

# PHILIPS

## LED Modules

### Fortimo SLM Food

#### 1211 L19 2828 G6



Philips Fortimo LED spotlight module (SLM) food gen 6 continues to focus on the combination of quality of light and performance. By offering the CoB separate from the holder, even more flexibility in possible system combinations and specifications is achieved. This results in an extensive portfolio of lumen ranges, CCTs and spectra. Please also check the online Easy Design-in Tool for your perfect system combination ([www.na.easydesignintool.philips.com](http://www.na.easydesignintool.philips.com)).

#### Ordering Data

Commercial Product Name	12NC	Minimum Order Quantity
Fortimo SLM C 925 FWW 1211 L19 2828 G6	9290 014 52280	10
Fortimo SLM C 930 FPR 1211 L19 2828 G6	9290 014 52580	10

Not all products are currently available as make-to-stock. Please contact your local Philips representative for specific availability and lead time.

# Fortimo SLM food 1211 L19 2828 G6

## Features

- Excellent quality of light available for all applications
- Extensive range of CCT
- Small LES for narrow beam angles and small reflector designs
- Flexibility to select a different lumen output between 800 lm and 10000 lm
- State-of-the-art chip-on-board (CoB) technology, enabling high system efficacy
- System proposition (CoB + holder + driver)

- Flexibility to optimize luminaire performance (lm/W or high lumen output)
- Philips Advance Xitanium LED window drivers with SimpleSet technology for maximum flexibility
- Mini drivers for smallest possible luminaire designs
- Three dedicated product lines:
  - SLM gen 6 premium white
  - SLM gen 6 crisp white
  - SLM gen 6 food

## Benefits

- 5-year limited system warranty with over 50,000 hours lifetime<sup>1</sup>

## Applications

- Architectural lighting
- Retail spot lighting
- Recessed downlight

## Drive Currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED SLM Food 1211 L19 2828 G6	1200	1500	1500	mA

## Module Temperatures

Parameter	Nominal*	Life**	Max***	Unit
Tc (case temperature at Tc point)	85	85	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

1. View limited warranty at <http://www.usa.lighting.philips.com/support/support/warranty> for details and restrictions.

# Fortimo SLM food 1211 L19 2828 G6

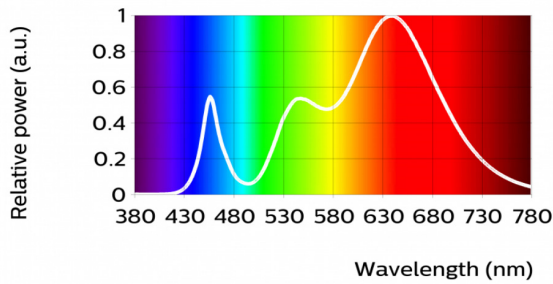
## Optical Characteristics – Table per CCT

### Fortimo SLM C 925 FWW 1211 L19 2828 G6

Parameter	Min	Typ	Max	Unit
Luminous Flux	3120	3460	3810	lm
Module Efficiency		84		lm/W
Color Coordinates (CIEx, CIEy)		(0.457, 0.385)		–
Color Consistency			3	SDCM
CRI		93		–

Measurement tolerances are:  $\pm 5\%$  on flux,  $\pm 6\%$  on efficiency,  $+0.005$  on x,y, and  $\pm 1.5$  on CRI.

Measurement precision for flux  $\pm 5\%$ .  
Measurement precision for efficacy  $\pm 6\%$ .  
Measurement precision for x, y  $\pm 0.005$ .  
Measurement precision for CRI  $\pm 1.5$ .



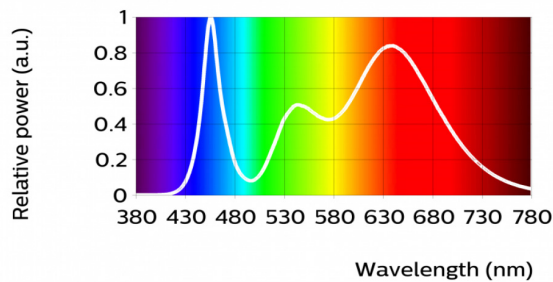
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
94	97	83	93	99	97	95	95	95	89	91	77	94	87	

### Fortimo SLM C 930 FPR 1211 L19 2828 G6

Parameter	Min	Typ	Max	Unit
Luminous Flux	3250	3620	3980	lm
Module Efficiency		85		lm/W
Color Coordinates (CIEx, CIEy)		(0.397, 0.330)		–
Color Consistency			3	SDCM
CRI		88		–

Measurement tolerances are:  $\pm 5\%$  on flux,  $\pm 6\%$  on efficiency,  $+0.005$  on x,y, and  $\pm 1.5$  on CRI.

