PHILIPS

Fortimo

LED

Fortimo LED Panel
30120

Datasheet

Fortimo LED Panel

The Fortimo LED Panels are designed to light up spaces in office and commercial buildings. With their ultra-slim design they can be installed easily. The Fortimo panels offer an excellent performance (120 Lm/W at 4000K CRI80), reliability (50,000 hours) and quality of light. It's designed to meet the standards for office lighting (UGR <19 possible). A wide range of choices in different sizes (60x60; 62x62; 30x120; 60x120) and color temperatures can be combined with a wide choice of Xitanium drivers to perfectly match your application.

Key features and benefits

- Efficacy up to 121 lm/W on module level
- Ultra-slim LED module
- Excellent light uniformity
- Meeting office standards for low UGR
- Good quality of light (CRI >80)
- Available in 60x60 and 30x120
- High flexibility of lumen output due to wide driver choice
- 5 year system warranty
- Module is provided with integrated quick install connector

October 2019

direct

100%
instant

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Panel 30120 830 MD2	75194400	9290 021 68206	5
Fortimo LED Panel 30120 840 MD2	75195100	9290 021 68306	5
Fortimo LED Panel 30120 865 MD2	75196800	9290 021 68406	5

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Panel 30120	800	1050	1150	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	45	70	75	°C

* Nominal value at which typical performance is specified

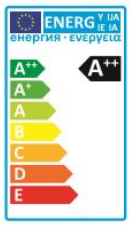
** Value at which life time is specified

*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

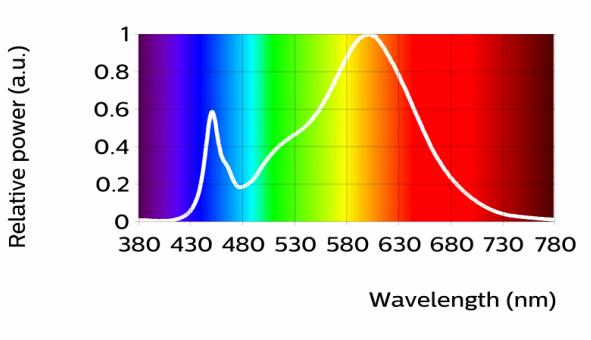
Fortimo LED Panel 30120 830 MD2

Parameter	Min	Typ	Max	Unit
Luminous flux	2898	3220	3542	lm
Flux within 120° cone		2801		lm
Flux within 90° cone		2222		lm
Module efficacy		115		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.442, 0.406)		-
Color consistency			4	SDCM
CRI	80			
Photometric code		830/469		
Radiation angle		80		deg
Photobiological safety			RG0	



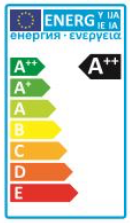
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	830	lm	lm/W
50% I-nom 400mA	Tc 25 °C	1715	126
	Tc-nom 45 °C	1663	123
	Tc-max 75 °C	1570	117
I-nom 800mA	Tc 25 °C	3327	118
	Tc-nom 45 °C	3220	115
	Tc-max 75 °C	3027	109
I-max 1150mA	Tc 25 °C	4632	112
	Tc-nom 45 °C	4473	108
	Tc-max 75 °C	4189	103



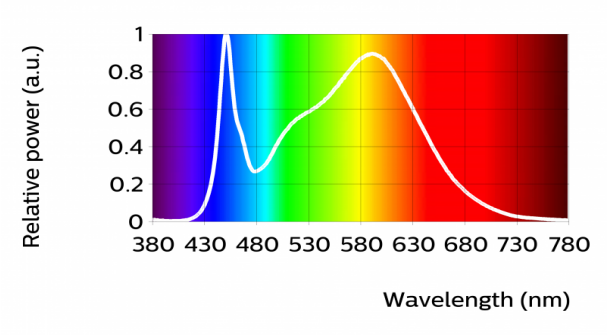
Fortimo LED Panel 30120 840 MD2

Parameter	Min	Typ	Max	Unit
Luminous flux	3060	3400	3740	lm
Flux within 120° cone		2958		lm
Flux within 90° cone		2346		lm
Module efficacy		121		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.381, 0.382)		-
Color consistency			4	SDCM
CRI	80			
Photometric code		840/469		
Radiation angle		80		deg
Photobiological safety			RG0	



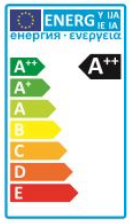
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	840	lm	lm/W
50% I-nom 400mA	Tc 25 °C	1810	133
	Tc-nom 45 °C	1756	130
	Tc-max 75 °C	1657	124
I-nom 800mA	Tc 25 °C	3513	125
	Tc-nom 45 °C	3400	121
	Tc-max 75 °C	3197	115
I-max 1150mA	Tc 25 °C	4892	118
	Tc-nom 45 °C	4725	115
	Tc-max 75 °C	4425	108



