

**PHILIPS**

CertaFlux

LED system

DLM EaseSelect  
3000 lm Gen1



## Datasheet

# Cost effective integration for downlight applications

### CertaFlux DLM ES 3000 lm Gen1

CertaFlux DLM EaseSelect brings with it good performance in a cost effective driver on board (DoB) solution, delivering a high quality of light with low flicker. Having an integrated driver and the same mechanical footprint as existing DLM solutions (DLM Flex), enables easy and hassle free design-in.

#### Key features and benefits

- Low flicker (<30%)
- Ease of design – in
- Cost-effective solution
- System efficacy of up to 97 lm/W
- Excellent color consistency of 3 SDCM
- Full portfolio with all typical downlight lumen packages and CCTs
- 3 years system warranty

December 2015

This product is available in the following options. Please note that the ordering code includes the housing. It is possible to use these as a module (PCB + housing) only.

## Ordering data

Commercial product name	12NC	EOC
Certaflux DLM ES 3000/830 G1	9290 009 98480	6947939 121083 00
Certaflux DLM ES 3000/840 G1	9290 009 98580	6947939 121106 00
Certaflux DLM ES 3000/865 G1*	9290 009 98680	6947939 121120 00

\* available in APR, please contact your local sales representative if availability in EU is needed

## Drive currents and case temperatures

Parameter	Nominal*	Life**	Max***	Unit
Tc (case temperature at Tc point)	70	70	85	°C

\* Nominal value at which typical performance is specified.

\*\* Value at which lifetime is specified.

\*\*\* Maximum value for safe operation; do not operate above this value.

## Electrical characteristics

Parameter	Min	Typ	Max	Unit
Nominal Input Voltage		220-240		Vac
Nominal input current		0.139		A
Nominal Input Frequency		50-60		Hz
Power @230 V AC 50 Hz		31		W
Power Factor @ 230 V AC 50 Hz		> 0.9		-
THD @ 220-240 V			29	%
Dimming		None		-

Specifications stated at Tc-nom and preset I.

## Absolute maximum ratings

Parameter	Min	Typ	Max	Unit
Ambient temperature	-20	25	35	°C
Ambient Relative Humidity (non-condensing)	0		90	%
Storage temperature	-40		65	°C
Storage Relative Humidity (non-condensing)	5		95	%

## Optical characteristics - table per color (CCT)

### CertaFlux DLM ES 3000 lm 830

Parameter	Min	Typ	Max	Unit
Luminous Flux		2850		lm
Efficacy		92		lm/W
Correlated color temperature (CCT) range		3000		K
CRI	80			-
Energy Efficiency Label		A+		-
Radiation Angle		90		deg

Color consistency of 3 SDCM, averaged over the module.

Tolerance for flux data is -10% - +20%. Measurement tolerance is ±5%.  
Tolerance for efficacy data is dependent on the above mentioned tolerances.  
Measurement tolerance for CRI is 1.5.

### CertaFlux DLM ES 3000 lm 840

Parameter	Min	Typ	Max	Unit
Luminous Flux		3000		lm
Efficacy		97		lm/W
Correlated color temperature (CCT) range		4000		K
CRI	80			-
Energy Efficiency Label		A+		-
Radiation Angle		90		deg

Color consistency of 3 SDCM, averaged over the module.

Tolerance for flux data is -10% - +20%. Measurement tolerance is ±5%.  
Tolerance for efficacy data is dependent on the above mentioned tolerances.  
Measurement tolerance for CRI is 1.5.

