

**PHILIPS**

**Fortimo**

**LED**

Fortimo SLM PW  
1204 L09 1619 G7+



Datasheet

# Experience bright and vivid colors

## Fortimo SLM PW 1204 L09 1619 G7+

Fortimo LED SLM Gen 7+ continues to focus on the combination of Quality of Light and performance. Fortimo SLM Gen 7+ range further enhance the efficacy performance Vs Gen 7 with dedicated design. With this upgrade, we try to offer a more reliable solution to help our OEM customer to achieve compact luminaire design or narrow beam angle design. Please also check the online Easy Design-in Tool for your perfect system combination ([www.easydesignintool.com](http://www.easydesignintool.com))

### Key features and benefits

- Best quality of light available for all application
- Extensive ranges of CCTs
- Small LES for narrow beam angels and small reflector designs
- 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

August 2020



## Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo SLM C 830 PW 1204 L09 1619 G7+	8718699 766375 00	9290 021 96606	100
Fortimo SLM C 930 PW 1204 L09 1619 G7+	8718699 766399 00	9290 021 96706	100
Fortimo SLM C 935 PW 1204 L09 1619 G7+	8718699 766412 00	9290 021 96806	100
Fortimo SLM C 940 PW 1204 L09 1619 G7+	8718699 766436 00	9290 021 96906	100

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM PW 1204 L09 1619 G7+	400	see performance window	960	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> 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)

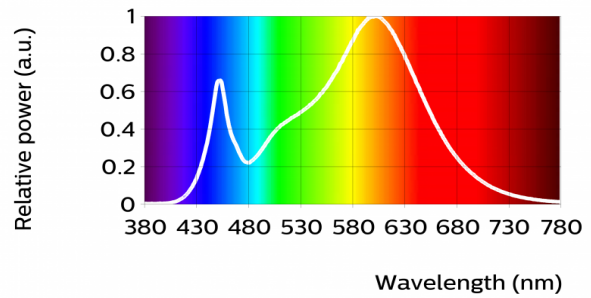
### Fortimo SLM C 830 PW 1204 L09 1619 G7+

Parameter	Min	Typ	Max	Unit
Luminous flux	1747	1878	2066	lm
Module efficacy		138		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			3	SDCM
CRI	81	83		
Photometric code		830/359		
Photobiological safety			RG1 unlimited	



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

Operation point	830	lm	lm/W
80% I-nom 320mA	Tc 25 °C	1696	154
	Tc-nom 85 °C	1550	144
	Tc-max 95 °C	1530	143
I-nom 400mA	Tc 25 °C	2075	149
	Tc-nom 85 °C	1878	138
	Tc-max 95 °C	1851	136
I-max 960mA	Tc 25 °C	4271	115
	Tc-nom 85 °C	3812	105
	Tc-max 95 °C	3750	103



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82	93	94	81	84	91	80	58	7	85	81	79	85	97	76

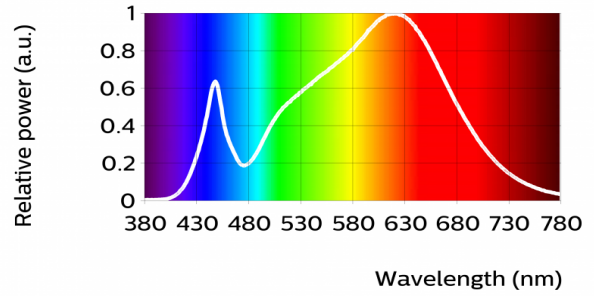
Fortimo SLM C 930 PW 1204 L09 1619 G7+

Parameter	Min	Typ	Max	Unit
Luminous flux	1494	1607	1767	lm
Module efficacy		118		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			3	SDCM
CRI	91	93		
R9	50			
Photometric code		930/359		
Photobiological safety			RG1 unlimited	



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

Operation point	930	lm	lm/W
80% I-nom 320mA	Tc 25 °C	1451	132
	Tc-nom 85 °C	1326	124
	Tc-max 95 °C	1309	122
I-nom 400mA	Tc 25 °C	1775	127
	Tc-nom 85 °C	1607	118
	Tc-max 95 °C	1584	117
I-max 960mA	Tc 25 °C	3651	98
	Tc-nom 85 °C	3260	90
	Tc-max 95 °C	3206	88



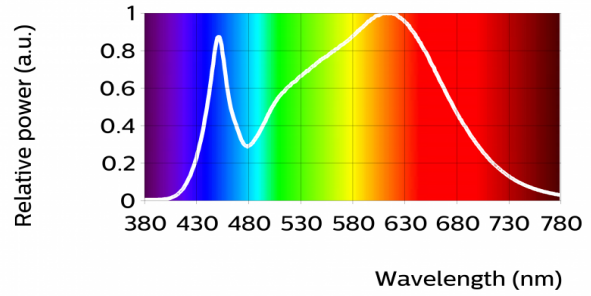
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93	95	95	92	93	93	91	84	62	87	93	86	94	96	91