Measurement precision for flux  $\pm 5\%$ .  
Measurement precision for efficacy  $\pm 6\%$ .  
Measurement precision for x, y  $\pm 0.005$ .  
Measurement precision for CRI  $\pm 1.5$ .

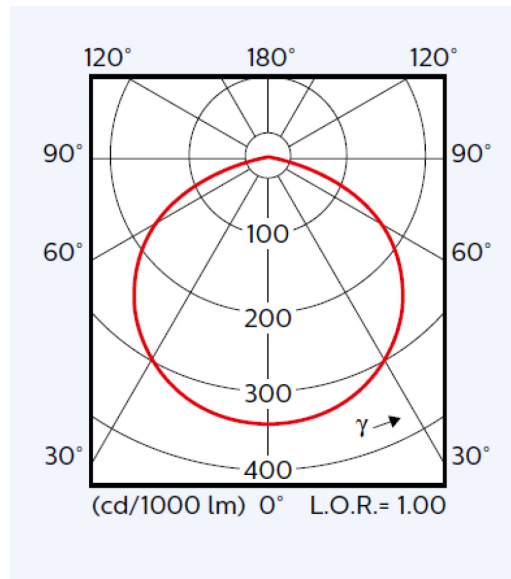


R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
83	89	87	91	88	88	96	96	96	89	90	74	83	89	

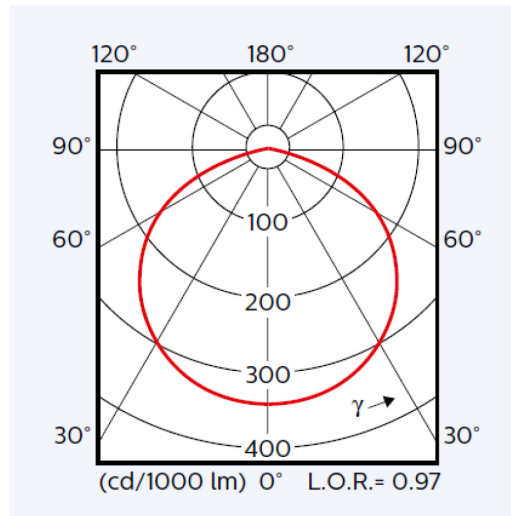
# Fortimo SLM food 1211 L19 2828 G6

## Beam Shape

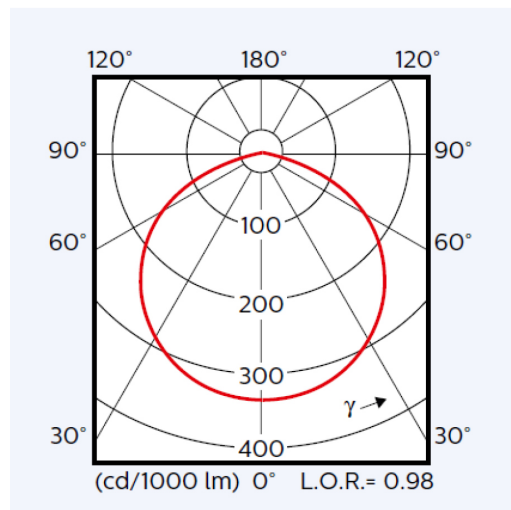
Bare CoB



CoB with a standard/downlight/Zhaga poke-in holder



CoB with a poke-in holder



# Fortimo SLM food 1211 L19 2828 G6

## Fortimo SLM C 925 FWW 1211 L19 2828 G6

Parameter	Min	Typ	Max	Unit
Forward Voltage		34.7	37.2	V
Power Consumption		41.6	44.6	W
Thermal Power		27.4		W

