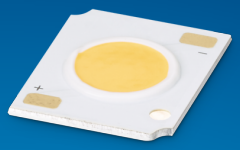
PHILIPS

Fortimo

LED

Fortimo SLM PW 1202
L06 1215 G7+



Datasheet

Experience bright and vivid colors

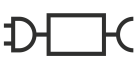
Fortimo SLM PW 1202 L06 1215 G7+

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)

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

September 2021







Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo SLM C 830 PW 1202 L06 1215 G7+	8718699 766115 00	9290 021 95306	100
Fortimo SLM C 930 PW 1202 L06 1215 G7+	8718699 766139 00	9290 021 95406	100
Fortimo SLM C 935 PW 1202 L06 1215 G7+	8718699 766153 00	9290 021 95506	100
Fortimo SLM C 940 PW 1202 L06 1215 G7+	8718699 766177 00	9290 021 95606	100

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM PW 1202 L06 1215 G7+	200	see performance window	480	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

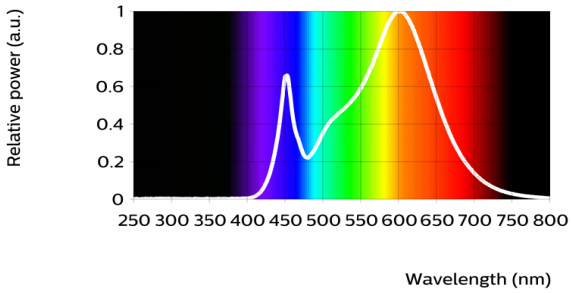
Optical characteristics - table per color (CCT)

Fortimo SLM C 830 PW 1202 L06 1215 G7+

Parameter	Min	Typ	Max	Unit
Luminous flux	867	933	1026	lm
Module efficacy	127	137		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			RG2	
Ethr			705	lux

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 160mA	Tc 25 °C	848	155
	Tc-nom 85 °C	768	143
	Tc-max 95 °C	755	141
I-nom 200mA	Tc 25 °C	1038	149
	Tc-nom 85 °C	933	137
	Tc-max 95 °C	916	135
I-max 480mA	Tc 25 °C	2147	116
	Tc-nom 85 °C	1886	104
	Tc-max 95 °C	1844	102



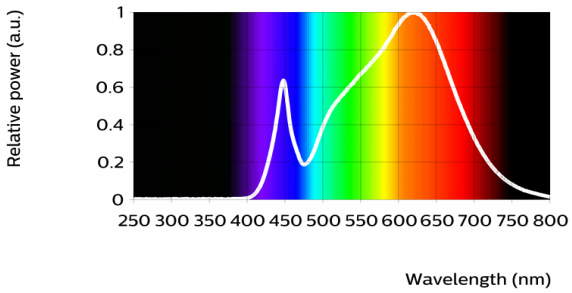
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82	93	94	81	84	91	80	58	7	85	81	79	85	97	76

Fortimo SLM C 930 PW 1202 L06 1215 G7+

Parameter	Min	Typ	Max	Unit
Luminous flux	742	797	877	lm
Module efficacy	109	117		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			RG2	
Ethr			705	lux

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 160mA	Tc 25 °C	725	132
	Tc-nom 85 °C	657	122
	Tc-max 95 °C	646	121
I-nom 200mA	Tc 25 °C	888	127
	Tc-nom 85 °C	797	117
	Tc-max 95 °C	783	115
I-max 480mA	Tc 25 °C	1833	99
	Tc-nom 85 °C	1611	88
	Tc-max 95 °C	1575	87



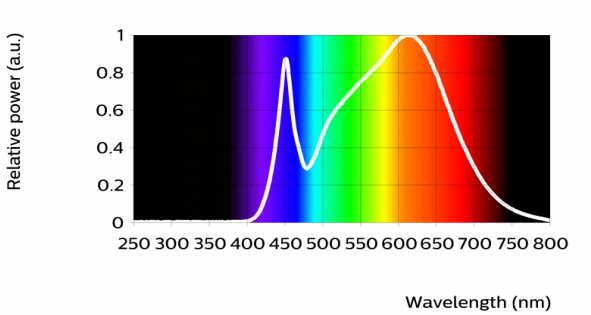
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93	95	95	92	93	93	91	84	62	87	93	86	94	96	91

Fortimo SLM C 935 PW 1202 L06 1215 G7+

Parameter	Min	Typ	Max	Unit
Luminous flux	767	825	907	lm
Module efficacy	112	121		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			RG2	
Ethr			584	lux