Parameter	Min	Typ	Max	Unit
Luminous flux	1545	1661	1827	lm
Module efficacy		122		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.398, 0.376)		-
Color consistency			3	SDCM
CRI	91	93		
R9	50			
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
80% I-nom 320mA	Tc 25 °C	1500	137
	Tc-nom 85 °C	1371	128
	Tc-max 95 °C	1353	127
I-nom 400mA	Tc 25 °C	1835	131
	Tc-nom 85 °C	1661	122
	Tc-max 95 °C	1637	120
I-max 960mA	Tc 25 °C	3775	102
	Tc-nom 85 °C	3370	93
	Tc-max 95 °C	3315	91



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93	96	96	92	93	93	92	84	61	88	92	81	94	97	91

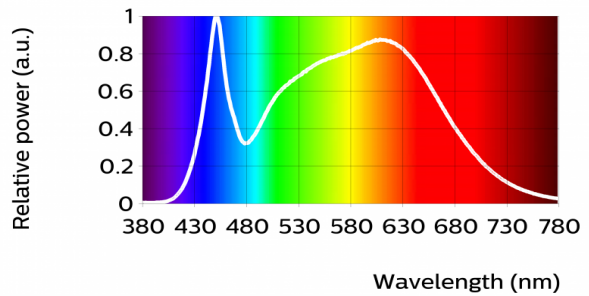
Fortimo SLM C 940 PW 1204 L09 1619 G7+

Parameter	Min	Typ	Max	Unit
Luminous flux	1590	1710	1881	lm
Module efficacy		125		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.374, 0.364)		-
Color consistency			3	SDCM
CRI	91	93		
R9	50			
Photometric code		940/359		
Photobiological safety			RG2	
Ethr			771	lux

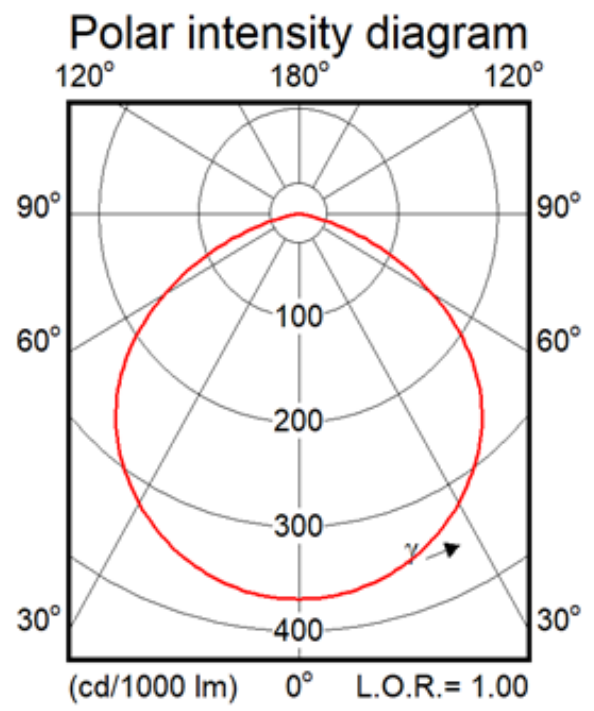


Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	940	lm	lm/W
80% I-nom 320mA	Tc 25 °C	1544	141
	Tc-nom 85 °C	1411	131
	Tc-max 95 °C	1393	130
I-nom 400mA	Tc 25 °C	1890	135
	Tc-nom 85 °C	1710	125
	Tc-max 95 °C	1685	124
I-max 960mA	Tc 25 °C	3890	105
	Tc-nom 85 °C	3472	95
	Tc-max 95 °C	3415	94



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93	95	94	93	93	91	93	86	64	86	92	76	94	96	92



## Electrical characteristics

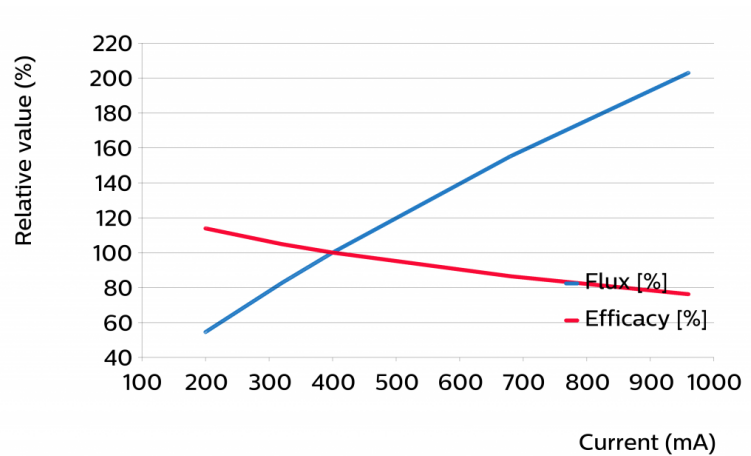
Parameter	Min	Typ	Max	Unit
Forward voltage	32.1	34.1	36.1	V
Power consumption	12.9	13.6	14.4	W = kWh/1000h
Number of modules in parallel			1	

