

## 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 30120 830 MD3	8710163 617664 00	9290 034 32106	1607921	5
Fortimo LED Panel 30120 835 MD3	8710163 617695 00	9290 034 32206	1607920	5
Fortimo LED Panel 30120 840 MD3	8710163 617725 00	9290 034 32306	1607924	5

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Panel 30120 MD3	700	1050	1150	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> 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

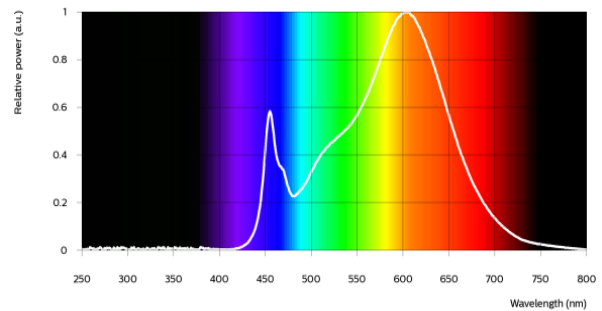
## Optical characteristics - table per color (CCT)

### Fortimo LED Panel 30120 830 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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$ .

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



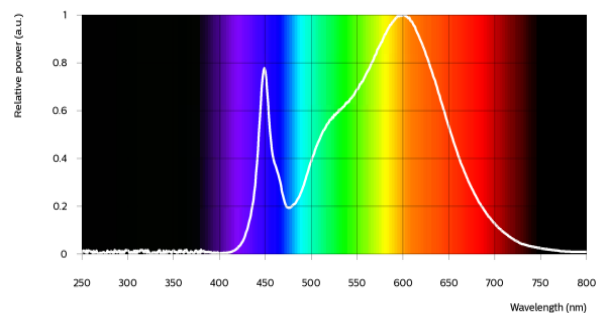
This product contains a light source of energy efficiency class C. EPREL model identifier: 9290034321LS. Registration number: 1607921

### Fortimo LED Panel 30120 835 MD3

Parameter	Min	Typ	Max	Unit
Luminous flux	3015	3350	4020	lm
Efficacy		133		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.418, 0.403)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		835/359		
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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$ .

Operation point	835	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



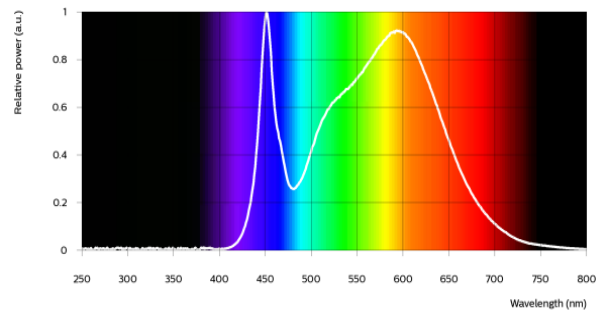
This product contains a light source of energy efficiency class C. EPREL model identifier: 9290034322LS. Registration number: 1607920

## Fortimo LED Panel 30120 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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$ .

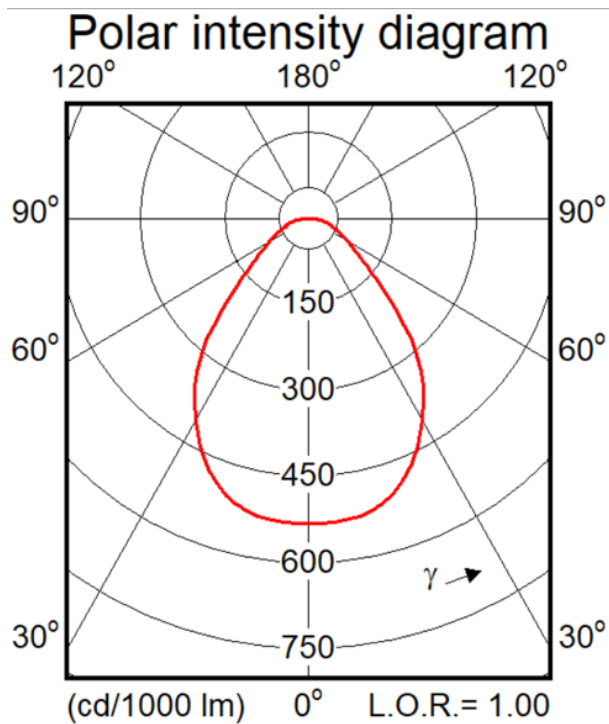
Operation point	840	lm	lm/W
80% I-nom 560mA	Tc 25 °C	2888	144
	Tc-nom 45 °C	2820	141
	Tc-max 75 °C	2707	137
I-nom 700mA	Tc 25 °C	3584	141
	Tc-nom 45 °C	3500	139
	Tc-max 75 °C	3359	135
I-max 1150mA	Tc 25 °C	5756	134
	Tc-nom 45 °C	5620	132
	Tc-max 75 °C	5391	128



