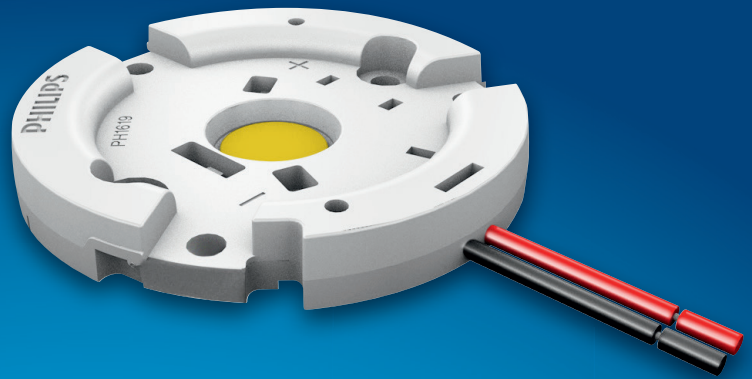


PHILIPS

Fortimo

LED system

SLM Gen4 1100 lm L9



Datasheet

Experience **bright** **and vivid** colors

Fortimo LED SLM 1100 lm L9

The Fortimo LED SLM Gen4 is a next generation solution for spotlight and mini-down-light applications. It is a product in line with the Fortimo brand promise of light quality and a smart system. We provide you with a system proposition ranging from 1100 lm to 4500 lm in preset outputs, with the flexibility to tune as per your needs.



*Measurements showing compliancy to Zhaga book 3 version 1.2 have been done on the 3000 lm L15 module with the standard holder.

October 2014

This module is available in the following options. It is possible to combine these with any of the drivers as described in the design-in guide available at www.Philips.com/Technology. The nominal operating current for this module has been selected as 300 mA. Apart from this value, the module can be operated at different currents. A list of possible Rsets is provided below. More information about such tuning can be found further on in the document.

Commercial product name	EOC	12NC
Standard with pre-tinned cables (60 cm)		
Fortimo LED SLM 1100lm 827 L9 G4	8718291 78313800	9290 009 01206
Fortimo LED SLM 1100lm 830 L9 G4	8718291 78315200	9290 009 01306
Fortimo LED SLM 1100lm 840 L9 G4	8718291 78317600	9290 009 01406
Poke-in (PI) version with no pre-connected wires		
Fortimo LED SLM 1100lm 827 PI L9 G4	8718696 43242600	9290 009 35106
Fortimo LED SLM 1100lm 830 PI L9 G4	8718696 43244000	9290 009 35206
Fortimo LED SLM 1100lm 840 PI L9 G4	8718696 43246400	9290 009 35306

Associated Rsets

Commercial product name	EOC	12NC	Value (Ω)	Type
Fortimo LED Rset 300mA	8718696 40193400	9290 009 12506	560	Push-in
Fortimo LED Rset 300mAconnector	8718696 40195800	9290 009 12606	560	JST

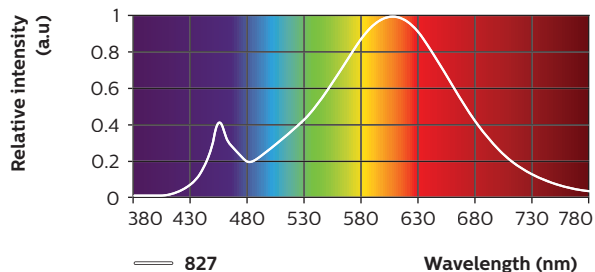
Optical characteristics - table per CCT

Fortimo LED SLM 1100 lm L9 827

Parameter	Min	Typ	Max	Unit
Luminous Flux	920	1030	1140	lm
Module Efficiency		92		lm/W
Correlated Colour Temperature		2700		K
Colour Coordinates		(0.458, 0.410)		-
Colour Consistency		3		SDCM
CRI		80		-
Radiation Angle		115		deg
Thermal Power			8.6	W
Energy efficiency label		A+		-

Note: Specifications stated at $T_c \text{ nom} = 85^\circ\text{C}$ and $I \text{ nom} = 300 \text{ mA}$

Ri	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82	80	91	96	77	79	88	83	60	14	79	74	72	82	98	74