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

## Fortimo SLM C 930 FPR 1211 L19 2828 G6

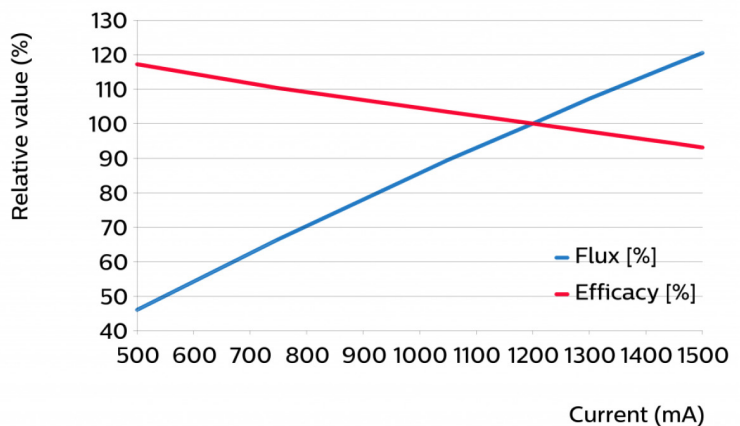
Parameter	Min	Typ	Max	Unit
Forward Voltage		34.7	37.2	V
Power Consumption		41.6	44.6	W
Thermal Power		26.2		W

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

## Tuning Information

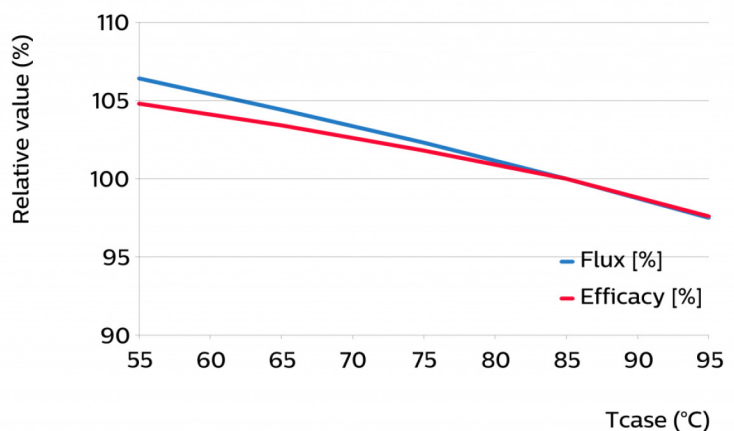
Flux and efficacy vs. current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
500	46	117
750	67	110
1050	90	103
1200	100	100
1300	107	98
1400	114	95
1400	117	94
1500	121	93



Flux and efficacy vs. temperature at Tc (at I nominal)