### CertaFlux DLM ES 3000 lm 865

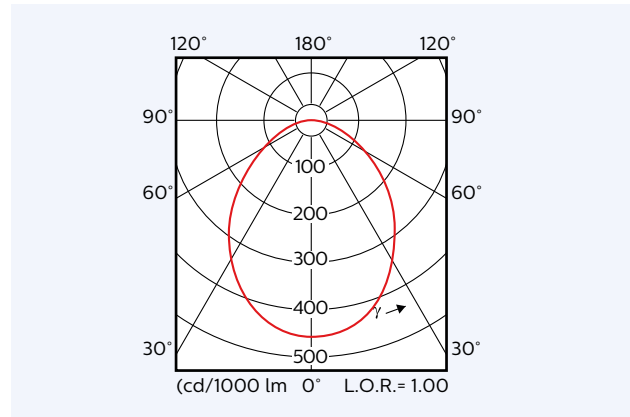
Parameter	Min	Typ	Max	Unit
Luminous Flux		3000		lm
Efficacy		97		lm/W
Correlated color temperature (CCT) range		6500		K
CRI	80			-
Energy Efficiency Label		A+		-
Radiation Angle		90		deg

Color consistency of 3 SDCM, averaged over the module.

Tolerance for flux data is -10% - +20%. Measurement tolerance is ±5%.  
Tolerance for efficacy data is dependent on the above mentioned tolerances.  
Measurement tolerance for CRI is 1.5.

