

# PHILIPS

## LED Modules

### Fortimo SLM

#### 1203 L09 1619 G6



Philips Fortimo LED spotlight module (SLM) 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 827 1203 L09 1619 G6	9290 014 54506	20
Fortimo SLM C 830 1203 L09 1619 G6	9290 014 54606	20
Fortimo SLM C 835 1203 L09 1619 G6	9290 014 54706	20
Fortimo SLM C 840 1203 L09 1619 G6	9290 014 54806	20
Fortimo SLM C 927 1203 L09 1619 G6	9290 014 55106	20
Fortimo SLM C 930 1203 L09 1619 G6	9290 014 55206	20

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

# Fortimo SLM 1203 L09 1619 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 1203 L09 1619 G6	300	510	510	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 1203 L09 1619 G6

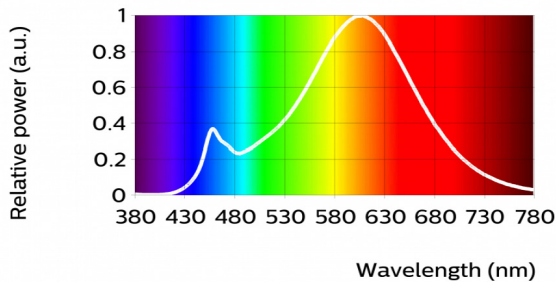
## Optical Characteristics – Table per CCT

### Fortimo SLM C 827 1203 L09 1619 G6

Parameter	Min	Typ	Max	Unit
Luminous Flux	1230	1370	1510	lm
Module Efficiency		133		lm/W
Correlated Color Temperature (CCT)		2700		K
Color Coordinates (CIEx, CIEy)		(0.458, 0.410)		–
Color Consistency			3	SDCM
CRI	80	82		–

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

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



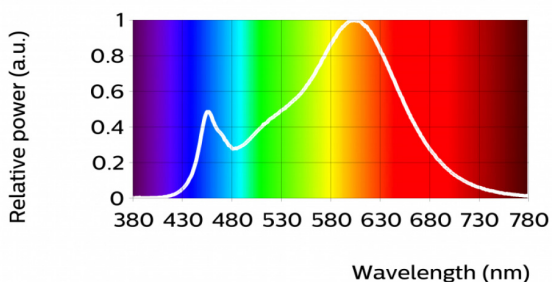
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
79	92	94	76	79	90	82	59	59	82	72	73	82	97	

### Fortimo SLM C 830 1203 L09 1619 G6

Parameter	Min	Typ	Max	Unit
Luminous Flux	1260	1410	1550	lm
Module Efficiency		136		lm/W
Correlated Color Temperature (CCT)		3000		K
Color Coordinates (CIEx, CIEy)		(0.434, 0.403)		–
Color Consistency			3	SDCM
CRI	80	82		–

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

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



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
83	94	93	80	84	94	81	59	59	87	80	76	86	97	

# Fortimo SLM 1203 L09 1619 G6

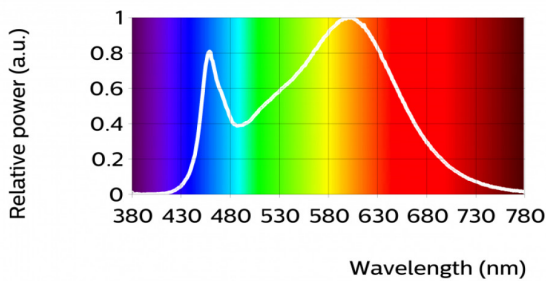
## Optical Characteristics – Table per CCT

### Fortimo SLM C 835 1203 L09 1619 G6

Parameter	Min	Typ	Max	Unit
Luminous Flux	1290	1430	1580	lm
Module Efficiency		139		lm/W
Correlated Color Temperature (CCT)		3500		K
Color Coordinates (CIEx, CIEy)		(0.407, 0.392)		–
Color Consistency			3	SDCM
CRI	80	82		–

