



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 (139 lm/W at 4000K CRI80), reliability (50,000 hours) and quality of light. It's designed to meet the standards for office lighting (UGR 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 139 lm/W on module level
- Ultra-slim LED module
- Excellent light uniformity
- Meeting office standards for low UGR
- Good quality of light (CRI >80)
- A wide range of different sizes (60x60, 62x62, 30x120 and 60x120)
- High flexibility of lumen output due to wide driver choice
- 5 year system warranty
- Module is provided with integrated quick install connector
- Excellent color consistency of 3 SDCM
- Single packaging for each panel

August 2023



Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
Fortimo LED Panel 6060 830 MD3	8710163 617480 00	9290 034 31506	1607919	5
Fortimo LED Panel 6060 840 MD3	8710163 617510 00	9290 034 31606	1607923	5

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Panel 6060 MD3	700	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

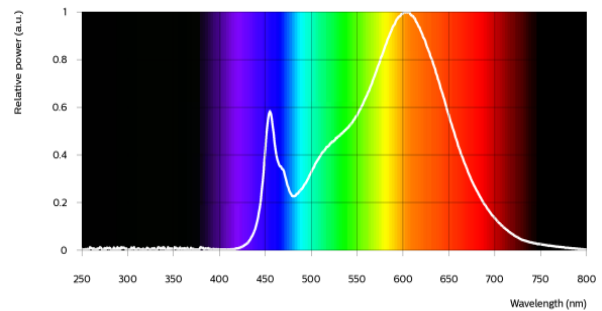
Optical characteristics - table per color (CCT)

Fortimo LED Panel 6060 830 MD3

Parameter	Min	Typ	Max	Unit
Luminous flux	3015	3350	4020	lm
Efficacy		133		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.438, 0.404)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		830/359		
Radiation angle		83		deg
Photobiological safety			RG0	

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

Operation point	830	lm	lm/W
80% I-nom 560mA	Tc 25 °C	2764	138
	Tc-nom 45 °C	2699	135
	Tc-max 75 °C	2591	131
I-nom 700mA	Tc 25 °C	3430	135
	Tc-nom 45 °C	3350	133
	Tc-max 75 °C	3215	129
I-max 1150mA	Tc 25 °C	5509	129
	Tc-nom 45 °C	5379	126
	Tc-max 75 °C	5160	122



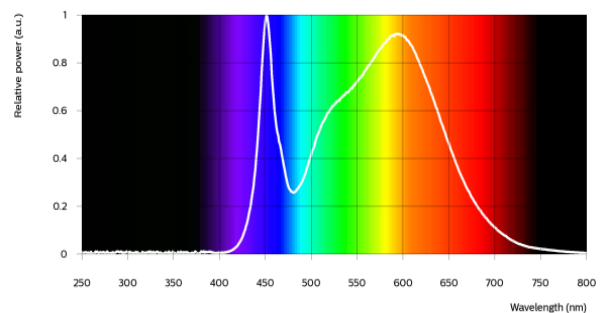
This product contains a light source of energy efficiency class C. EPREL model identifier: 9290034315LS. Registration number: 1607919

Fortimo LED Panel 6060 840 MD3

Parameter	Min	Typ	Max	Unit
Luminous flux	3150	3500	4200	lm
Efficacy		139		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.386, 0.382)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		840/359		
Radiation angle		83		deg
Photobiological safety			RG0	

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

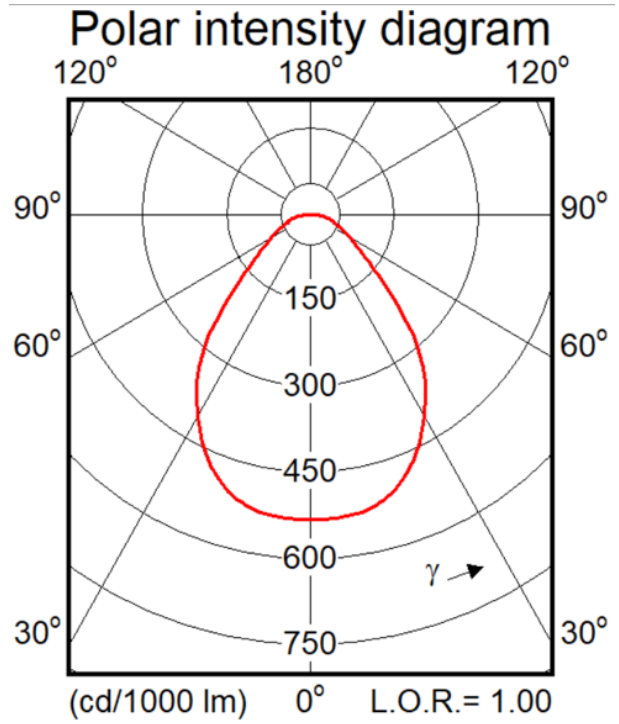
Operation point	840	lm	lm/W
80% I-nom 560mA	Tc 25 °C	2888	144
	Tc-nom 45 °C	2820	141
	Tc-max 75 °C	2707	137
I-nom 700mA	Tc 25 °C	3584	141
	Tc-nom 45 °C	3500	139
	Tc-max 75 °C	3359	135
I-max 1150mA	Tc 25 °C	5756	134
	Tc-nom 45 °C	5620	132
	Tc-max 75 °C	5391	128



This product contains a light source of energy efficiency class C. EPREL model identifier: 9290034316LS. Registration number: 1607923