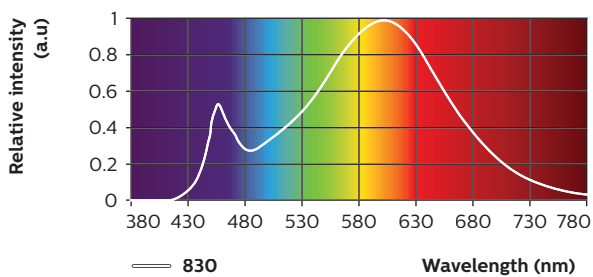


Fortimo LED SLM 1100 lm L9 830

Parameter	Min	Typ	Max	Unit
Luminous Flux	990	1100	1210	lm
Module Efficiency		98		lm/W
Correlated Colour Temperature		3000		K
Colour Coordinates		(0.434, 0.403)		-
Colour Consistency		3		SDCM
CRI		80		-
Radiation Angle		115		deg
Thermal Power			8.4	W
Energy efficiency label		A+		-

Note: Specifications stated at Tc nom = 85 °C and I nom = 300 mA

Ri	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82	80	92	95	76	79	89	83	60	12	81	72	68	83	98	74

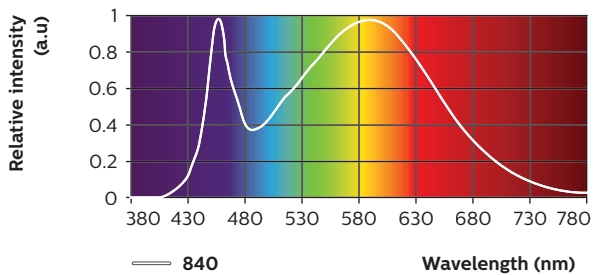


Fortimo LED SLM 1100 lm L9 840

Parameter	Min	Typ	Max	Unit
Luminous Flux	1050	1170	1290	lm
Module Efficiency		104		lm/W
Correlated Colour Temperature		4000		K
Colour Coordinates		(0.382, 0.380)		-
Colour Consistency		3		SDCM
CRI		80		-
Radiation Angle		115		deg
Thermal Power			8.3	W
Energy efficiency label		A+		-

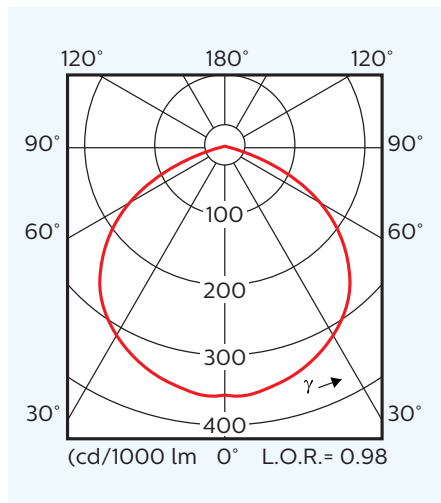
Note: Specifications stated at Tc nom = 85 °C and I nom = 300 mA

Ri	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
81	79	90	96	76	78	84	85	63	7	74	72	58	82	98	73



Beam shape

The Philips Fortimo LED SLM generates a Lambertian beam shape, which is a pragmatic starting point for OEMs wishing to design secondary optics.



Electrical characteristics

Parameter	Typ	Unit
Nominal current	300	mA
Forward voltage	37.3	V
Power consumption	11	W

Note: Specifications stated at $T_c \text{ nom} = 85^\circ\text{C}$ and $I \text{ nom} = 300 \text{ mA}$

Lifetime

Parameter	Min	Typ	Max	Unit
Lumen maintenance B50L70	50,000			hrs
$\Delta u'v'$ at 6,000 hours			0.002	-
Critical failures (10%)	50,000			hrs

Note: Specifications stated at $T_c \text{ nom} = 85^\circ\text{C}$ and $I \text{ nom} = 300 \text{ mA}$

Parameter	Nominal *	Max**
T_c [$^\circ\text{C}$]	85	95
Current [mA]	300	340

* Nominal value at which performance is specified.

