

PHILIPS

Fortimo

LED

Fortimo FastFlex IP High Bay



Datasheet

Fortimo FastFlex IP High Bay

Fortimo FastFlex IP High Bay is an integrated module solution with IP66 protection, excellent optical and heat management that offers high energy efficacy (greater than 150 lumens per watt) and high quality of light. Fortimo FastFlex IP High Bay products are designed to enable optimum LED lighting in High Bay applications. A range of compatible IP67 Xitanium drivers complement these modules to further differentiate your lighting solution on efficacy, lifetime and robustness under extreme temperature conditions.

Key features and benefits

- IP66 integrated heat sink and optics
- High energy efficacy, greater than 150 lm/W
- 6000 lumen-level modules
- 3 Color temperatures: 4000K, 5700K
- Dedicated light distribution for High Bay
- CRI 70
- Enables complete IP66 system with IP driver
- Easy to design-in with practical optical solutions for High Bay lighting.
- Easy to install and maintain - CSA compliant, modular solution
- 50K hours at B50L70 at Tc 75°C
- 5 years system warranty

September 2021



Ordering data

Commercial product name	12NC	Box quantity
Fortimo FastFlex IP 6KLM 840 HB-60	9290 014 28980	12
Fortimo FastFlex IP 6KLM 857 HB-60	9290 014 29180	12
Fortimo FastFlex IP 6KLM 840 HB-90	9290 014 29080	12
Fortimo FastFlex IP 6KLM 857 HB-90	9290 014 29280	12

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex IP High Bay	700	700	1080	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	50	75	90	°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

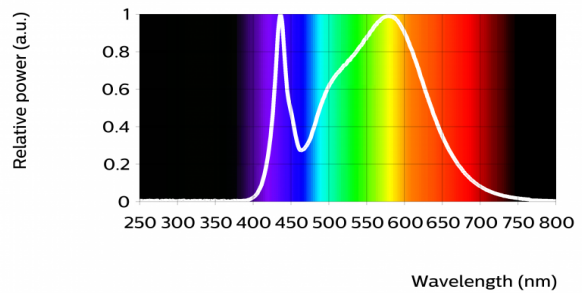
Optical characteristics - table per color (CCT)

Fortimo FastFlex IP 6KLM 840 HB-60
 Fortimo FastFlex IP 6KLM 840 HB-90


Parameter	Min	Typ	Max	Unit
Luminous flux	5490	6100	7320	lm
Module efficacy	133	148		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.387, 0.386)		-
Color consistency			5	SDCM
CRI	80			
Photobiological safety			RG2	
Ethr			502	lux

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 560mA	Tc 25 °C	5164	160
	Tc-nom 50 °C	5000	156
	Tc-max 90 °C	4623	146
I-nom 700mA	Tc 25 °C	6306	152
	Tc-nom 50 °C	6100	148
	Tc-max 90 °C	5623	138
I-life 700mA	Tc 25 °C	6306	152
	Tc-nom 50 °C	6100	148
	Tc-max 90 °C	5623	138

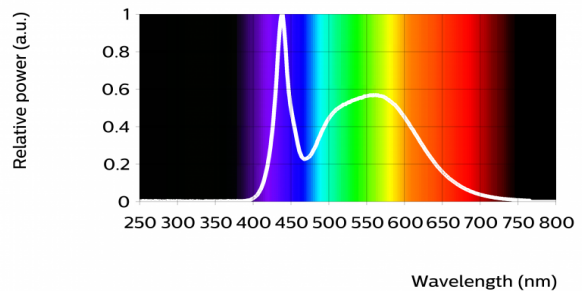


Fortimo FastFlex IP 6KLM 857 HB-60
 Fortimo FastFlex IP 6KLM 857 HB-90

Parameter	Min	Typ	Max	Unit
Luminous flux	5490	6100	7320	lm
Module efficacy	133	148		lm/W
Correlated color temperature (CCT)		5700		K
Color coordinates (CIEx, CIEy)		(0.335, 0.352)		-
Color consistency			5	SDCM
CRI	80			
Photobiological safety			RG2	
Ethr			502	lux

