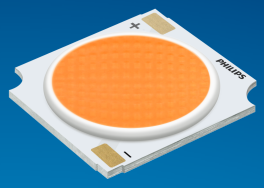
PHILIPS

Fortimo

LED

Fortimo SLM C 1205 L15 1919 G7N



Datasheet

Fortimo SLM – best combination of performance and quality of light – now embraces industry standard footprint

Fortimo SLM C 1205 L15 1919 G7N

The leading efficacy and Quality of Light of Fortimo SLM is finally served in the industry-proven footprint! The new G7N family offers the standard series (CRI80 and CRI90) in 3 SDCM and the HE series (CRI90) in 2 SDCM, both featuring Premium White. Please check 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 application
- Extended portfolio covering standard color and Premium White color.
- Standard series with good color consistency (3 SDCM)
- High Efficacy CRI90 series offers 10-12% higher efficacy than standard CRI90 with excellent color consistency (2 SDCM)
- System proposition (Module + Driver + Holder)
- Flexibility to optimize luminaire performance (high efficacy or high lm output)
- 50,000 hours lifetime

April 2021

indirect

100%

instant

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo SLM C 827 1205 L15 1919 G7N *	8719514 368835 00	9290 033 77906	20
Fortimo SLM C 830 1205 L15 1919 G7N	**8719514 368866 00**	**9290 033 78006**	**20**
Fortimo SLM C 835 1205 L15 1919 G7N *	8719514 368897 00	9290 033 78106	20
Fortimo SLM C 840 1205 L15 1919 G7N	**8719514 368927 00**	**9290 033 78206**	**20**
Fortimo SLM C 850 1205 L15 1919 G7N *	8719514 368958 00	9290 033 78306	20
Fortimo SLM C 857 1205 L15 1919 G7N *	8719514 368989 00	9290 033 78406	20
Fortimo SLM C 927 1205 L15 1919 G7N	**8719514 369016 00**	**9290 033 78506**	**20**
Fortimo SLM C 930 1205 L15 1919 G7N	**8719514 369047 00**	**9290 033 78606**	**20**
Fortimo SLM C 935 1205 L15 1919 G7N *	8719514 369078 00	9290 033 78706	20
Fortimo SLM C 940 1205 L15 1919 G7N *	8719514 369108 00	9290 033 78806	20
Fortimo SLM C 930 PW 1205 L15 1919 G7N	**8719514 369139 00**	**9290 033 78906**	**20**
Fortimo SLM C 935 PW 1205 L15 1919 G7N	**8719514 369160 00**	**9290 033 79006**	**20**
Fortimo SLM C 940 PW 1205 L15 1919 G7N	**8719514 369191 00**	**9290 033 79106**	**20**

* Only provided on demand. Please check with your local sales representative for order support.

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo SLM C 1205 L15 1919 G7N	450	see performance window	1150	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	85	see performance window	105	°C

* Nominal value at which typical performance is specified

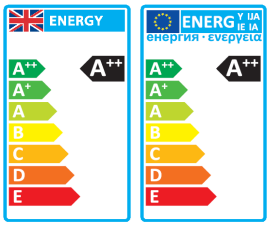
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

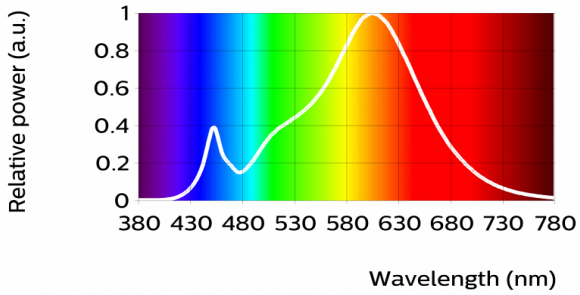
Fortimo SLM C 827 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2190	2305	2536	lm
Module efficacy		152		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	80	82		
R9	0			
Photometric code		827/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

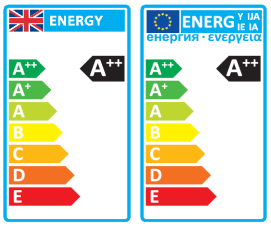
Operation point	827	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2036	167
	Tc-nom 85 °C	1884	158
	Tc 95 °C	1813	153
I-nom 450mA	Tc 25 °C	2505	162
	Tc-nom 85 °C	2305	152
	Tc 95 °C	2212	147
I-max 1150mA	Tc 25 °C	5689	127
	Tc-nom 85 °C	5089	116
	Tc 95 °C	4807	110