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

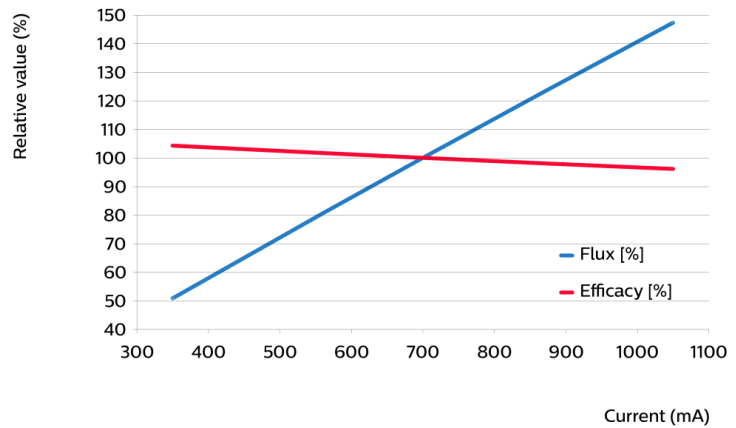
Parameter	Min	Typ	Max	Unit
Forward voltage	34.2	36.0	37.8	V
Power consumption	23.9	25.2	26.5	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

Tuning information

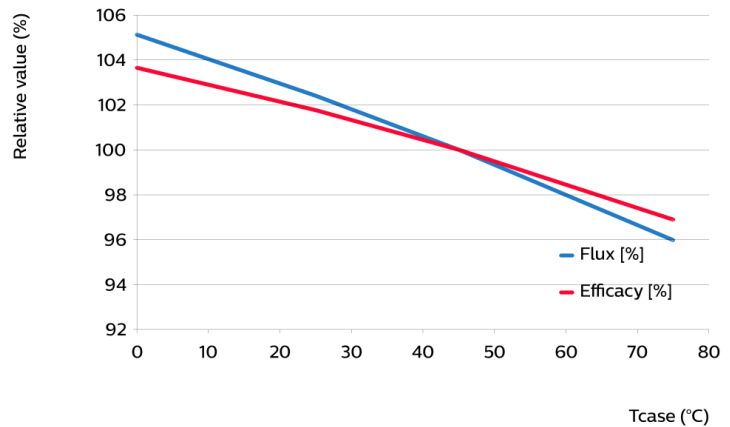
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1050	147	96
875	124	98
700	100	100
560	81	102
350	51	104



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

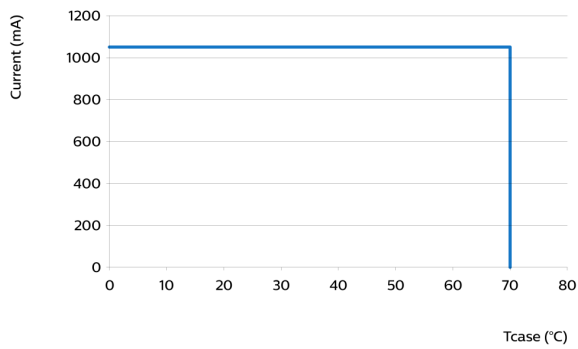
Tc [°C]	Flux [%]	Efficacy [%]
75	96	97
45	100	100
25	102	102
0	105	104



Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
I 700mA	Tc 45°C	>50	>50	>50	>50	>50	>50	42	35	32
	Tc 70°C	>50	>50	>50	>50	47	43	26	22	20
	Tc 75°C	>50	>50	>50	>50	43	40	24	20	18
I 1050mA	Tc 45°C	>50	>50	>50	>50	>50	>50	37	31	29
	Tc 70°C	>50	>50	>50	>50	42	38	23	20	18
	Tc 75°C	>50	>50	>50	46	39	35	21	18	16
I 1150mA	Tc 45°C	>50	>50	>50	>50	>50	>50	35	29	27
	Tc 70°C	>50	>50	>50	47	40	36	22	19	17
	Tc 75°C	>50	>50	>50	43	37	33	20	17	16

Performance Window

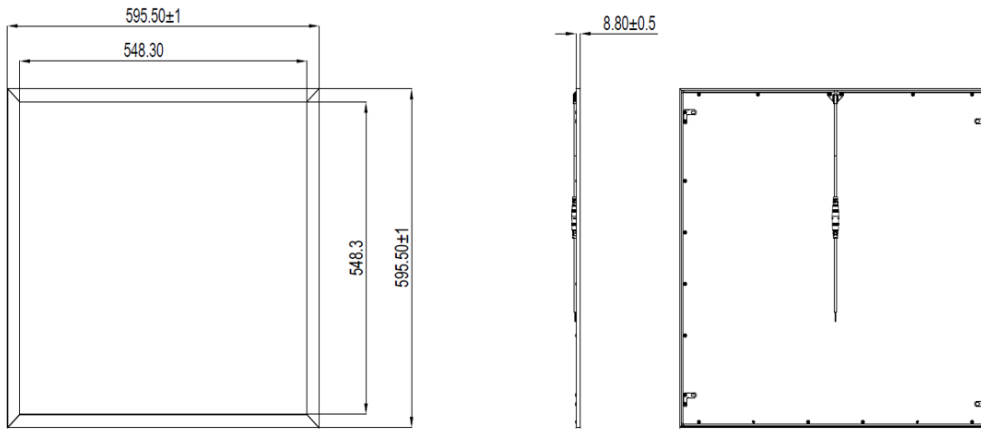


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.5...0.5	mm ²	stranded
	20...20	AWG	stranded
Input wire strip length	7...9	mm	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	595	596	597	mm
Width	595	596	597	mm
Height	8.3	8.8	9.3	mm
Product mass		2250		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1150	mA
Case temperature (Tc-max)		75	°C
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
IEC/EN 60598-1
IEC/EN 60598-2-1
UKCA

Environmental

RoHS/REACH

Application

IP rating	IP40
Overheating protection	No
Luminaire class	Class III
Dimming	Yes

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