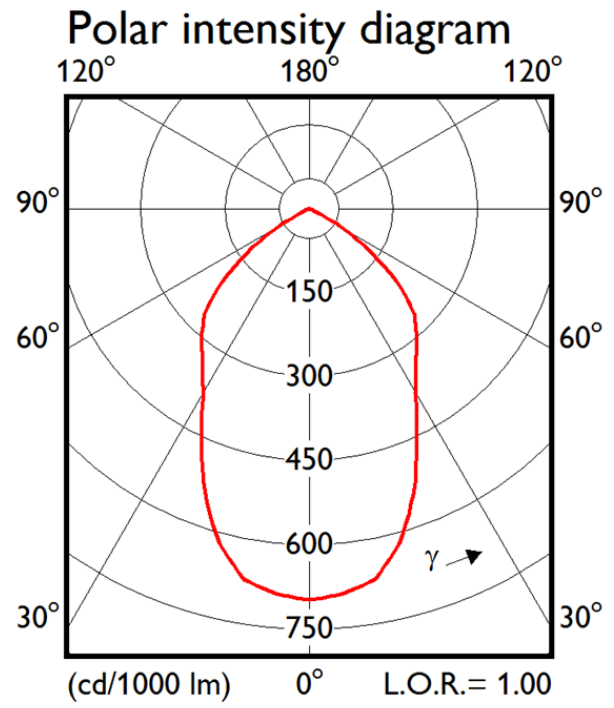
Measurement precision for flux +/- 5%. Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	857	lm	lm/W
80% I-nom 560mA	Tc 25 °C	5164	160
	Tc-nom 50 °C	5000	156
	Tc-max 90 °C	4623	146
I-nom 700mA	Tc 25 °C	6306	152
	Tc-nom 50 °C	6100	148
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I-life 700mA	Tc 25 °C	6306	152
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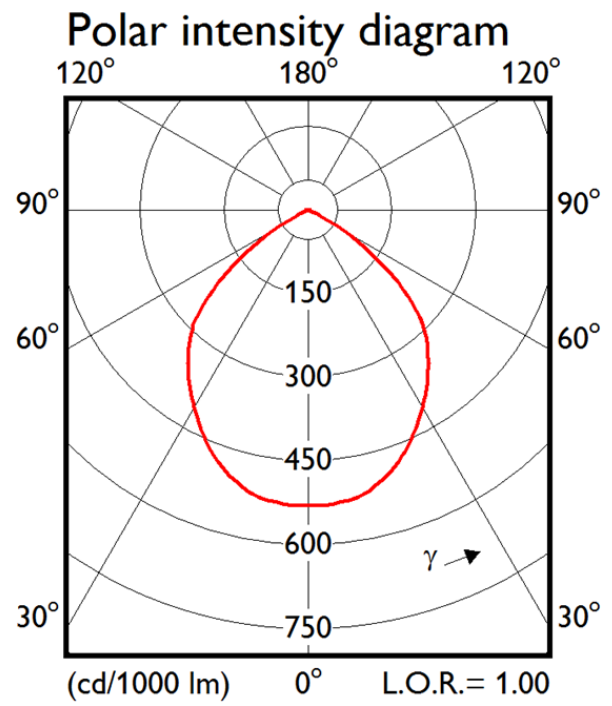


Beam shape

High Bay Light distribution 60D



High Bay Light distribution 90D



Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	58.0	59.0	62.0	V
Power consumption	40.6	41.3	43.4	W = kWh/1000h
Thermal power		21.9		W
Number of modules in series per chain			5	
Number of modules in parallel			1	