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
81	91	95	80	81	91	81	56	4	81	80	76	83	98

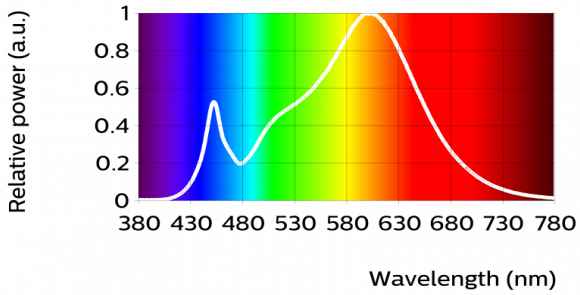
Fortimo SLM C 830 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2294	2415	2656	lm
Module efficacy		159		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	80	82		
R9	0			
Photometric code		830/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

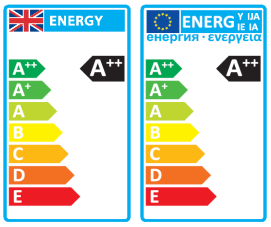
Operation point	830	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2133	175
	Tc-nom 85 °C	1973	165
	Tc 95 °C	1899	160
I-nom 450mA	Tc 25 °C	2624	169
	Tc-nom 85 °C	2415	159
	Tc 95 °C	2318	154
I-max 1150mA	Tc 25 °C	5962	134
	Tc-nom 85 °C	5337	122
	Tc 95 °C	5043	116



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
81	91	96	81	82	90	83	59	5	81	81	73	84	99

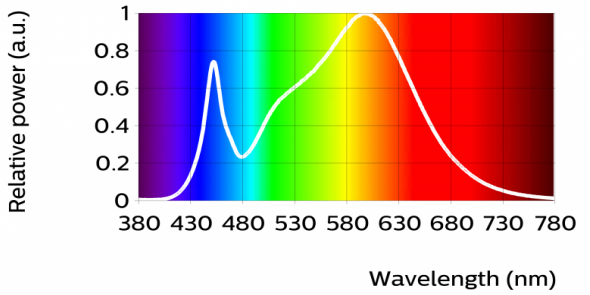
Fortimo SLM C 835 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2346	2470	2717	lm
Module efficacy		163		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.408, 0.393)		-
Color consistency			3	SDCM
CRI	80	82		
R9	0			
Photometric code		835/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

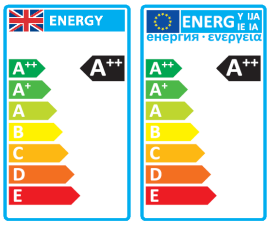
Operation point	835	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2185	179
	Tc-nom 85 °C	2022	169
	Tc 95 °C	1946	164
I-nom 450mA	Tc 25 °C	2688	173
	Tc-nom 85 °C	2470	163
	Tc 95 °C	2375	158
I-max 1150mA	Tc 25 °C	6110	137
	Tc-nom 85 °C	5469	125
	Tc 95 °C	5168	119



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
80	89	96	81	80	86	84	60	2	76	80	66	82	98

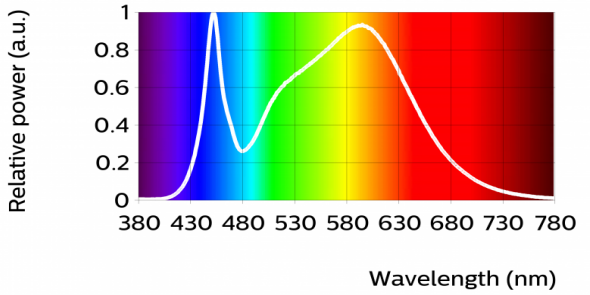
Fortimo SLM C 840 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2408	2535	2788	lm
Module efficacy		167		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			3	SDCM
CRI	80	82		
R9	0			
Photometric code		840/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