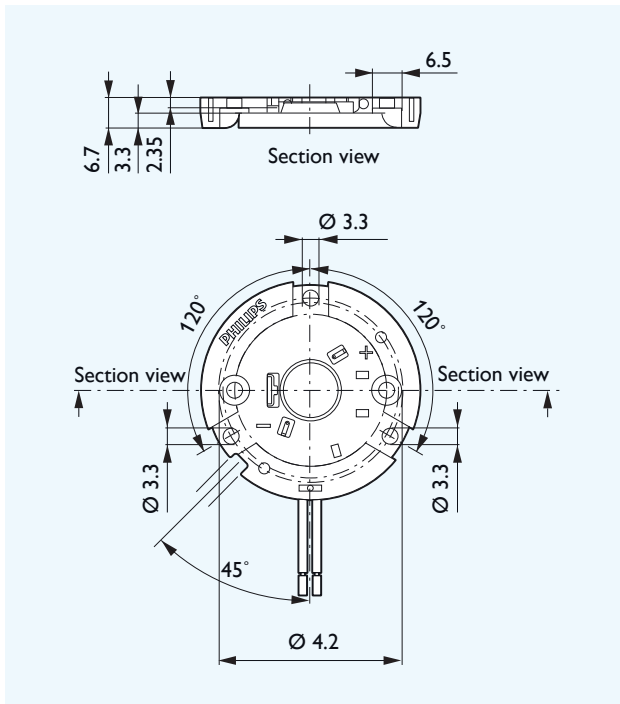
** Maximum value for safety (at this temperature, warranty need not apply)

Note: $T_c \text{ life} \leq 85^\circ\text{C}$ (measured at 25°C ambient temperature)

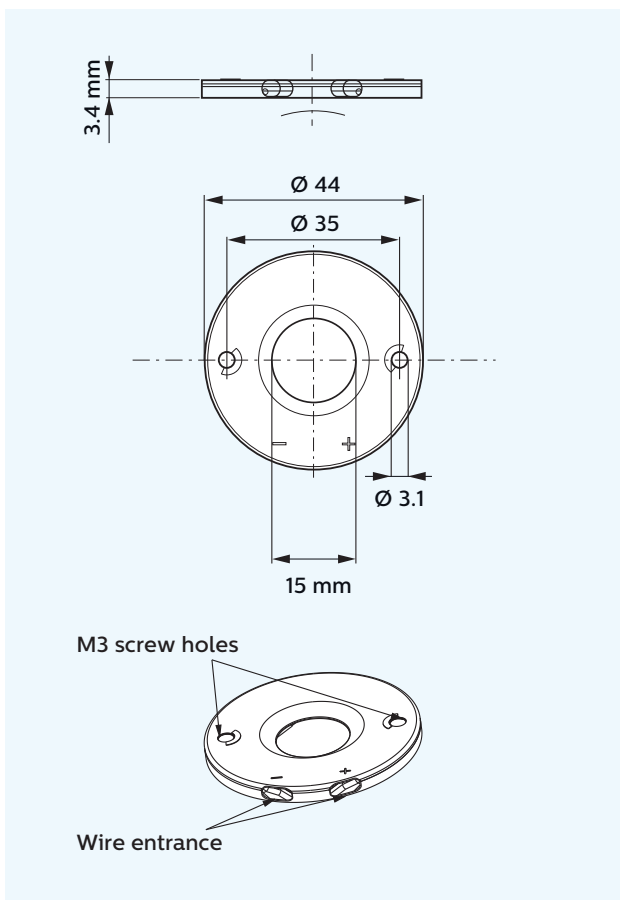
Abs max ratings

Parameter	Min	Typ	Max	Unit
Current I_{max}			340	mA
Case temperature $T_c \text{ max}$			95	$^\circ\text{C}$
ESD Human Body Model (HBM) Class 3A JESD22-A114-E			8	kV
ESD Machine Model (MM) Class B JESD22-A115-B			400	kV
Operating ambient temperature	-20		40	$^\circ\text{C}$
Storage temperature	-40		80	$^\circ\text{C}$

Standard version



Poke-in version



Application information

Compliance and approval

IEC / EN 62031, IEC / EN 62471

Environmental

RoHS / REACH

Application information

Zhaga	1100 lm L9 827	1100 lm L9 830	1100 lm L9 840
Luminous Flux Category	C010	C010	C010
LES diameter [mm]	9	9	9
LES category	LES9	LES9	LES9
Rotational Symmetry S	0.9	0.9	0.9
Uniformity Parameter U	100%	100%	100%
Correlated Color temperature [K]	2700	3000	4000
Color rendering index	>80	>80	>80