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

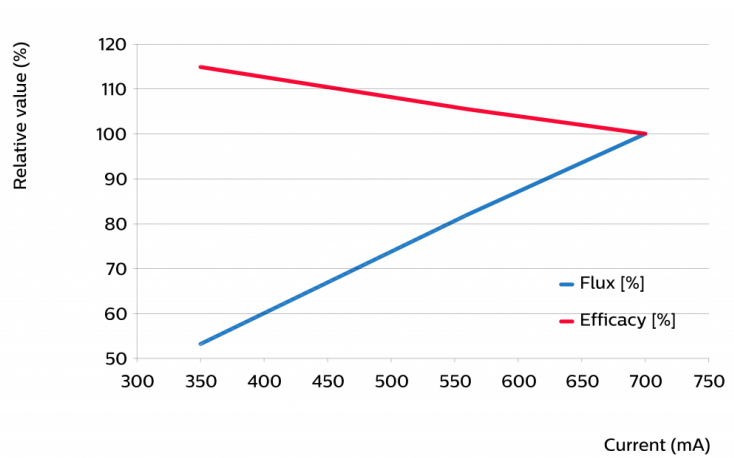
Specifications stated at Tc-nom and I-nom

Fortimo FastFlex IP modules have a built-in 4KV surge protection circuit.

Tuning information

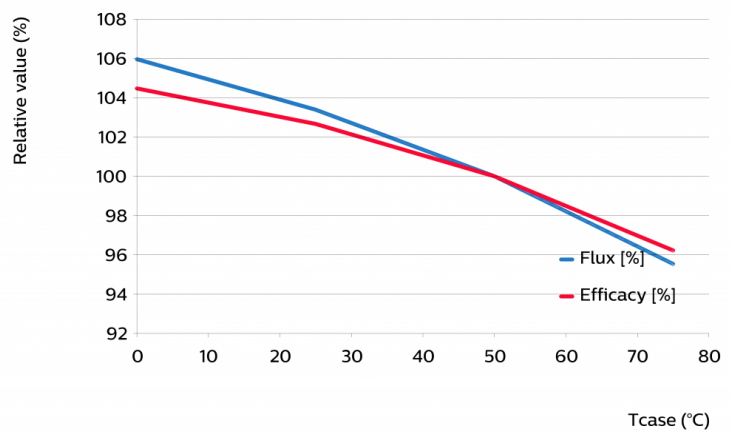
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
700	100	100
700	100	100
700	100	100
560	82	105
350	53	115



