	Tc max 95°C	>50	>50	46	>50	36	29	26	17	14
I nom 600 mA	Tc 75°C	>50	>50	>50	>50	>50	>50	49	32	26
	Tc nom 85°C	>50	>50	>50	>50	46	37	33	22	17
	Tc max 95°C	>50	>50	41	49	32	26	23	15	12
I max 1200 mA	Tc 75°C	>50	>50	42	>50	33	26	24	16	12
	Tc nom 85°C	>50	37	30	35	23	18	17	11	9
	Tc max 95°C	40	26	21	25	16	13	12	8	6

Lifetime

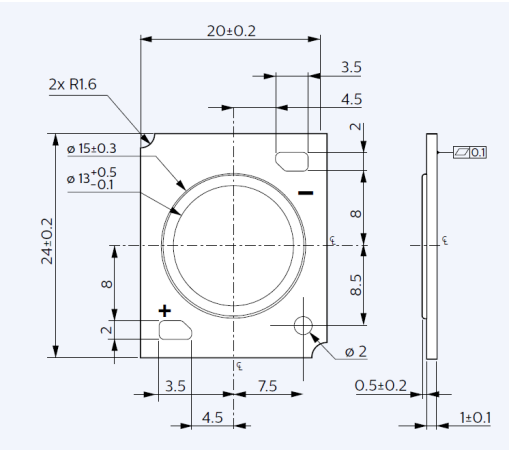
Switching cycles in accordance to EU 1194/2012: >15000

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	23.8	24	24.2	mm
Width	19.8	20	20.2	mm
Height PCB	0.9	1	1.1	mm
Height including dam	1.2	1.5	1.8	mm
Product mass		1.2		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1200	mA
Case temperature (Tc-max)		95	°C
ESD (direct contact)		8	kV
Working voltage		330	V_{dc}
Ambient temperature	-20	40	°C
Storage temperature	-40	80	°C

Application information

Certificates and Standards
IEC 62031:2008/A1:2012/A2:2014
EN 62031:2008/A1:2013/A2:2015
Relevant clauses of IEC 62471:2006 (Incl. IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)
Relevant clauses of IEC 60838-1:2004/A1:2008/A2:2011 with IEC 60838-2-2:2006 /A1:2012
Relevant clauses of EN 62471:2008 (With IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)
Relevant clauses of EN 60838-1:2004/A1:2008/A2:2011 with EN 60838-2-2:2006/A1:2012
UL 8750
ENEC+
CE

Environmental
RoHS/REACH

Application	
Dimming	Yes

09/12/2019

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