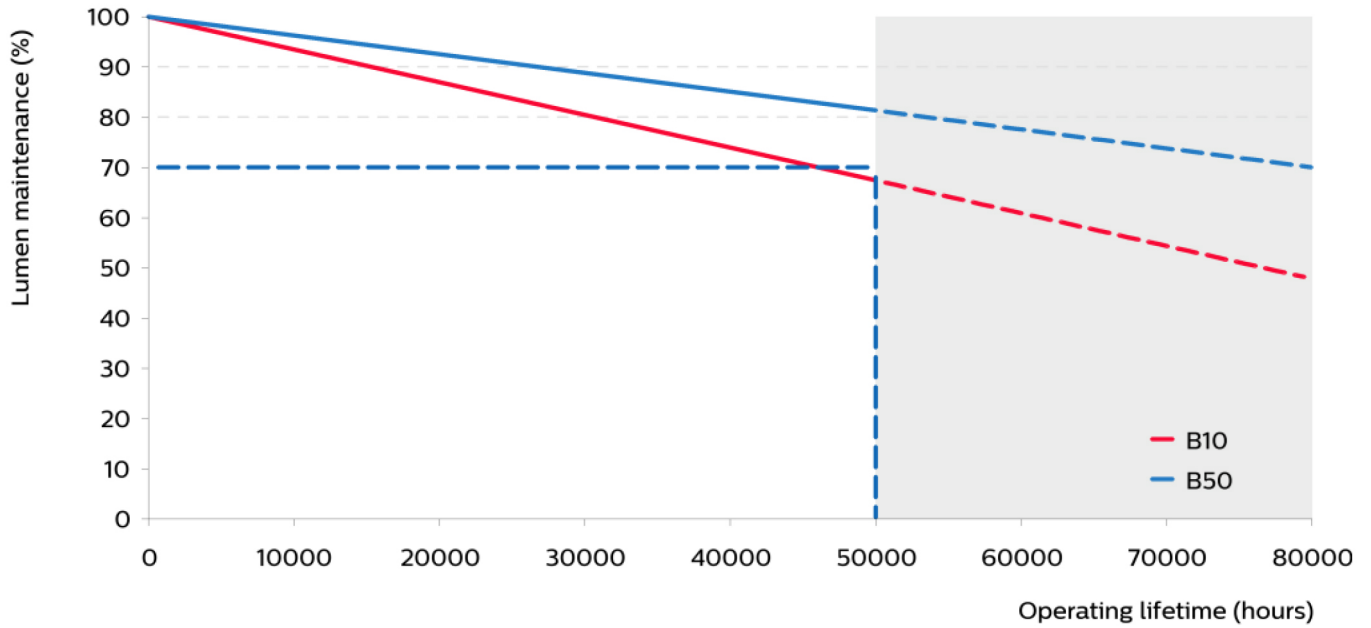
Tcase [°C]	Flux [%]	Efficacy [%]
55	106	105
65	104	103
75	102	102
85	100	100
95	98	98