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

Tc [°C]	Flux [%]	Efficacy [%]
75	96	96
50	100	100
25	103	103
0	106	104

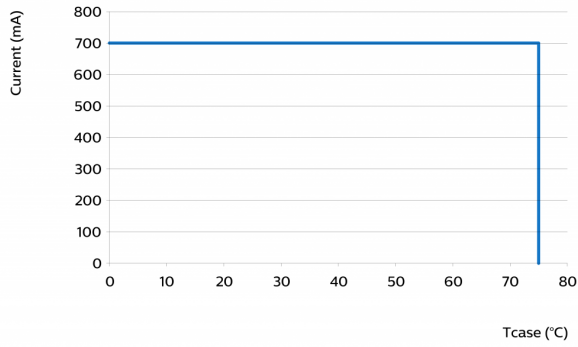


Lifetime

Parameter	Value	Unit
C10 at Tc life	50000	hours

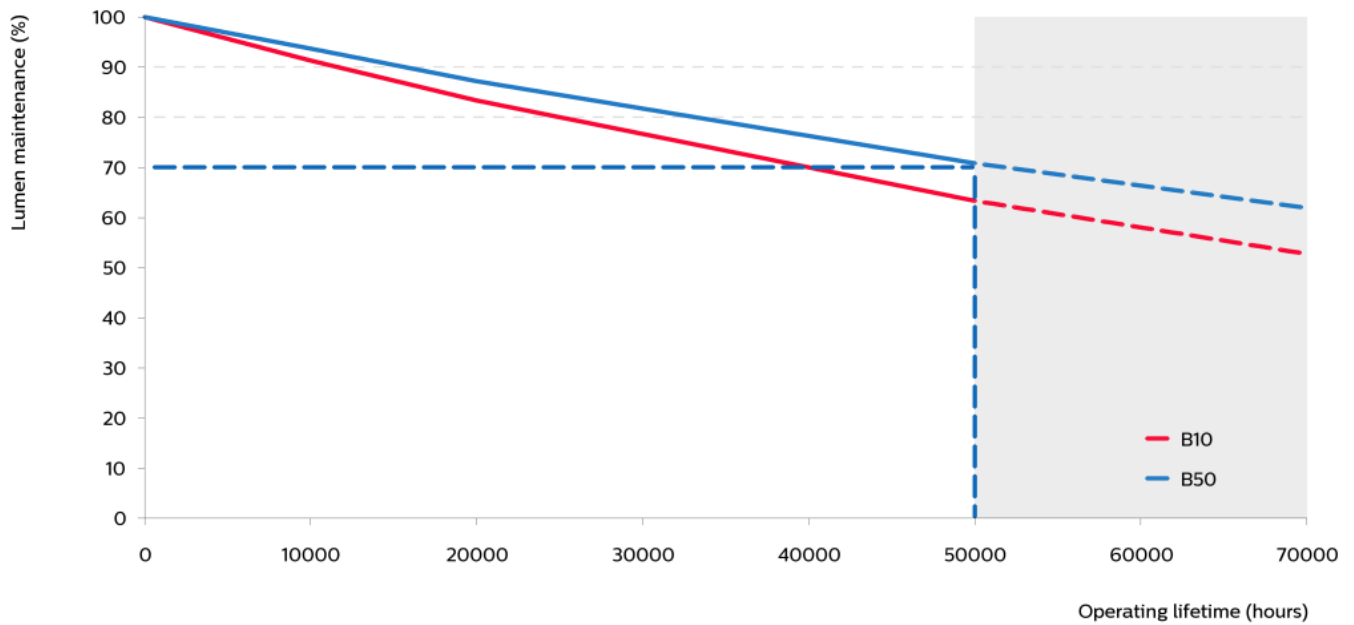
L70B50 50000 hours

Performance Window



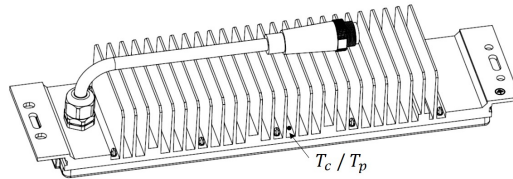
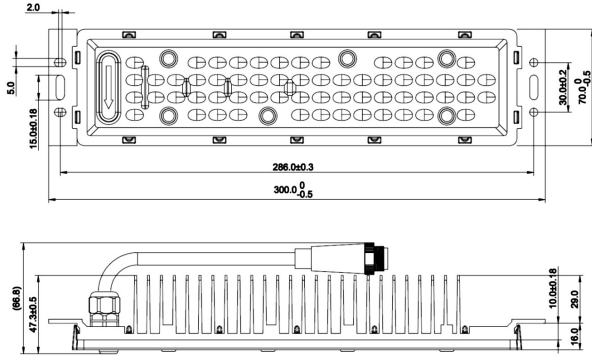
Lumen maintenance graphs

Lumen maintenance at I-life and Tc-life conditions



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	299.5	300	300	mm
Width	69.5	70	70	mm
Height without cable	46.8	47.3	47.8	mm
Height with cable		66.8		mm
Product mass		720		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1080	mA
Case temperature (Tc-max)		90	°C
Power at rated Vf-max and I-max		70	W
Working voltage		500	V _{dc}
Ambient temperature	-30	50	°C
Storage temperature	-40	65	°C

Application information

Certificates and Standards

IEC/EN 62031

IEC/TR 62778

IEC 62717

Application

IP rating

IP-rating 66, IK-rating 08

Dimming

Yes



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