PHILIPS

Fortimo

LED

Fortimo FastFlex IP

Datasheet

Fortimo FastFlex IP

Fortimo FastFlex IP Standard 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 Standard products are designed to enable optimum LED lighting in Outdoor - streets and roads - 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: 3000K, 4000K, 5700K
- Dedicated light distributions for Outdoor (street/road)
- CRI 70
- Enables complete IP66 system with IP driver
- Easy to design-in with practical optical solutions for Street and Road 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 730 II-S	9290 014 27780	12
Fortimo FastFlex IP 6KLM 740 II-S	9290 014 28180	12
Fortimo FastFlex IP 6KLM 757 II-S	9290 014 28580	12
Fortimo FastFlex IP 6KLM 730 II-M	9290 014 27880	12
Fortimo FastFlex IP 6KLM 740 II-M	9290 014 28280	12
Fortimo FastFlex IP 6KLM 757 II-M	9290 014 28680	12
Fortimo FastFlex IP 6KLM 730 III-S	9290 014 27980	12
Fortimo FastFlex IP 6KLM 740 III-S	9290 014 28380	12
Fortimo FastFlex IP 6KLM 757 III-S	9290 014 28780	12
Fortimo FastFlex IP 6KLM 730 III-M	9290 014 28080	12
Fortimo FastFlex IP 6KLM 740 III-M	9290 014 28480	12
Fortimo FastFlex IP 6KLM 757 III-M	9290 014 28880	12

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex IP	700	700	1296	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

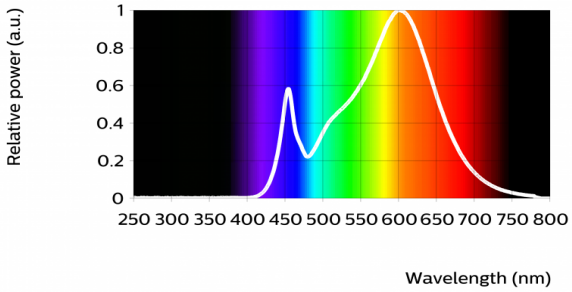
Optical characteristics - table per color (CCT)

Fortimo FastFlex IP 6KLM 730 II-S
Fortimo FastFlex IP 6KLM 730 II-M
Fortimo FastFlex IP 6KLM 730 III-S
Fortimo FastFlex IP 6KLM 730 III-M

Parameter	Min	Typ	Max	Unit
Luminous flux	5310	5900	7080	lm
Module efficacy	129	143		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.437, 0.406)		-
Color consistency			5	SDCM
CRI	70			
Photobiological safety			RG2	
Ethr			502	lux

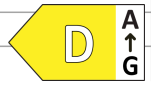
Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	730	lm	lm/W
80% I-nom 560mA	Tc 25 °C	4977	151
	Tc-nom 50 °C	4821	147
	Tc-max 90 °C	4615	142
I-nom 700mA	Tc 25 °C	6097	144
	Tc-nom 50 °C	5900	140
	Tc-max 90 °C	5641	135
I-life 700mA	Tc 25 °C	6097	144
	Tc-nom 50 °C	5900	140
	Tc-max 90 °C	5641	135



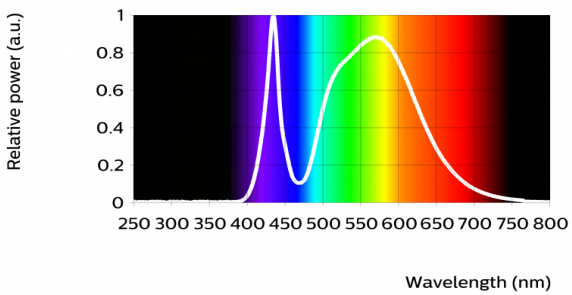
Fortimo FastFlex IP 6KLM 740 II-S
Fortimo FastFlex IP 6KLM 740 II-M
Fortimo FastFlex IP 6KLM 740 III-S
Fortimo FastFlex IP 6KLM 740 III-M

