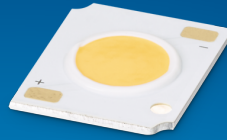


PHILIPS

Fortimo

LED

Fortimo SLM C 1203
L09 1619 G7 HE



Datasheet

Fortimo SLM C 1203 L09 1619 G7 HE

Fortimo LED SLM Gen 7 CRI90 HE continues to focus on the combination of Quality of Light and efficacy. The new HE range has a significant improvement on CRI90 efficacy and close the efficacy gap to < 5% vs. CRI80 range. In the meantime, the new HE range will be delivered with 2 SDCM color consistency. The superior efficacy and color consistency of Fortimo SLM G7 HE will further unlock the extraordinary potential of light, facilitate the innovation and inspire the next generation luminaire design at our OEM customers. 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
- 10%-12% efficacy improvement vs. current G7 CRI90 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

June 2020



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo SLM C 930 PW 1203 L09 1619 G7 HE	8719514 280229 00	9290 028 33406	20
Fortimo SLM C 930 PC 1203 L09 1619 G7 HE	8719514 280328 00	9290 028 34006	20

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 1203 L09 1619 G7 HE	300	see performance window	510	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 930 PW 1203 L09 1619 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1363	1435	1579	lm
Module efficacy		139		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	90	92		
R9	50			
Photometric code		930/259		
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 240mA	Tc 25 °C	1310	158
	Tc-nom 85 °C	1176	145
	Tc-max 95 °C	1150	142
I-nom 300mA	Tc 25 °C	1608	153
	Tc-nom 85 °C	1435	139
	Tc-max 95 °C	1401	136
I-max 510mA	Tc 25 °C	2554	135
	Tc-nom 85 °C	2245	121
	Tc-max 95 °C	2183	118

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
94	98	96	93	95	94	87	77	51	95	94	88	96	99

Fortimo SLM C 930 PC 1203 L09 1619 G7 HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1242	1307	1438	lm
Module efficacy		127		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			2	SDCM
CRI	91	93		
R9	70			
Photometric code		930/259		
Photobiological safety			RG1 unlimited	

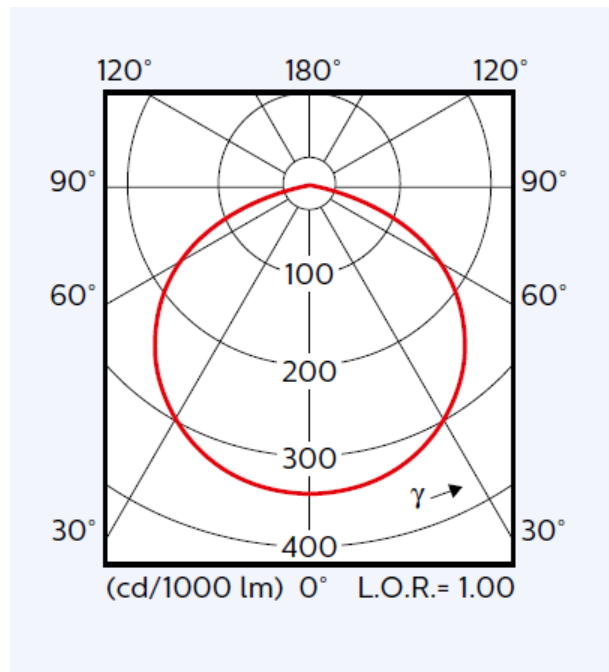


Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	930	lm	lm/W
80% I-nom 240mA	Tc 25 °C	1195	144
	Tc-nom 85 °C	1072	132
	Tc-max 95 °C	1048	130
I-nom 300mA	Tc 25 °C	1466	139
	Tc-nom 85 °C	1307	127
	Tc-max 95 °C	1277	124
I-max 510mA	Tc 25 °C	2328	123
	Tc-nom 85 °C	2046	111
	Tc-max 95 °C	1989	108

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
95	90	91	95	94	91	90	90	78	87	91	87	96	93