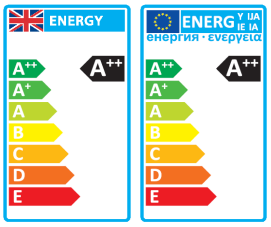
Operation point	840	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2238	183
	Tc-nom 85 °C	2071	173
	Tc 95 °C	1993	168
I-nom 450mA	Tc 25 °C	2753	178
	Tc-nom 85 °C	2535	167
	Tc 95 °C	2433	162
I-max 1150mA	Tc 25 °C	6261	140
	Tc-nom 85 °C	5607	128
	Tc 95 °C	5300	122



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
80	88	95	81	80	84	86	63	4	73	80	61	82	97

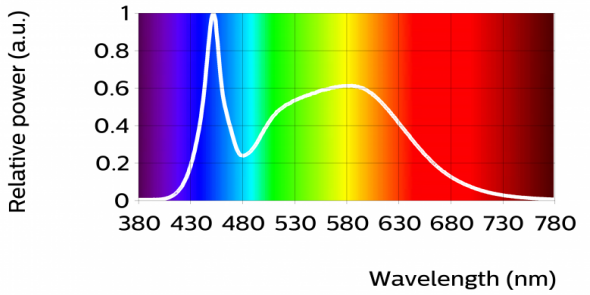
Fortimo SLM C 850 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2422	2550	2805	lm
Module efficacy		168		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			3	SDCM
CRI	80	82		
R9	0			
Photometric code		850/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

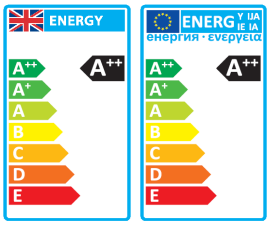
Operation point	850	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2252	185
	Tc-nom 85 °C	2084	175
	Tc 95 °C	2006	169
I-nom 450mA	Tc 25 °C	2770	179
	Tc-nom 85 °C	2550	168
	Tc 95 °C	2449	163
I-max 1150mA	Tc 25 °C	6303	141
	Tc-nom 85 °C	5649	129
	Tc 95 °C	5341	123



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
80	87	92	82	81	82	87	66	4	70	81	62	82	96

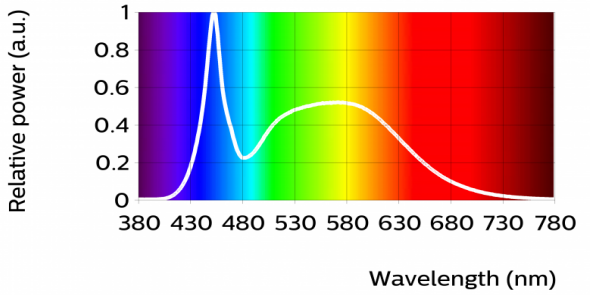
Fortimo SLM C 857 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2432	2560	2816	lm
Module efficacy		169		lm/W
Correlated color temperature (CCT)		5700		K
Color coordinates (CIEx, CIEy)		(0.329, 0.343)		-
Color consistency			3	SDCM
CRI	80	82		
R9	0			
Photometric code		857/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

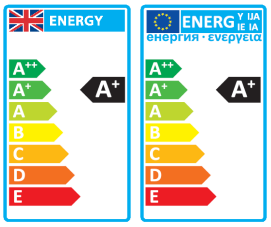
Operation point	857	lm	lm/W
80% I-nom 360mA	Tc 25 °C	2261	185
	Tc-nom 85 °C	2092	175
	Tc 95 °C	2014	170
I-nom 450mA	Tc 25 °C	2782	179
	Tc-nom 85 °C	2560	169
	Tc 95 °C	2459	163
I-max 1150mA	Tc 25 °C	6331	142
	Tc-nom 85 °C	5676	129
	Tc 95 °C	5367	123



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
81	87	91	82	81	82	88	69	6	69	81	59	83	95

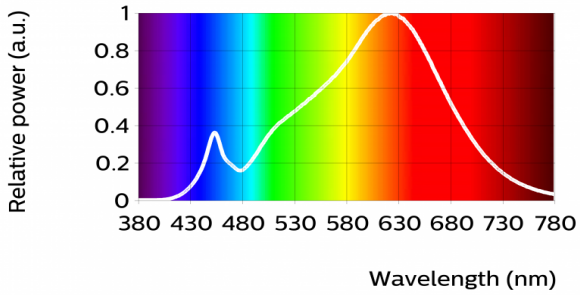
Fortimo SLM C 927 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	1867	1965	2162	lm
Module efficacy		130		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		927/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