Parameter	Min	Typ	Max	Unit
Luminous flux	5625	6250	7500	lm
Module efficacy	136	151		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.385, 0.383)		-
Color consistency			5	SDCM
CRI	70			
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	740	lm	lm/W
80% I-nom 560mA	Tc 25 °C	5272	160
	Tc-nom 50 °C	5106	156
	Tc-max 90 °C	4889	150
I-nom 700mA	Tc 25 °C	6458	153
	Tc-nom 50 °C	6250	149
	Tc-max 90 °C	5976	143
I-life 700mA	Tc 25 °C	6458	153
	Tc-nom 50 °C	6250	149
	Tc-max 90 °C	5976	143

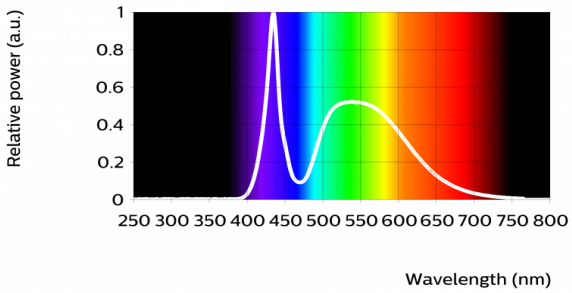


Fortimo FastFlex IP 6KLM 757 II-S
Fortimo FastFlex IP 6KLM 757 II-M
Fortimo FastFlex IP 6KLM 757 III-S
Fortimo FastFlex IP 6KLM 757 III-M

Parameter	Min	Typ	Max	Unit
Luminous flux	5625	6250	7500	lm
Module efficacy	136	151		lm/W
Correlated color temperature (CCT)		5700		K
Color coordinates (CIEx, CIEy)		(0.333, 0.348)		-
Color consistency			5	SDCM
CRI	70			
Photobiological safety			RG2	
Ethr			502	lux

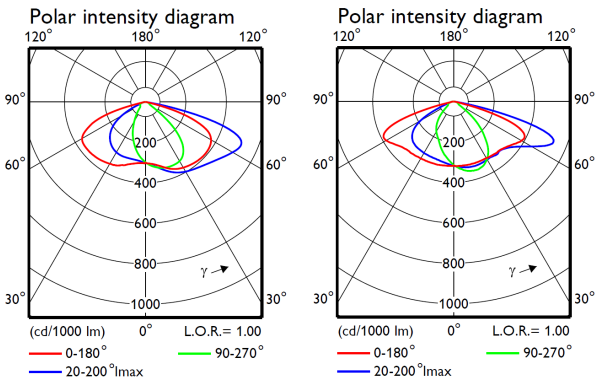
Measurement precision for flux +/- 5%.Measurement precision for efficacy +/- 6%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	757	lm	lm/W
80% I-nom 560mA	Tc 25 °C	5272	160
	Tc-nom 50 °C	5106	156
	Tc-max 90 °C	4889	150
I-nom 700mA	Tc 25 °C	6458	153
	Tc-nom 50 °C	6250	149
	Tc-max 90 °C	5976	143
I-life 700mA	Tc 25 °C	6458	153
	Tc-nom 50 °C	6250	149
	Tc-max 90 °C	5976	143

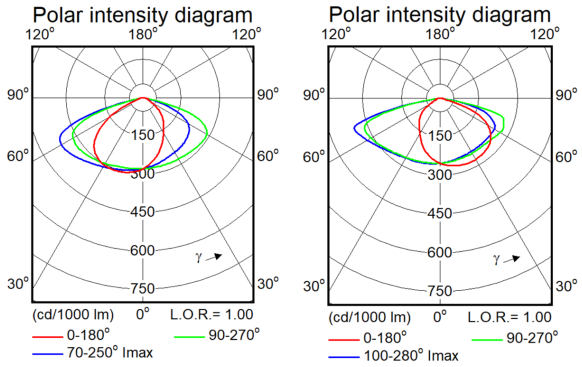


Beam shape

Light distributions of Type II S (left) and M (right)