## Beam shape

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

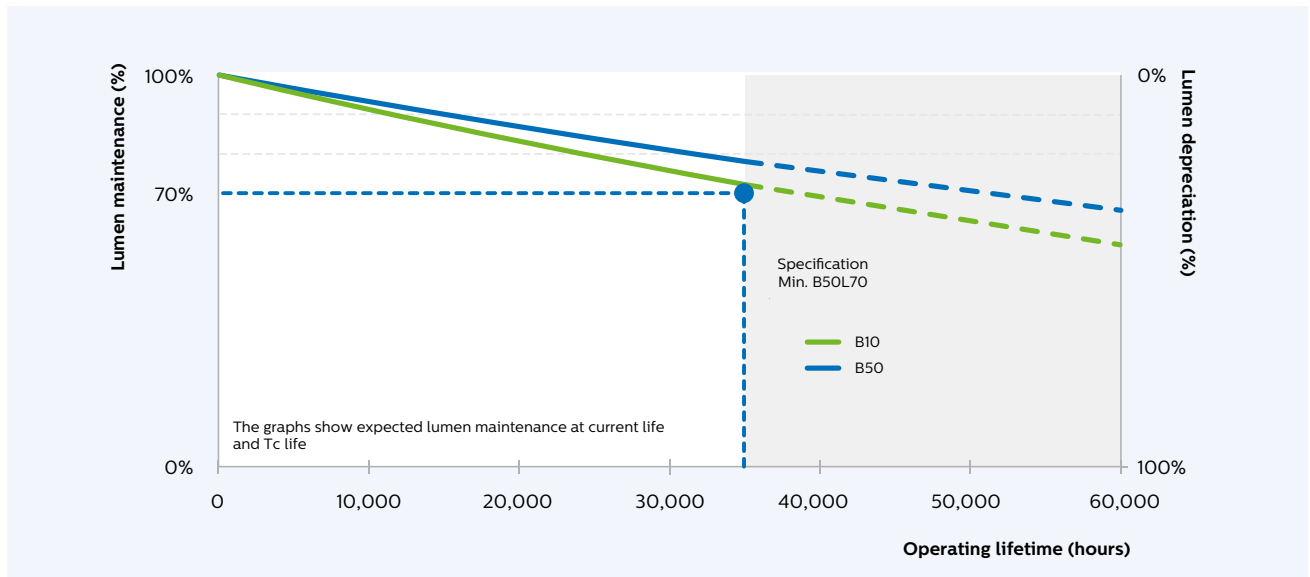


## Lifetime

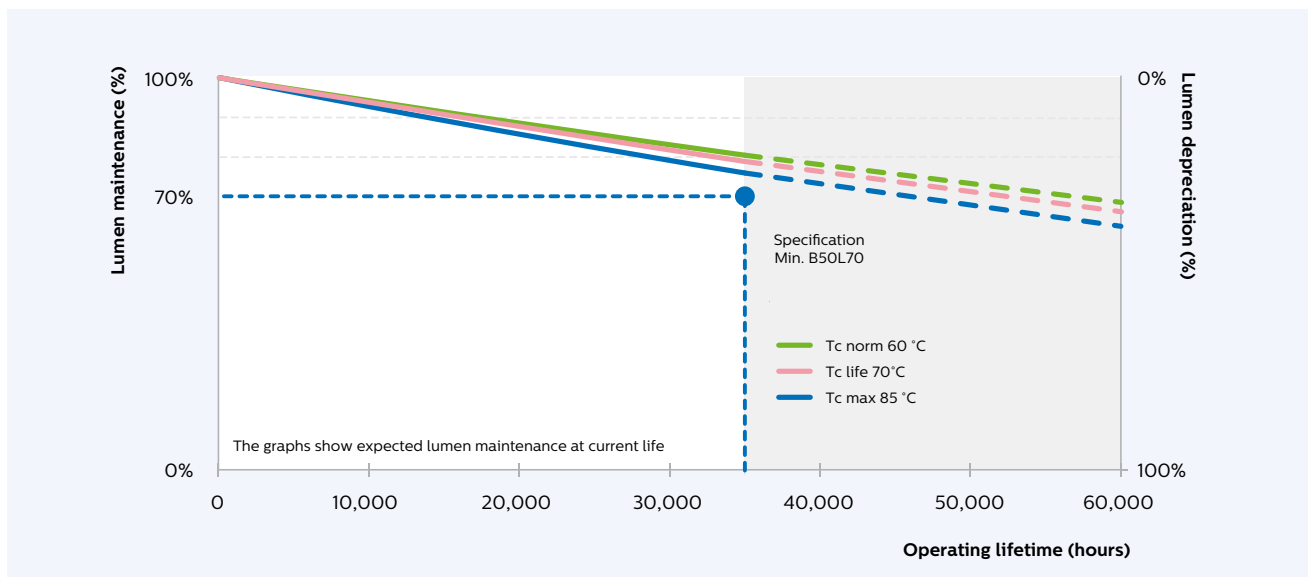
Lumen depreciation in operating hours	L70B50 @ 35 Khrs @ Tc life=70 °C
Lifetime	C10 @ 35 khrs @ Tc life=70 °C
Average operating time per year for warranty	4000 hours
Average number of on/off switching cycles over life time for warranty	3 cycles/day

## Lumen maintenance

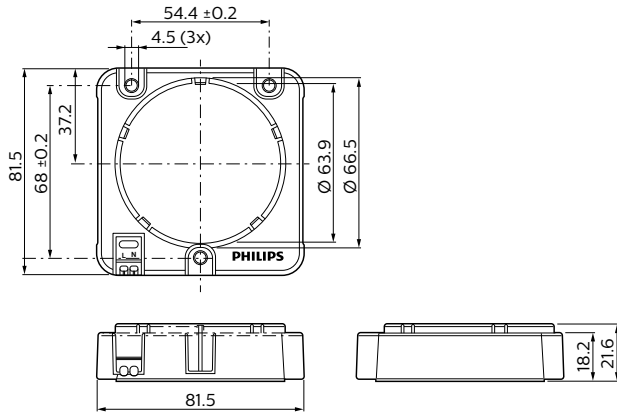
### Lumen maintenance at Tc life



### Lumen maintenance B50



## Mechanical Characteristics



## Wiring

Specification item	Value	Unit
Input wire cross-section	0.25-0.75	mm <sup>2</sup>
	18-24	AWG
Input wire strip length	6-7	mm
Strain Relief	To be handled at luminaire level	

## Application information

### Compliance and approval

Approval marks: CE/ENEC

IEC/EN 62031, IEC/EN 62471, IEC/EN 61347-2-13, IEC/EN 62384, IEC 61000-3-3 :2008, IEC 61547 :2009

### Environmental

ROHS, REACH

IP Rating	20 for Tc < 85 °C
Overheating protection	No Protection
Luminaire class	IEC Class I