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

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



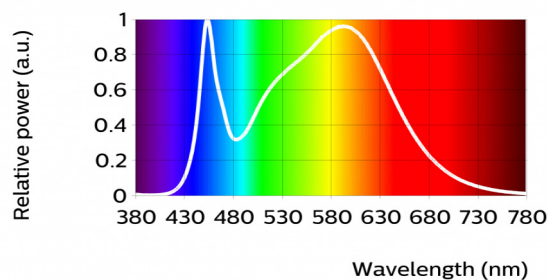
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
86	96	93	80	85	94	83	65	65	90	79	70	89	97	

### Fortimo SLM C 840 1203 L09 1619 G6

Parameter	Min	Typ	Max	Unit
Luminous Flux	1340	1490	1640	lm
Module Efficiency		144		lm/W
Correlated Color Temperature (CCT)		4000		K
Color Coordinates (CIEx, CIEy)		(0.382, 0.380)		–
Color Consistency			3	SDCM
CRI	80	82		–

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

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



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
80	89	96	79	80	85	86	63	63	74	77	58	82	98	

# Fortimo SLM 1203 L09 1619 G6

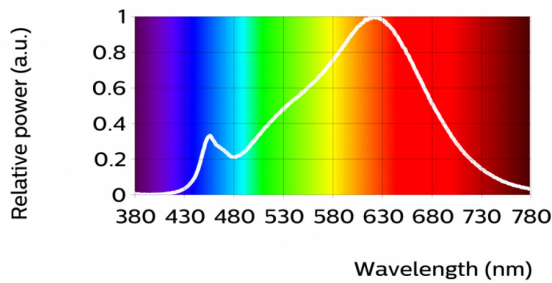
## Optical Characteristics – Table per CCT

### Fortimo SLM C 927 1203 L09 1619 G6

Parameter	Min	Typ	Max	Unit
Luminous Flux	1020	1140	1250	lm
Module Efficiency		110		lm/W
Correlated Color Temperature (CCT)		2700		K
Color Coordinates (CIEx, CIEy)		(0.458, 0.410)		–
Color Consistency			3	SDCM
CRI	90	92		–

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

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



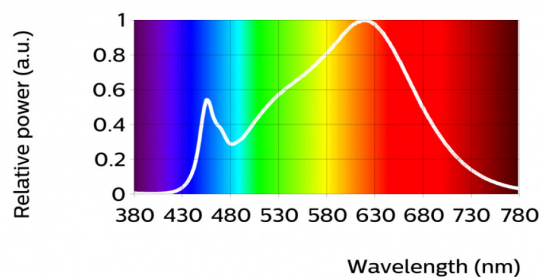
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
92	96	99	91	91	96	91	79	79	90	91	81	93	99	

### Fortimo SLM C 930 1203 L09 1619 G6

Parameter	Min	Typ	Max	Unit
Luminous Flux	1060	1170	1290	lm
Module Efficiency		114		lm/W
Correlated Color Temperature (CCT)		3000		K
Color Coordinates (CIEx, CIEy)		(0.434, 0.403)		–
Color Consistency			3	SDCM
CRI	90	92		–

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

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

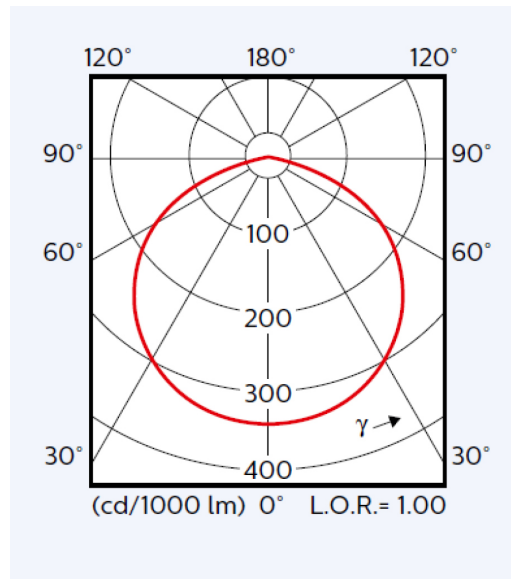


R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93	97	99	91	92	96	91	81	81	92	91	77	94	99	