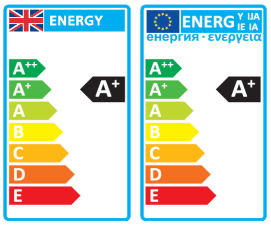
Operation point	927	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1740	143
	Tc-nom 85 °C	1609	135
	Tc 95 °C	1549	131
I-nom 450mA	Tc 25 °C	2140	138
	Tc-nom 85 °C	1965	130
	Tc 95 °C	1890	125
I-max 1150mA	Tc 25 °C	4859	109
	Tc-nom 85 °C	4346	99
	Tc 95 °C	4105	94



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92	96	98	93	92	96	92	80	56	90	94	85	93	98

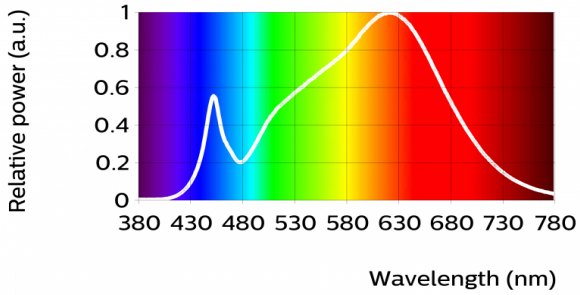
Fortimo SLM C 930 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	1957	2060	2265	lm
Module efficacy		136		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		930/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

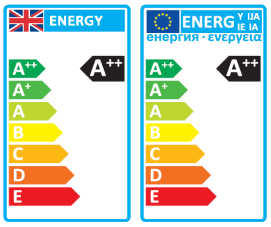
Operation point	930	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1823	149
	Tc-nom 85 °C	1686	141
	Tc 95 °C	1623	137
I-nom 450mA	Tc 25 °C	2242	145
	Tc-nom 85 °C	2060	136
	Tc 95 °C	1981	132
I-max 1150mA	Tc 25 °C	5094	114
	Tc-nom 85 °C	4558	104
	Tc 95 °C	4306	99



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
93	95	96	93	92	94	93	83	61	88	94	80	94	97

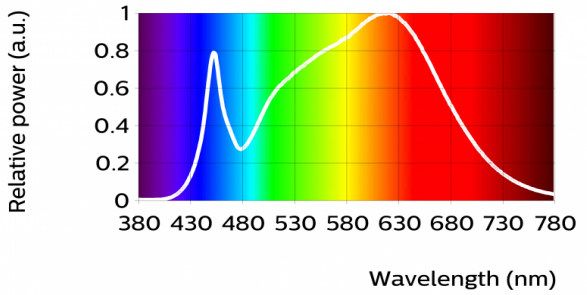
Fortimo SLM C 935 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2028	2135	2348	lm
Module efficacy		141		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.408, 0.393)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		935/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

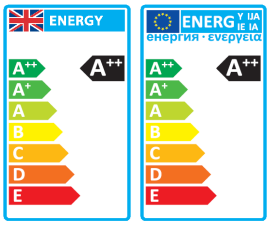
Operation point	935	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1888	155
	Tc-nom 85 °C	1747	146
	Tc 95 °C	1681	142
I-nom 450mA	Tc 25 °C	2323	150
	Tc-nom 85 °C	2135	141
	Tc 95 °C	2052	136
I-max 1150mA	Tc 25 °C	5279	118
	Tc-nom 85 °C	4724	108
	Tc 95 °C	4464	103



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92	95	95	93	92	92	94	85	62	86	93	75	93	97

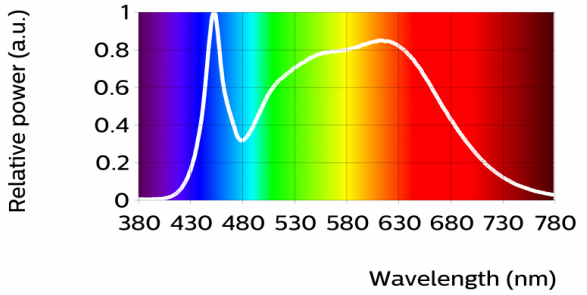
Fortimo SLM C 940 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2085	2195	2414	lm
Module efficacy		145		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		940/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