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

## Tuning information

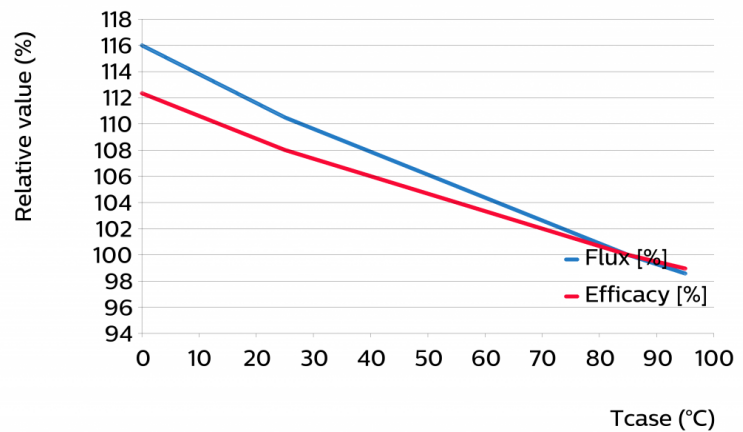
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
960	203	76
680	155	86
400	100	100
320	83	105
200	54	114



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

Tc [°C]	Flux [%]	Efficacy [%]
95	99	99
85	100	100
25	110	108
0	116	112





## Lumen maintenance

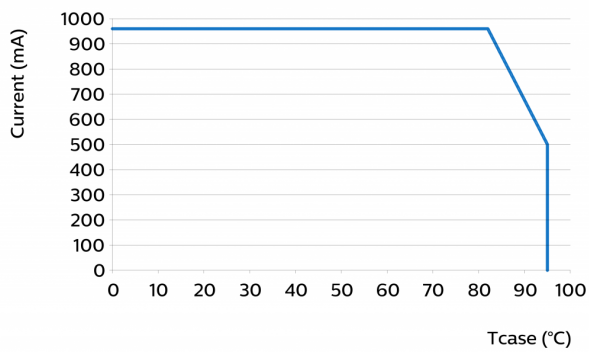
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80%I nom 320 mA	Tc 75°C	>50	>50	>50	>50	>50	>50	46	30	24
	Tc nom 85°C	>50	>50	>50	>50	43	34	31	20	16
	Tc max 95°C	>50	47	38	45	30	24	21	14	11
I nom 400 mA	Tc 75°C	>50	>50	>50	>50	>50	45	40	26	21
	Tc nom 85°C	>50	>50	49	>50	38	30	27	18	14
	Tc max 95°C	>50	42	34	40	26	21	19	12	10
I max 960 mA	Tc 75°C	46	33	26	31	20	16	15	10	8
	Tc nom 85°C	35	23	19	22	15	12	10	7	6
	Tc max 95°C	26	17	14	16	11	8	8	5	4

## Lifetime

Parameter	Value	Unit
C10 at Tc life	50000	hours
M70F50 nominal	>50000	hours
M70F50 life	>50000	hours

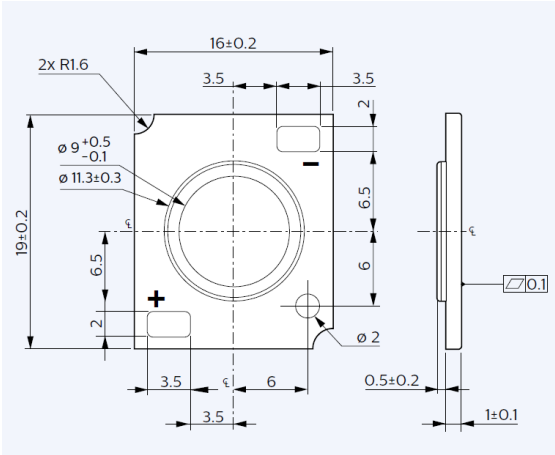
Switching cycles in accordance to EU 1194/2012: >15000

## Performance Window



## Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	18.8	19	19.2	mm
Width	15.8	16	16.2	mm
Height PCB	0.9	1	1.1	mm
Height including dam	1.2	1.5	1.8	mm
Product mass		0.78		gram



## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		960	mA
Case temperature (Tc-max)		95	°C
ESD (direct contact)		8	kV
Working voltage		180	V <sub>dc</sub>
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



© 2020 Signify Holding, IBRS 10461, 5600VB, NL. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

[www.philips.com/oem](http://www.philips.com/oem)

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.

18/08/2020