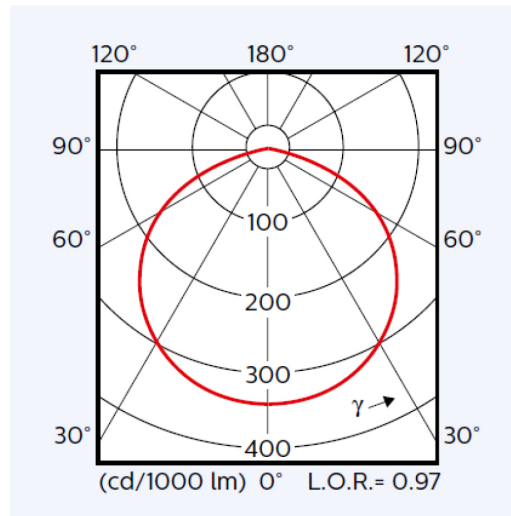
# Fortimo SLM 1203 L09 1619 G6

## Beam Shape

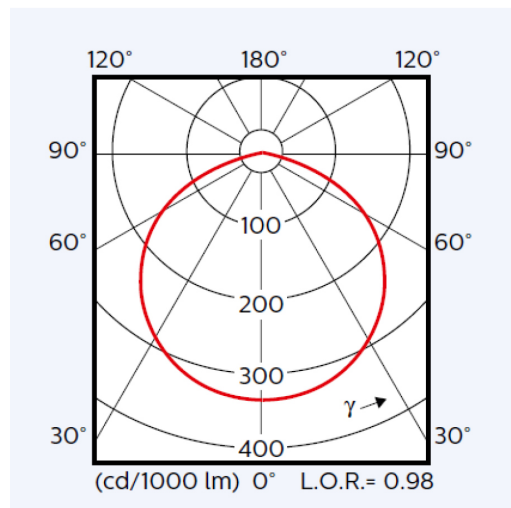
Bare CoB



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



CoB with a poke-in holder



# Fortimo SLM 1203 L09 1619 G6

Fortimo SLM C 827 1203 L09 1619 G6

Fortimo SLM C 830 1203 L09 1619 G6

Fortimo SLM C 835 1203 L09 1619 G6

Fortimo SLM C 840 1203 L09 1619 G6

Parameter	Min	Typ	Max	Unit
Forward Voltage		34.3	36.8	V
Power Consumption		10.3	11.0	W
Thermal Power		6.1		W

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

Fortimo SLM C 927 1203 L09 1619 G6

Fortimo SLM C 930 1203 L09 1619 G6

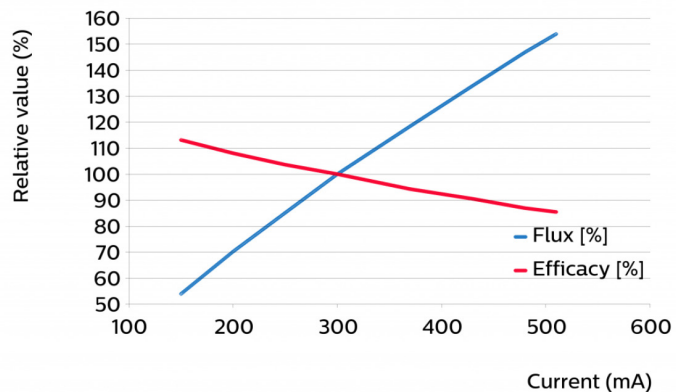
Parameter	Min	Typ	Max	Unit
Forward Voltage		34.3	36.8	V
Power Consumption		10.3	11.0	W
Thermal Power		6.5		W

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

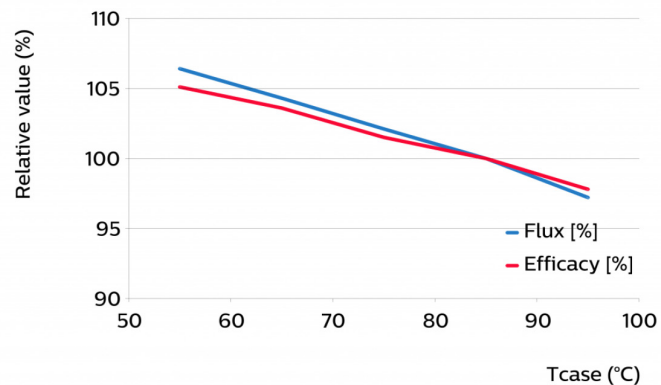
## Tuning Information

Flux and efficacy vs. current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
150	54	113
200	70	108
250	85	104
300	100	100
370	118	94
430	134	91
480	147	87
510	154	85