Fortimo LED Panel 30120 865 MD2

Parameter	Min	Typ	Max	Unit
Luminous flux	3060	3400	3740	lm
Flux within 120° cone		2958		lm
Flux within 90° cone		2346		lm
Module efficacy		121		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.316, 0.343)		-
Color consistency			4	SDCM
CRI	80			
Photometric code		865/469		
Radiation angle		80		deg
Photobiological safety			RG0	



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Operation point	865	lm	lm/W
50% I-nom 400mA	Tc 25 °C	1810	133
	Tc-nom 45 °C	1756	130
	Tc-max 75 °C	1657	124
I-nom 800mA	Tc 25 °C	3513	125
	Tc-nom 45 °C	3400	121
	Tc-max 75 °C	3197	115
I-max 1150mA	Tc 25 °C	4892	118
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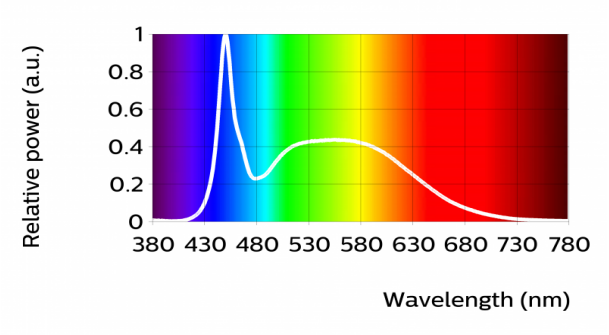
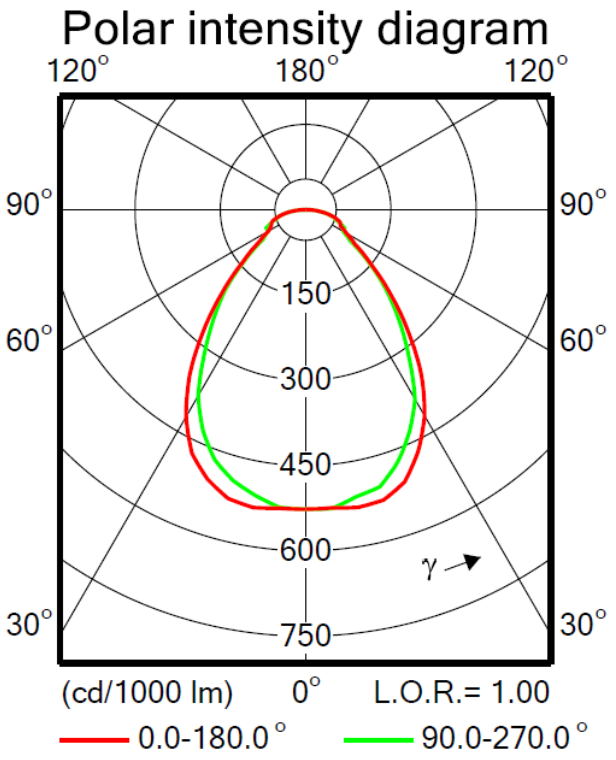


Beam shape

The Fortimo LED panel creates a 80° beam, enabling a Unified Glare Ratio of less than 19 which is a requirement for office applications.



Electrical characteristics

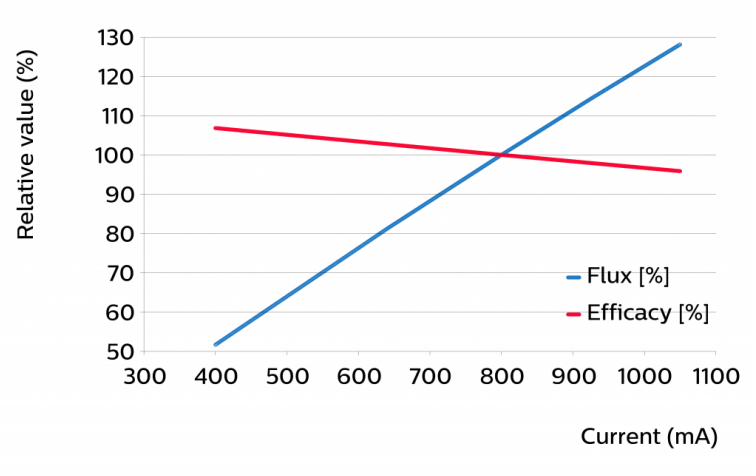
Parameter	Min	Typ	Max	Unit
Forward voltage	32.6	35.0	37.5	V
Power consumption	26.0	28.0	30.0	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel			1	

Measurement precision for Vf +/- 3%. Measurement precision for power +/- 3.3%
Specifications stated at Tc-nom and I-nom