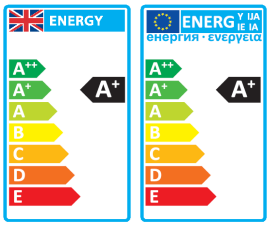
Operation point	940	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1941	159
	Tc-nom 85 °C	1796	150
	Tc 95 °C	1728	146
I-nom 450mA	Tc 25 °C	2388	154
	Tc-nom 85 °C	2195	145
	Tc 95 °C	2110	140
I-max 1150mA	Tc 25 °C	5427	122
	Tc-nom 85 °C	4859	111
	Tc 95 °C	4592	106



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92	94	94	93	91	91	95	87	65	85	92	70	93	96

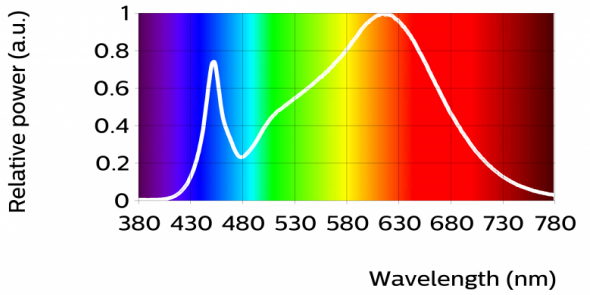
Fortimo SLM C 930 PW 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	1957	2060	2266	lm
Module efficacy		136		lm/W
Correlated color temperature (CCT)		3100		K
Color coordinates (CIEx, CIEy)		(0.422, 0.386)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		931/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

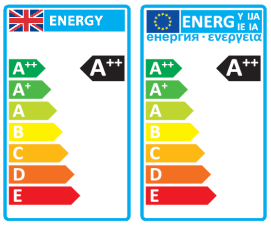
Operation point	931	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1823	149
	Tc-nom 85 °C	1686	141
	Tc 95 °C	1623	137
I-nom 450mA	Tc 25 °C	2242	145
	Tc-nom 85 °C	2060	136
	Tc 95 °C	1981	132
I-max 1150mA	Tc 25 °C	5094	114
	Tc-nom 85 °C	4558	104
	Tc 95 °C	4306	99



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
94	97	97	92	94	95	90	81	59	93	93	85	95	99

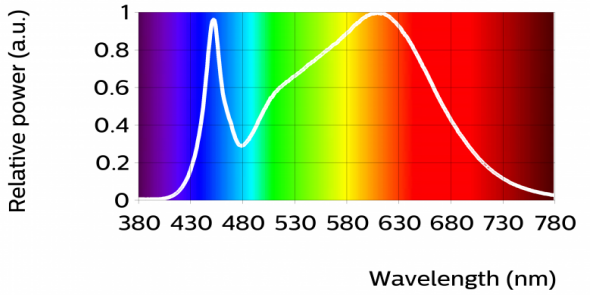
Fortimo SLM C 935 PW 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2028	2135	2348	lm
Module efficacy		141		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.398, 0.376)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		935/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

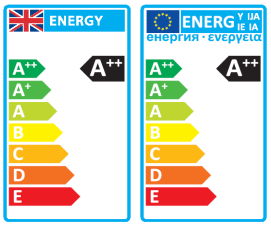
Operation point	935	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1888	155
	Tc-nom 85 °C	1747	146
	Tc 95 °C	1681	142
I-nom 450mA	Tc 25 °C	2323	150
	Tc-nom 85 °C	2135	141
	Tc 95 °C	2052	136
I-max 1150mA	Tc 25 °C	5279	118
	Tc-nom 85 °C	4724	108
	Tc 95 °C	4464	103



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92	95	96	91	92	93	91	80	53	88	91	77	93	98