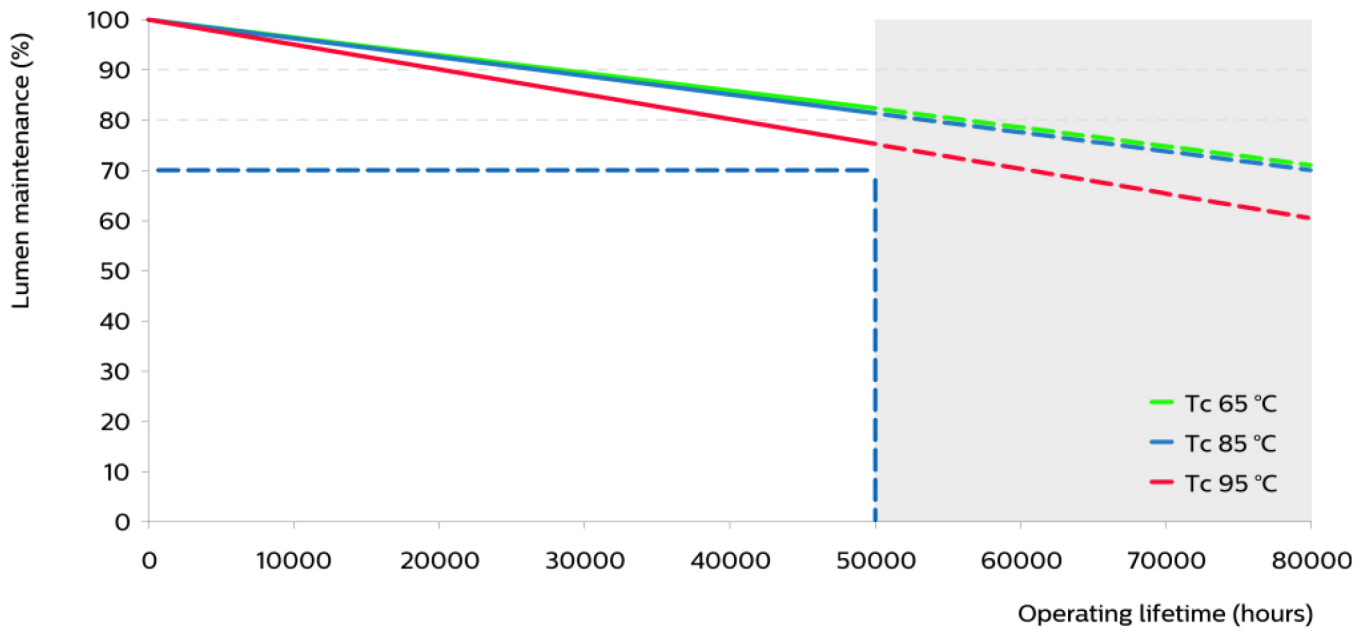
# Fortimo SLM food 1211 L19 2828 G6

## Lumen Maintenance

Lumen maintenance at I-life and Tc-life conditions



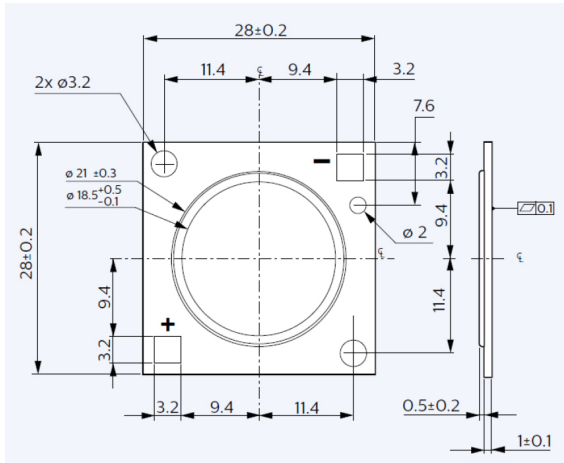
Lumen maintenance for B50 at current I-life conditions



# Fortimo SLM food 1211 L19 2828 G6

## Mechanical Characteristics

Parameter	Min	Typ	Max	Unit
Length	27.8	28	28.2	mm
Width	27.8	28	28.2	mm
Height PCB	0.9	1	1.1	mm
Height including dam	1.2	1.5	1.8	mm



## Absolute Ratings

Parameter	Min	Typ	Max	Unit
Current Through the LED Module (I-max)			1500	mA
Case Temperature (Tc-max)			95	°C
Power at Rated Vf-max and I-max			57.3	W
ESD Human Body Model (HBM) Class 3A JESD22-A114-E 8 kV			8	kV
ESD Machine Model (MM) Class B JESD22-A115-B			400	kV
Ambient Temperature	-20		40	°C
Storage Temperature	-40		80	°C

# Fortimo SLM food 1211 L19 2828 G6

## Application Information

### Environmental

RoHS/REACH

### Certificates and standards

IEC 62031:2008 (First Edition) + A1:2012 + A2:2014

EN 62031:2008 + A1:2013 + A2:2015 without differences

Relevant clauses of IEC 62471:2006 (Incl. IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)

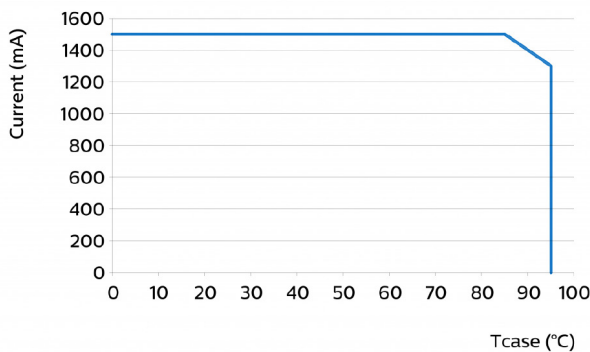
Relevant clauses of EN 62471:2008 (With IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)

Relevant clauses of IEC 60838-1:2004 + A1:2008 + A2:2011 with IEC 60838-2-2:2006 + A1:2012

Relevant clauses of EN 60838-1:2004 + A1:2008 + A2:2011 with EN 60838-2-2:2006 + A1:2012

Application	
IP Rating	No IP-rating
Overheating Protection	No
Luminaire Class	IEC Class I and Class II
Dimming	Yes

## Warranty Window



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[philips.com/ledmodulesna](http://philips.com/ledmodulesna)



Philips Lighting North America Corporation  
10275 W. Higgins Road, Rosemont IL 60018  
Tel: 800-322-2086 Fax: 888-423-1882  
Customer/Technical Service: 800-372-3331  
OEM Support: 866-915-5886

Philips Lighting Canada Ltd.  
281 Hillmount Rd, Markham, ON, Canada L6C 2S3  
Tel. 800-668-9008