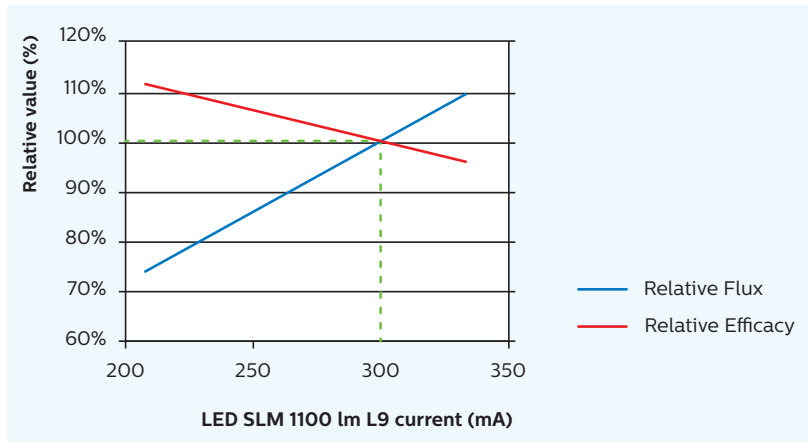
Note: Measurements showing compliancy to Zhaga book 3 version 1.2 have been done on the 3000 lm L15 module with the standard holder.

IP rating	No IP rating
Overheating protection	No protection

Tuning information

Flux and efficacy versus current (at nominal temperature)

1100 lm L9 827



I [A]	Flux (lm)	Efficacy (lm/W)
207	73.4%	111.2%
270	91.8%	103.1%
292	98.0%	101.0%
300	100.0%	100.0%
313	103.6%	98.0%
323	106.2%	96.9%
335	109.5%	95.9%

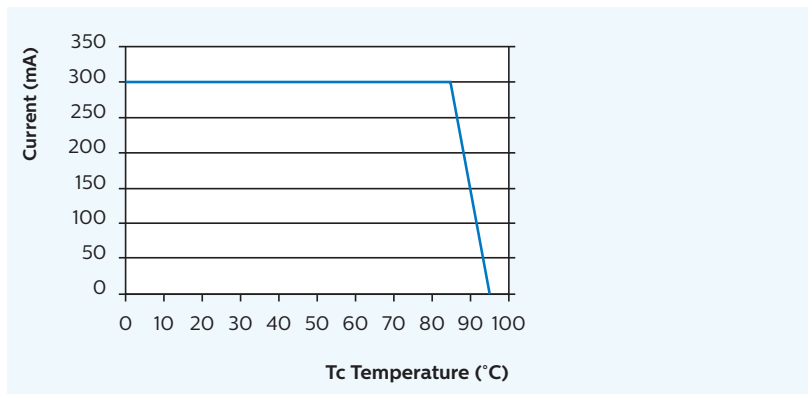
The highlighted values are available as Rsets with the system.

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

Tc (°C)	Flux (lm)	Efficacy (lm/W)
65	103.6%	103.1%
75	101.8%	101.1%
85	100.0%	100.0%

Please ensure that after tuning, your operating point is still covered by warranty or not.