This product contains a light source of energy efficiency class C. EPREL model identifier: 9290034323LS. Registration number: 1607924

## 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

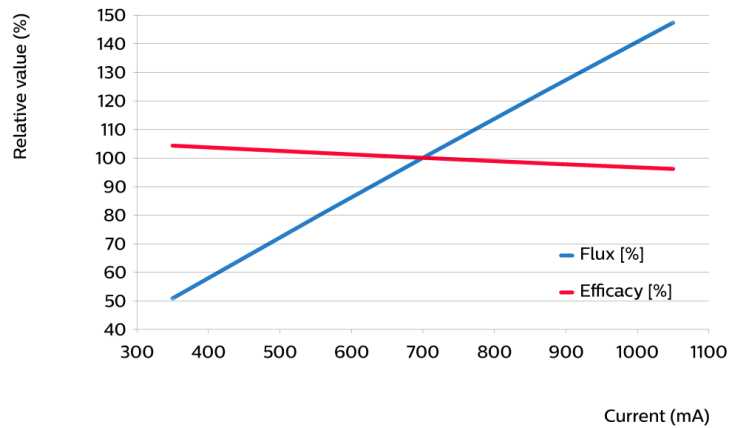
Parameter	Min	Typ	Max	Unit
Forward voltage	34.2	36.0	37.8	V
Power consumption	23.9	25.2	26.5	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	
Number of modules in parallel			1	

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

## Tuning information

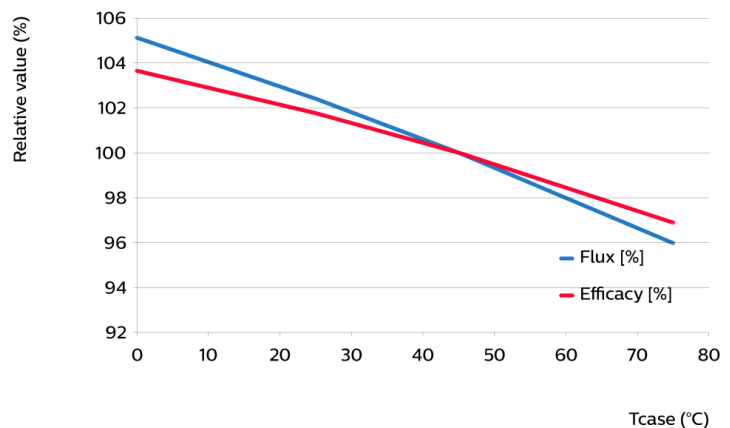
Flux and efficacy versus current (at Tc nominal)

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)

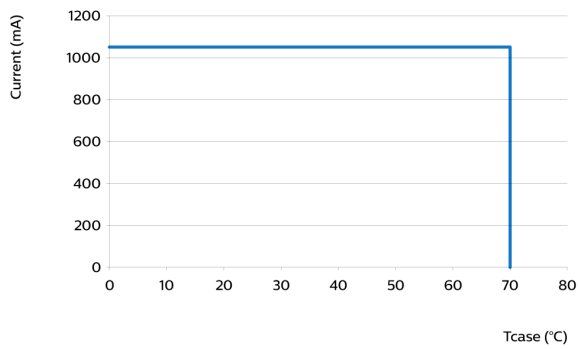
Tc [°C]	Flux [%]	Efficacy [%]
75	96	97
45	100	100
25	102	102
0	105	104



## 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 1200mA	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

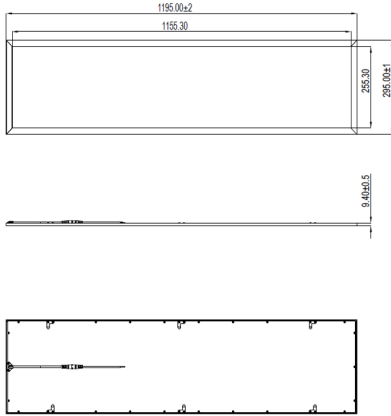


## Wiring

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

## Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	1193	1195	1197	mm
Width	294	295	296	mm
Height	8.9	9.4	9.9	mm
Product mass		2350		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
Working voltage		60	V <sub>dc</sub>
Ambient temperature	-10	45	°C
Storage temperature	-20	60	°C



## Application information

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### Certificates and Standards

CB  
CE  
ENEC  
UKCA  
IEC/EN 60598-1  
IEC/EN 60598-2-1

### Environmental

RoHS/REACH

### Application

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

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