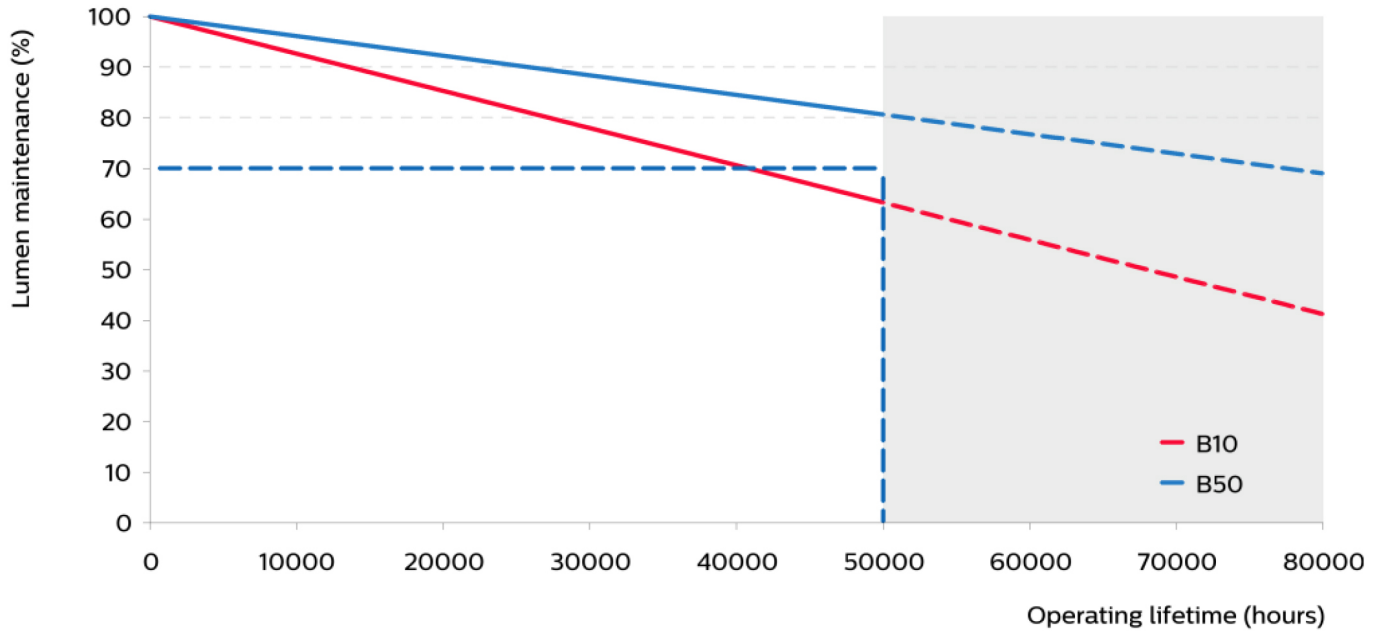
I [mA]	Flux [%]	Efficacy [%]
55	106	105
65	104	104
75	102	102
85	100	100
95	97	98