Light distributions of Type III S (left) and M (right)



Electrical characteristics

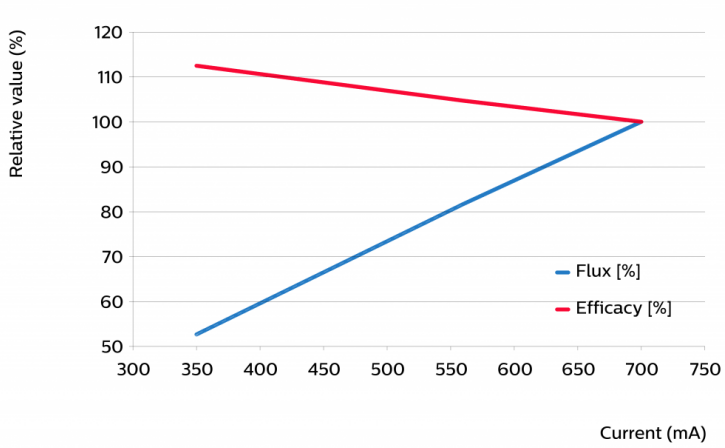
Parameter	Min	Typ	Max	Unit
Forward voltage	58.0	59.0	62.0	V
Power consumption	40.6	41.3	43.4	W = kWh/1000h
Thermal power		21.9		W
Number of modules in series per chain			5	
Number of modules in parallel			1	

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

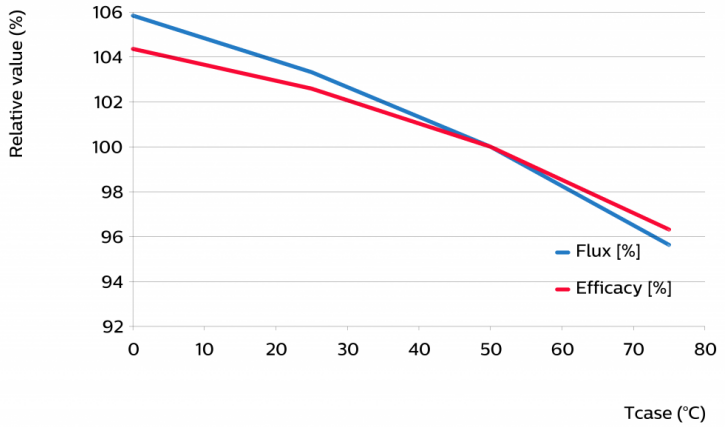
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
700	100	100
700	100	100
700	100	100
560	82	105
350	53	112