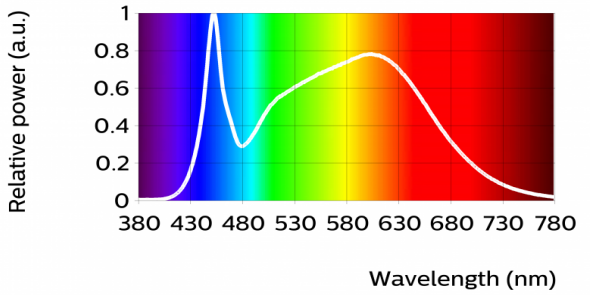
Fortimo SLM C 940 PW 1205 L15 1919 G7N

Parameter	Min	Typ	Max	Unit
Luminous flux	2085	2195	2414	lm
Module efficacy		145		lm/W
Correlated color temperature (CCT)		4100		K
Color coordinates (CIEx, CIEy)		(0.374, 0.364)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		941/359		
Photobiological safety			RG1 unlimited	



Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

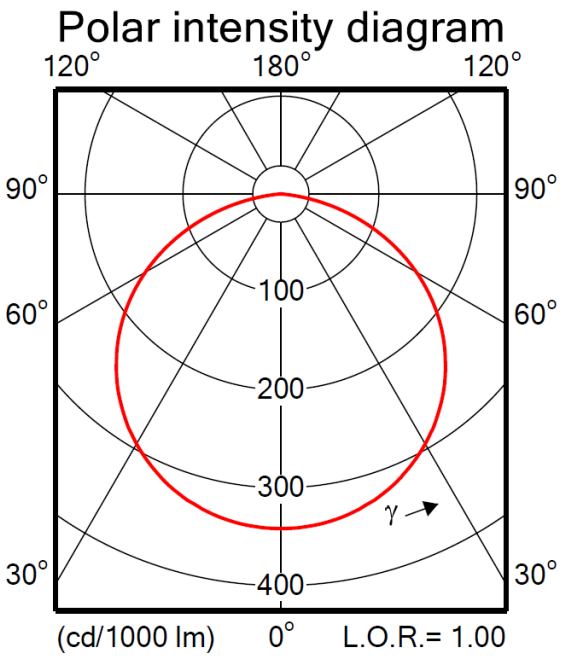
Operation point	941	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1941	159
	Tc-nom 85 °C	1796	150
	Tc 95 °C	1728	146
I-nom 450mA	Tc 25 °C	2388	154
	Tc-nom 85 °C	2195	145
	Tc 95 °C	2110	140
I-max 1150mA	Tc 25 °C	5427	122
	Tc-nom 85 °C	4859	111
	Tc 95 °C	4592	106



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
91	95	95	91	91	91	92	81	53	86	90	71	92	97

Beam shape

The chip on board has a Lambertian light distribution



Electrical characteristics

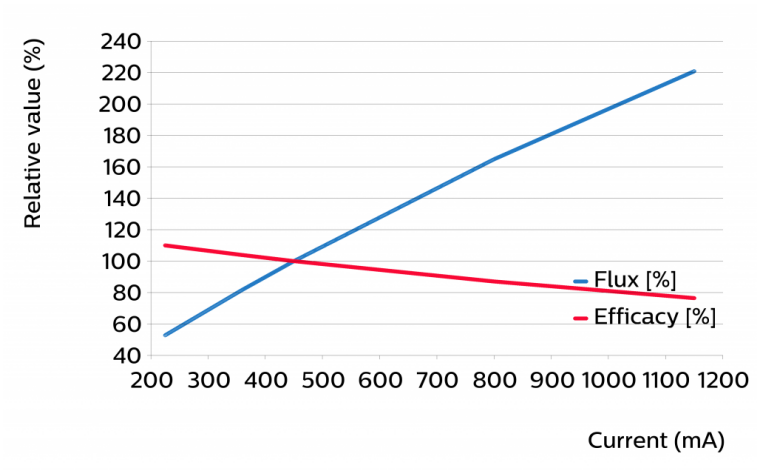
Parameter	Min	Typ	Max	Unit
Forward voltage	31.8	33.7	35.4	V
Power consumption	14.3	15.2	15.9	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel			1	