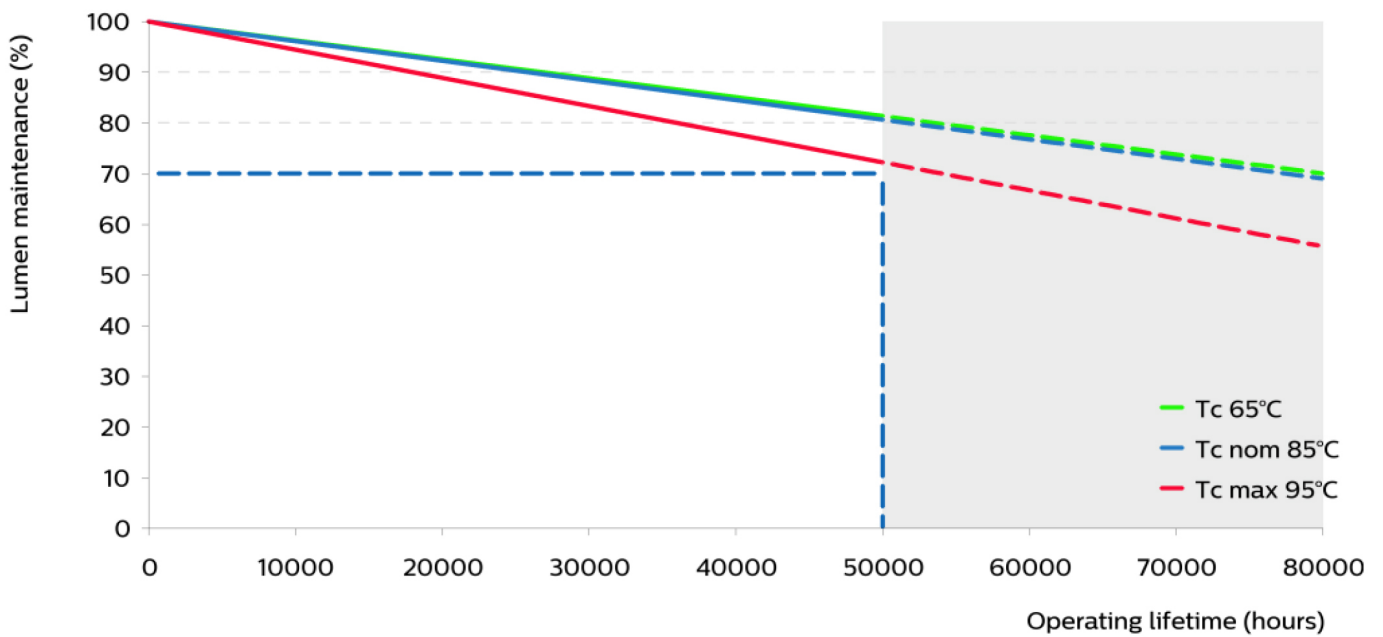
# Fortimo SLM 1203 L09 1619 G6

## Lumen Maintenance

Lumen maintenance at I-life and Tc-life conditions



Lumen maintenance for B50 at current I-life conditions





# Fortimo SLM 1203 L09 1619 G6

## Mechanical Characteristics

Fortimo SLM C 827 1203 L09 1619 G6

Fortimo SLM C 830 1203 L09 1619 G6

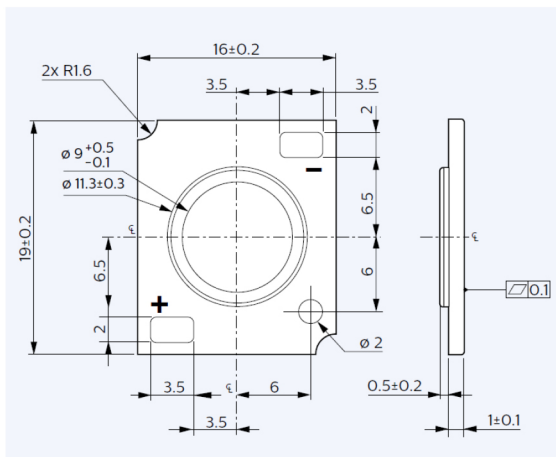
Fortimo SLM C 835 1203 L09 1619 G6

Fortimo SLM C 840 1203 L09 1619 G6

Fortimo SLM C 927 1203 L09 1619 G6

Fortimo SLM C 930 1203 L09 1619 G6

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



## Absolute Ratings

Parameter	Min	Typ	Max	Unit
Current Through the LED Module (I-max)			510	mA
Case Temperature (Tc-max)			95	°C
Power at Rated Vf-max and I-max			19.8	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 1203 L09 1619 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)

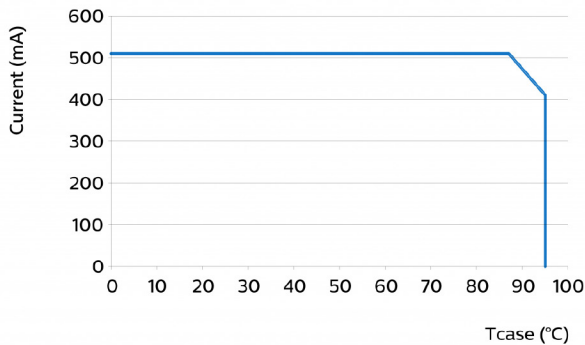
Relevant clauses of EN 62471:2008 (With IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)

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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