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

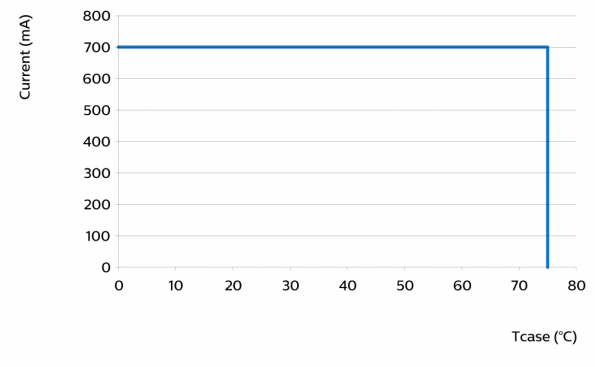


Lifetime

Parameter	Value	Unit
C10 at Tc life	50000	hours

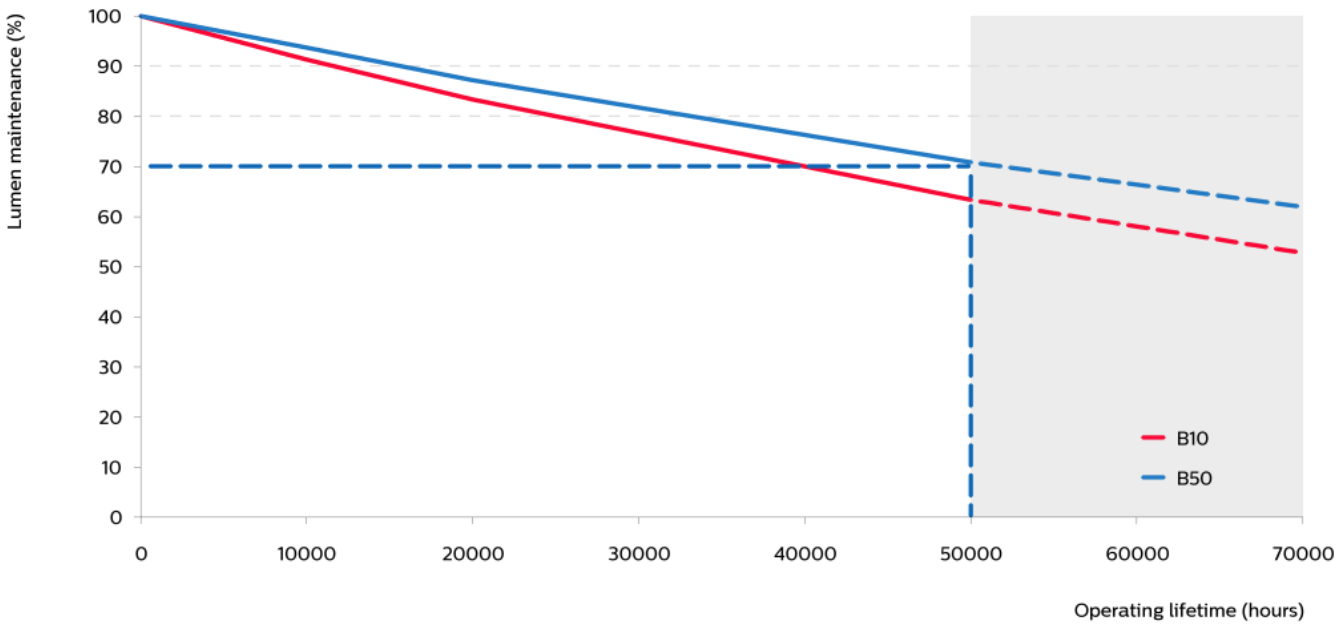
L70B50 50000 hours

Performance Window



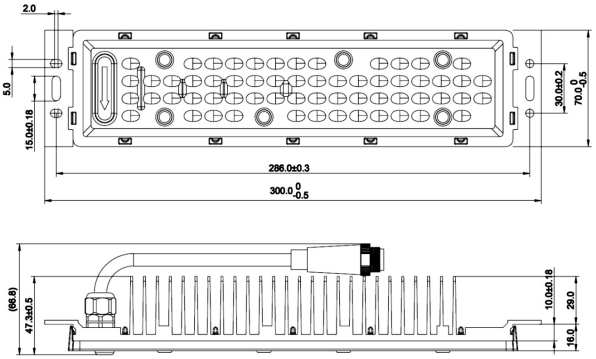
Lumen maintenance graphs

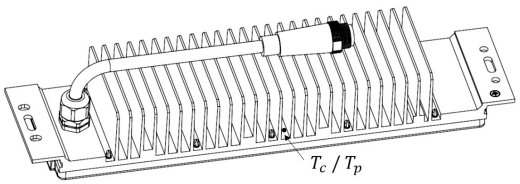
Lumen maintenance at I-life and Tc-life conditions



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)		1296	mA
Case temperature (Tc-max)		90	°C
Power at rated Vf-max and I-max		84	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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