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 160mA	Tc 25 °C	750	137
	Tc-nom 85 °C	679	127
	Tc-max 95 °C	668	125
I-nom 200mA	Tc 25 °C	918	132
	Tc-nom 85 °C	825	121
	Tc-max 95 °C	810	119
I-max 480mA	Tc 25 °C	1898	102
	Tc-nom 85 °C	1667	92
	Tc-max 95 °C	1630	90



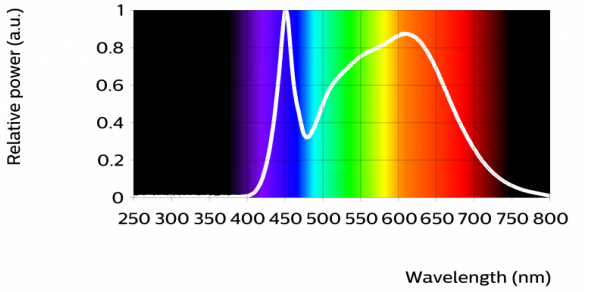
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93	96	96	92	93	93	92	84	61	88	92	81	94	97	91

Fortimo SLM C 940 PW 1202 L06 1215 G7+

Parameter	Min	Typ	Max	Unit
Luminous flux	790	849	934	lm
Module efficacy	116	124		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			487	lux

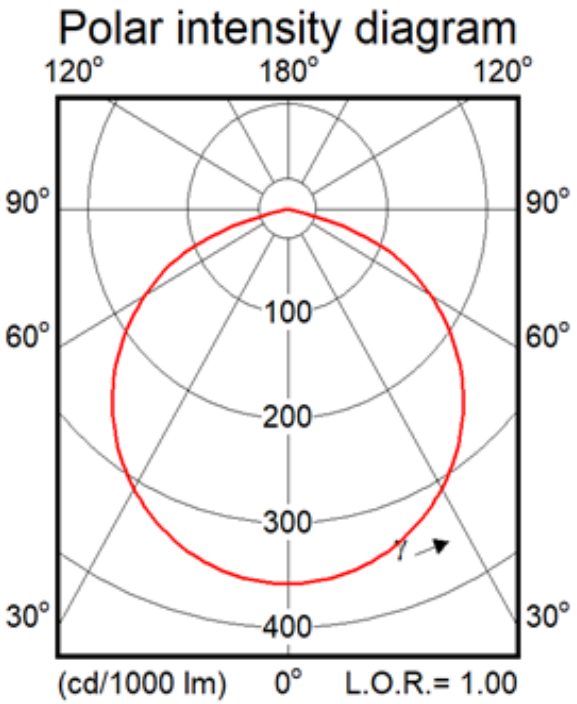
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	940	lm	lm/W
80% I-nom 160mA	Tc 25 °C	772	141
	Tc-nom 85 °C	699	130
	Tc-max 95 °C	688	129
I-nom 200mA	Tc 25 °C	945	135
	Tc-nom 85 °C	849	124
	Tc-max 95 °C	834	123
I-max 480mA	Tc 25 °C	1955	105
	Tc-nom 85 °C	1717	94
	Tc-max 95 °C	1679	93



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

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

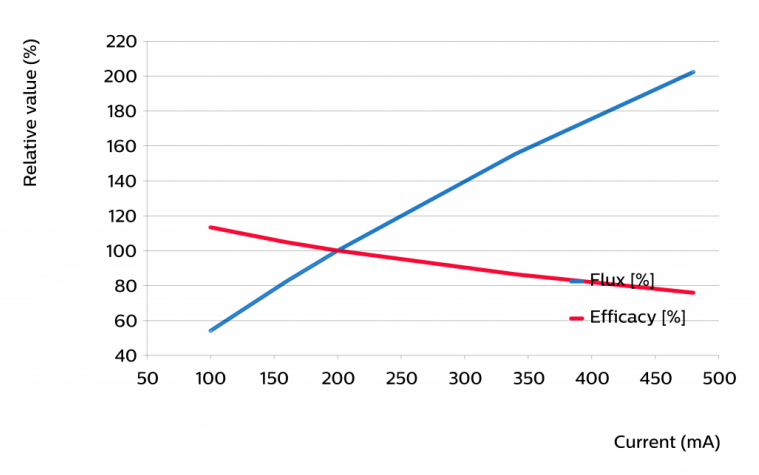
Parameter	Min	Typ	Max	Unit
Forward voltage	32.1	34.1	36.1	V
Power consumption	6.42	6.83	7.21	W = kWh/1000h
Number of modules in parallel			1	