Beam shape



Electrical characteristics

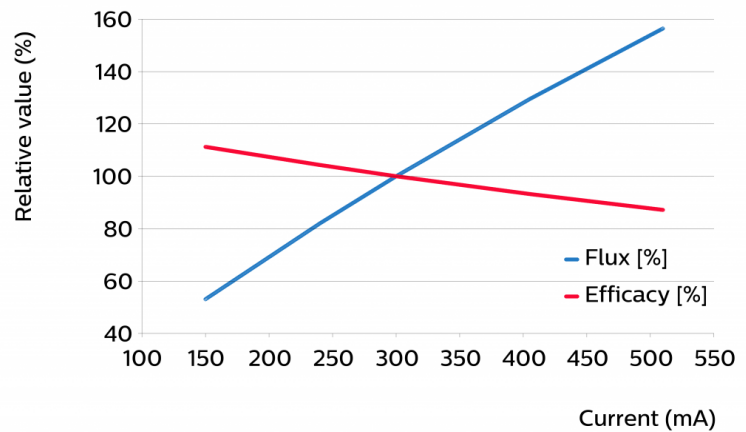
Parameter	Min	Typ	Max	Unit
Forward voltage	32.4	34.4	37.4	V
Power consumption	9.7	10.3	11.2	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel			1	

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

Tuning information

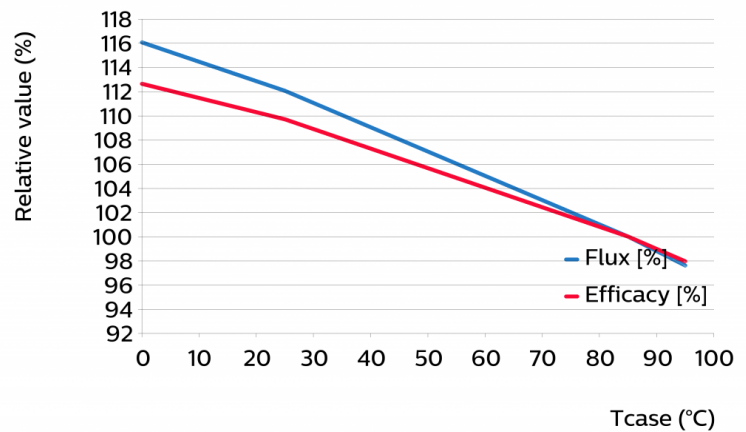
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
510	156	87
405	129	93
300	100	100
240	82	104
150	53	111



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

Tc [°C]	Flux [%]	Efficacy [%]
95	98	98
85	100	100
25	112	110
0	116	113



Lumen maintenance

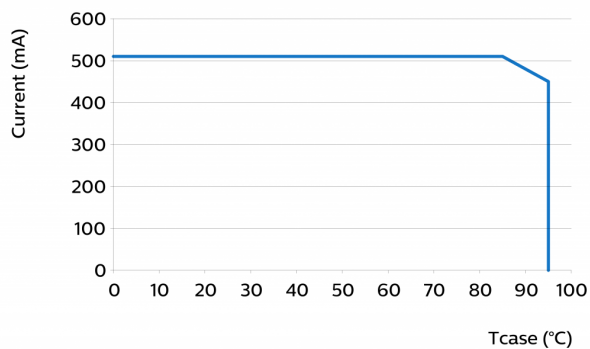
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 240 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	>50	42
	Tc nom 85°C	>50	>50	>50	>50	48	39	35	23	18
	Tc max 95°C	>50	>50	42	>50	33	27	24	16	13
I nom 300 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	>50	47	38
	Tc nom 85°C	>50	>50	>50	>50	44	35	32	21	17
	Tc max 95°C	>50	49	39	46	30	24	22	14	12
I max 510 mA	Tc 65°C	>50	>50	>50	>50	>50	>50	50	33	26
	Tc nom 85°C	>50	>50	41	48	32	25	23	15	12
	Tc max 95°C	>50	35	28	34	22	18	16	10	8

Lifetime

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

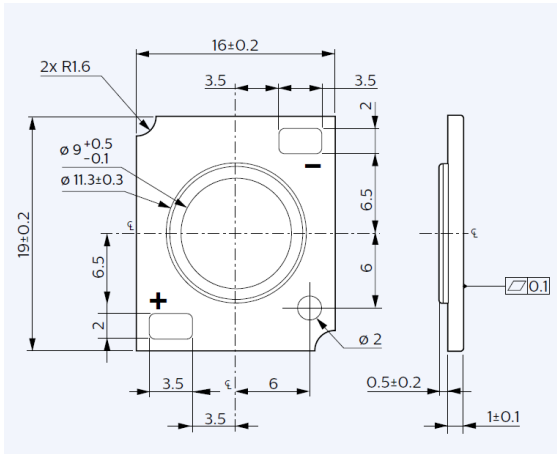
Switching cycles in accordance to EU 1194/2012: >15000.

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)		510	mA
Case temperature (Tc-max)		95	°C
ESD (direct contact)		8	kV
Working voltage		180	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

Application

Dimming

Yes



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18/06/2020