Tuning information

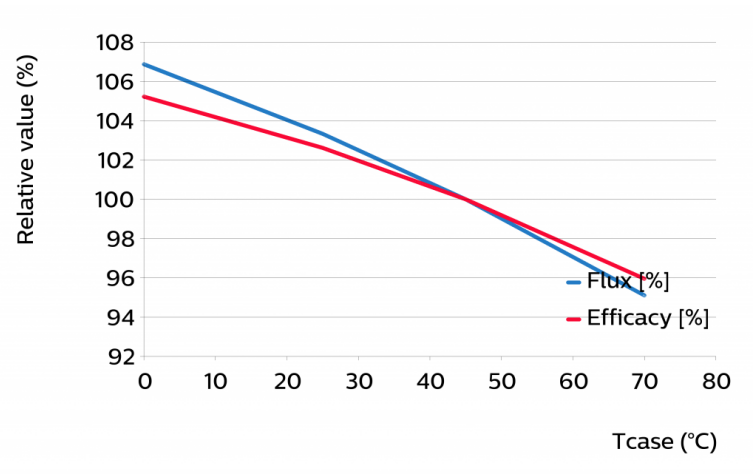
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1050	128	96
925	114	98
800	100	100
640	81	103
400	52	107



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

Tc [°C]	Flux [%]	Efficacy [%]
70	95	96
45	100	100
25	103	103
0	107	105



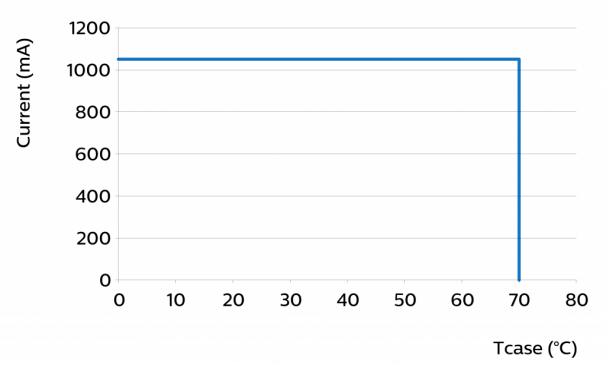
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70		
		B50	B20	B10
I nom 800 mA	Tc 45°C	>50	>50	>50
	Tc 70°C	>50	>50	>50
	Tc 75°C	>50	>50	>50
I life 1050mA	Tc 45°C	>50	>50	>50
	Tc 70°C	>50	>50	>50
	Tc 75°C	>50	45	41

Lifetime

Parameter	Value	Unit
C10 at Tc life	>50000	hours
M70F50 nominal	>50000	hours
M70F50 life	>50000	hours

Performance Window



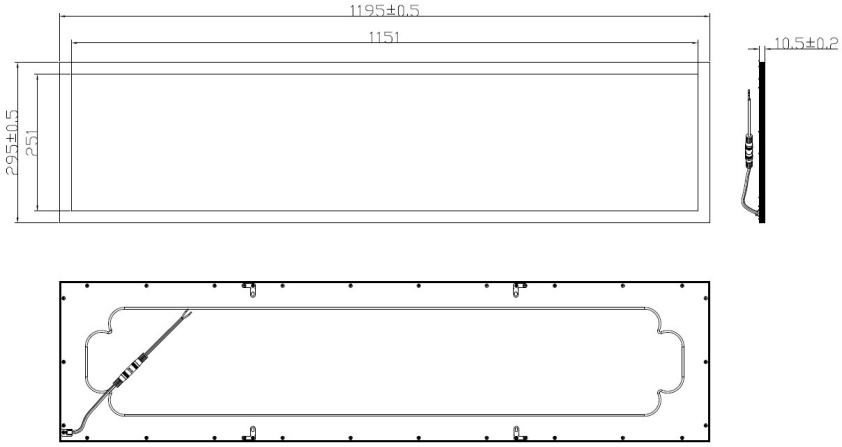
Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.5…0.5	mm²	stranded
	20…20	AWG	stranded
Input wire strip length	7…9	mm	

The LED module is provided with a quick install connector pair. Color coding for lead wires: Brown = + and Blue = -

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	1194.5	1195	1195.5	mm
Width	294.5	295	295.5	mm
Height	10.3	10.5	10.7	mm
Product mass		2800		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1150	mA
Case temperature (Tc-max)		75	°C
Power at rated Vf-max and I-max		38	W
ESD (direct contact)		8	kV
ESD (air)		15	kV
Working voltage		60	V_{dc}
Ambient temperature	-10	45	°C
Storage temperature	-20	60	°C

Application information

Certificates and Standards
CB
CE
ENEC
IEC 62031
IEC 60598-1
IEC 60598-2-1
IEC 60598-2-2

Environmental
RoHS/REACH

Application	
IP rating	IP40
Overheating protection	No protection
Luminaire class	IEC Class I, II and III. SELV input only.
Dimming	Yes

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23/10/2019