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

Tuning information

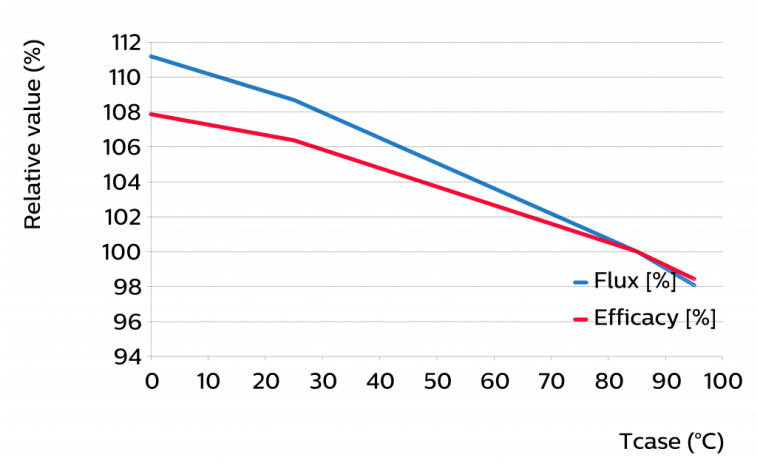
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1150	221	76
800	165	87
450	100	100
360	82	104
225	53	110



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

Tc [°C]	Flux [%]	Efficacy [%]
95	98	98
85	100	100
25	109	106
0	111	108



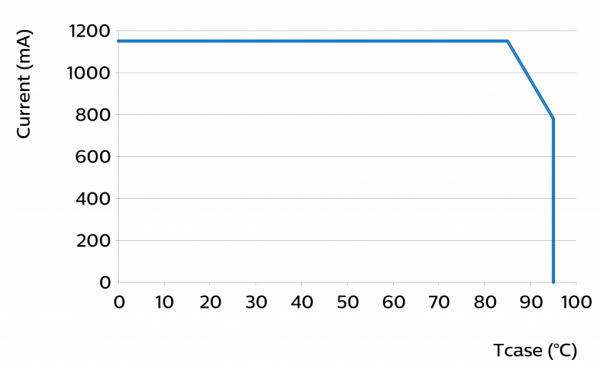
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 360 mA	Tc 75°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 85°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 95°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
I-nom 450 mA	Tc 75°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 85°C	>66	>66	>66	>66	>66	>66	>66	>66	>66
	Tc 95°C	>66	>66	>66	>66	>66	>66	>66	>66	64
I-max 1150 mA	Tc 75°C	>66	60	55	44	37	34	21	17	16
	Tc 85°C	60	51	46	37	32	29	17	15	13
	Tc 95°C	52	43	40	32	27	25	15	12	11

Lifetime

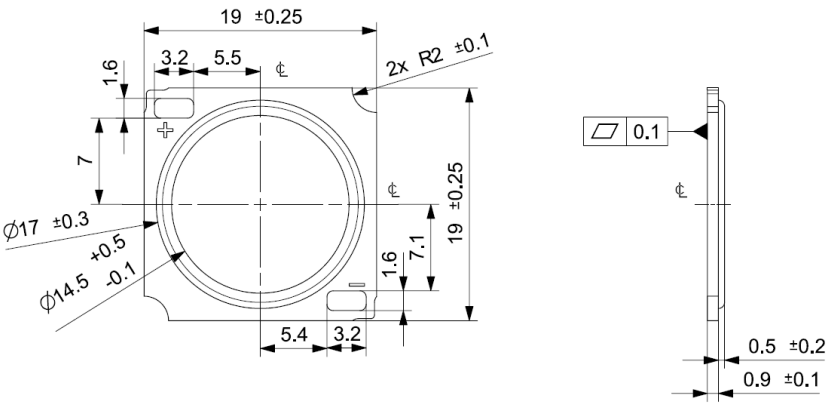
Parameter	Value	Unit
C10 at Tc life	50000	hours
M70F50 nominal	>50000	hours

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	18.75	19	19.25	mm
Width	18.75	19	19.25	mm
Height PCB	0.8	0.9	1	mm
Height total	1.2	1.4	1.7	mm
Product mass		0.99		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1150	mA
Case temperature (Tc-max)		105	°C
ESD (direct contact)	8		kV
Working voltage		60	V_{dc}
Ambient temperature	-20	40	°C
Storage temperature	-40	80	°C

Application information

Certificates and Standards
CE
IEC TR 62778
IEC/EN 62031
UL
UL 8750
ENEC
ENEC+

Environmental
RoHS/REACH

Application	
Dimming	Yes

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