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

Tuning information

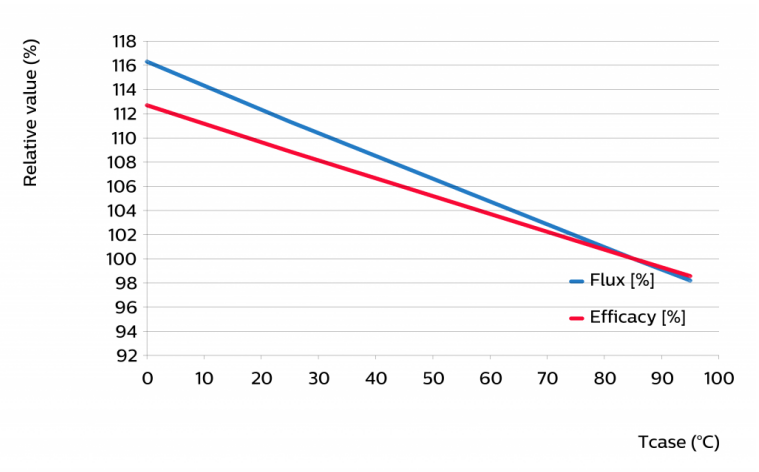
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
480	202	76
340	155	86
200	100	100
160	82	105
100	54	113



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

Tc [°C]	Flux [%]	Efficacy [%]
95	98	99
85	100	100
25	111	109
0	116	113



Lumen maintenance

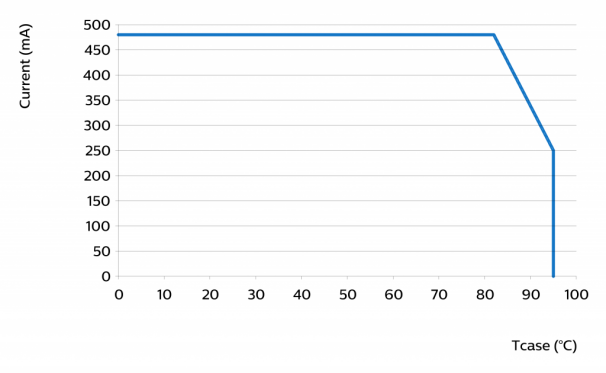
Operation point	Lumen maintenance	L70			L80			L90		
	x 1000 hours	B50	B20	B10	B50	B20	B10	B50	B20	B10
80%I nom 160 mA	Tc 75°C	>50	>50	>50	>50	>50	>50	39	34	30
	Tc nom 85°C	>50	>50	>50	50	43	39	24	20	19
	Tc max 95°C	50	43	39	31	27	25	15	13	12
I nom 200 mA	Tc 75°C	>50	>50	>50	>50	>50	>50	33	28	25
	Tc nom 85°C	>50	>50	>50	42	36	33	20	17	15
	Tc max 95°C	42	36	33	26	23	21	12	11	10
I max 480 mA	Tc 75°C	49	37	29	35	23	18	17	11	9
	Tc nom 85°C	40	26	21	25	16	13	12	8	6
	Tc max 95°C	29	19	15	18	12	9	8	6	4

Lifetime

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

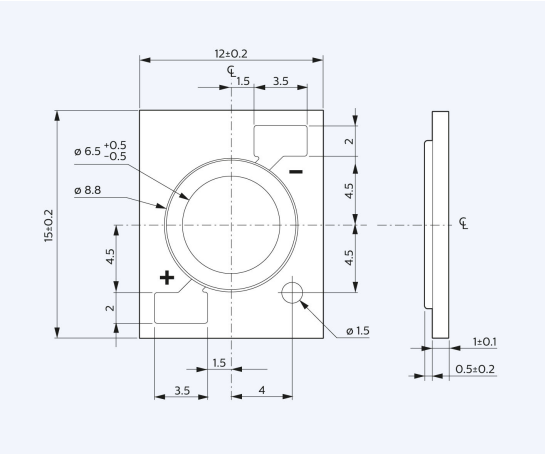
Switching cycles in accordance to EU 1194/2012: >15000

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	14.8	15	15.2	mm
Width	11.8	12	12.2	mm
Height PCB	0.9	1	1.1	mm
Height including dam	1.2	1.5	1.8	mm
Product mass		0.5		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		480	mA
Case temperature (Tc-max)		95	°C
Power at rated Vf-max and I-max		18.7	W
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+

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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