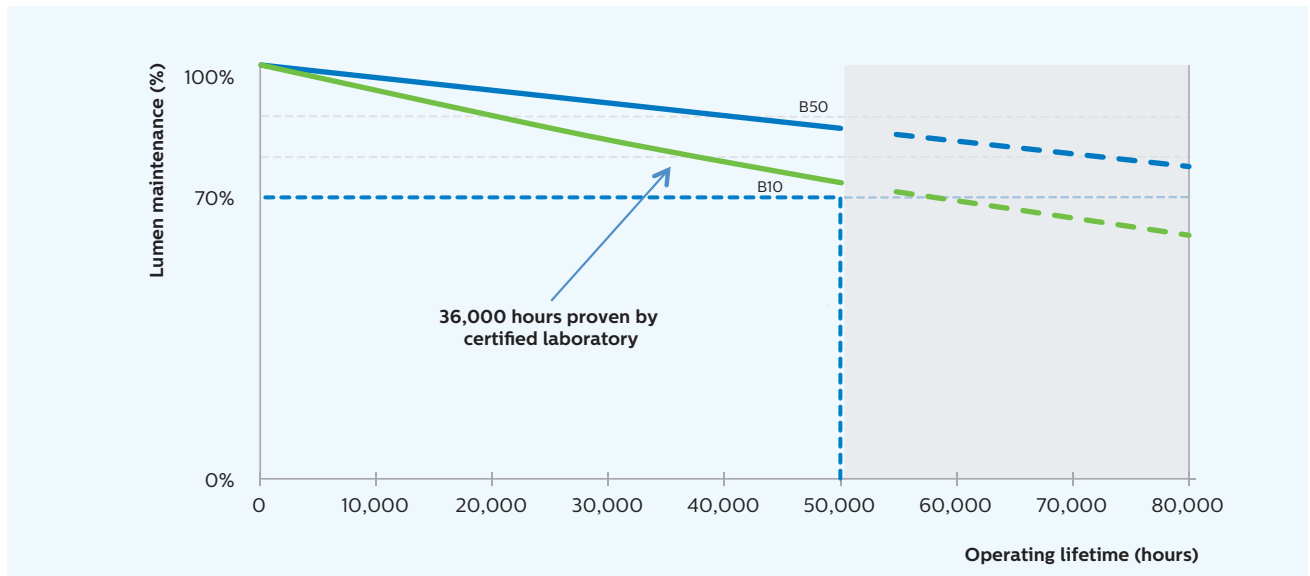
Warranty Window 1100 lm L9



Lumen maintenance

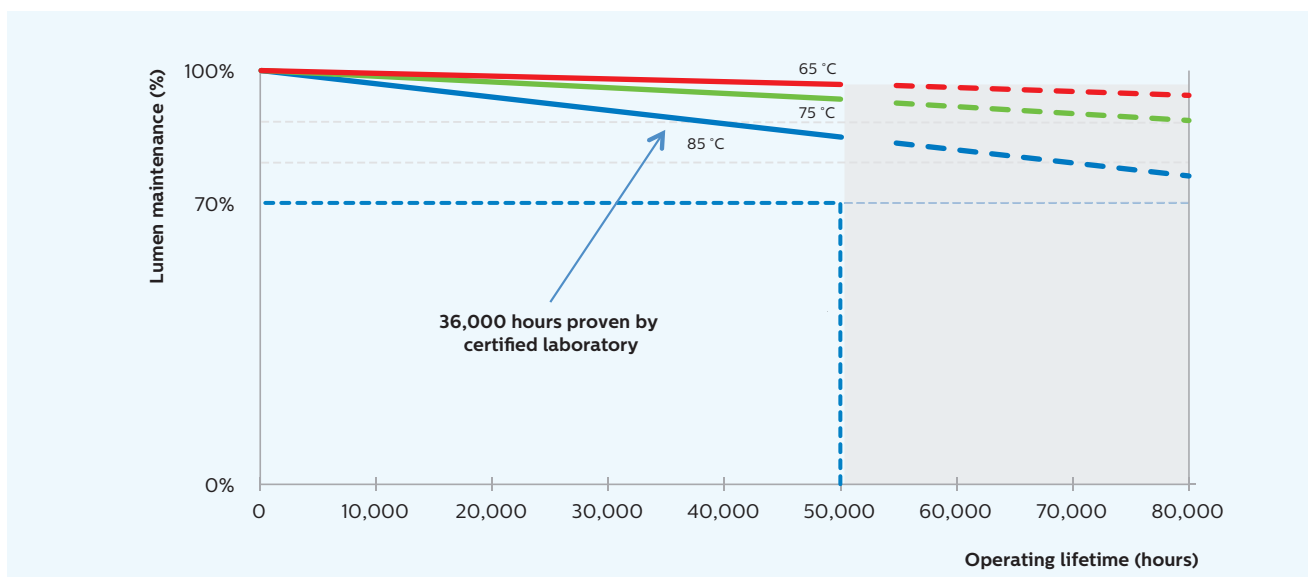
Lumen maintenance: at nominal conditions

Fortimo LED SLM 1100 lm L9



Lumen maintenance (B50): at nominal current

Fortimo LED SLM 1100 lm L9





© 2014 Royal Philips N.V. All rights reserved. Philips reserves the right to make changes in specifications and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences resulting from the use of this publication.

www.philips.com/technology
www.philips.com/fortimo
www.philips.com/xitanium