



CertaFlux

LED

CertaFlux LED Panel
6060



Datasheet

CertaFlux LED Panel

The CertaFlux LED panels are designed to enable OEM to make ultra-slim LED luminaires for commercial applications. With various combinations of Philips drivers, an OEM can offer a wide range of lumen packages with each panel module. This brings maximum luminaire offering flexibility to both OEMs and the end-users. CertaFlux LED panels offer excellent product performance and reliability, with good quality of light.

Key features and benefits

- Efficacy up to 100 lm/W on module level
- Ultra-slim LED module
- Excellent lighting uniformity
- High color rendering (CRI 80)
- High flexibility lumen output
- 3 years system warranty
- The module is provided with integrated quick install connector

April 2019



Ordering data

Commercial product name	EOC	12NC	Box quantity
CertaFlux LED Panel 6060 830 MD2	8718699 676193 00	9290 016 87406	5
CertaFlux LED Panel 6060 840 MD2	8718699 676216 00	9290 016 87506	5
CertaFlux LED Panel 6060 865 MD2	8718699 676230 00	9290 016 87606	5

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux LED Panel 6060	800	1050	1150	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	45	65	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)

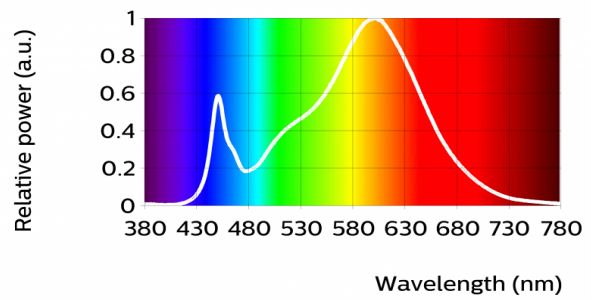
CertaFlux LED Panel 6060 830 MD2

Parameter	Min	Typ	Max	Unit
Luminous flux	2610	2900	3190	lm
Module efficacy		101		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.439, 0.404)		-
Color consistency			6	SDCM
CRI		80		
Photometric code		830/699		
Radiation angle		115		deg
Photobiological safety			RG1 unlimited	



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 640mA	Tc 25 °C	2464	107
	Tc-nom 45 °C	2385	105
	Tc-max 75 °C	2253	100
I-nom 800mA	Tc 25 °C	2999	103
	Tc-nom 45 °C	2900	101
	Tc-max 75 °C	2736	96
I-life 1050mA	Tc 25 °C	3782	98
	Tc-nom 45 °C	3652	95
	Tc-max 75 °C	3436	91



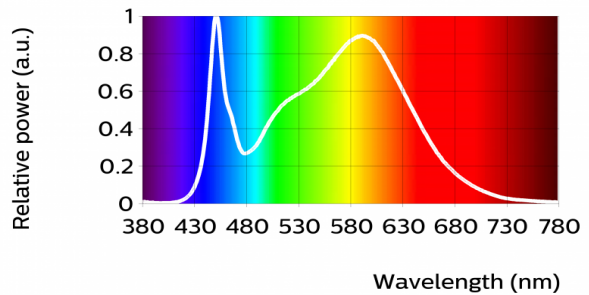
CertaFlux LED Panel 6060 840 MD2

Parameter	Min	Typ	Max	Unit
Luminous flux	2790	3100	3410	lm
Module efficacy		108		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.380, 0.384)		-
Color consistency			6	SDCM
CRI		80		
Photometric code		840/699		
Radiation angle		115		deg
Photobiological safety			RG1 unlimited	



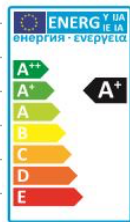
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	840	lm	lm/W
80% I-nom 640mA	Tc 25 °C	2634	115
	Tc-nom 45 °C	2549	112
	Tc-max 75 °C	2408	107
I-nom 800mA	Tc 25 °C	3206	110
	Tc-nom 45 °C	3100	108
	Tc-max 75 °C	2925	103
I-life 1050mA	Tc 25 °C	4044	104
	Tc-nom 45 °C	3905	102
	Tc-max 75 °C	3675	97



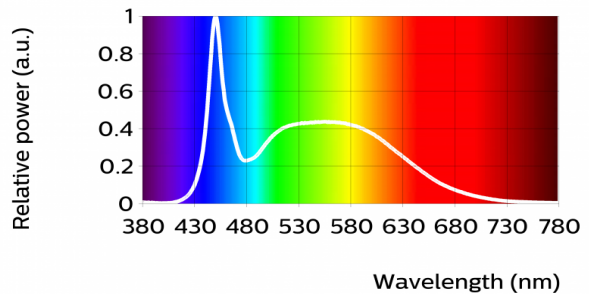
CertaFlux LED Panel 6060 865 MD2

Parameter	Min	Typ	Max	Unit
Luminous flux	2790	3100	3410	lm
Module efficacy		108		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.311, 0.337)		-
Color consistency			6	SDCM
CRI		80		
Photometric code		865/699		
Radiation angle		115		deg
Photobiological safety			RG1 unlimited	



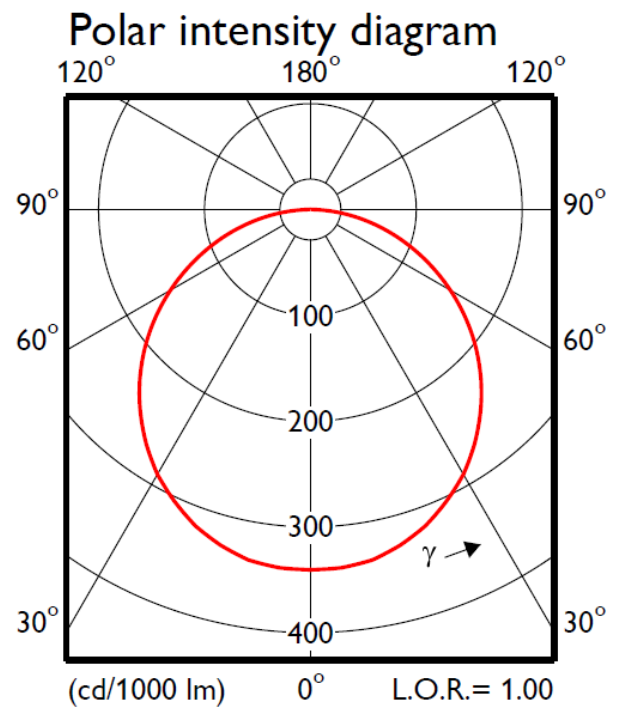
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	865	lm	lm/W
80% I-nom 640mA	Tc 25 °C	2634	115
	Tc-nom 45 °C	2549	112
	Tc-max 75 °C	2408	107
I-nom 800mA	Tc 25 °C	3206	110
	Tc-nom 45 °C	3100	108
	Tc-max 75 °C	2925	103
I-life 1050mA	Tc 25 °C	4044	104
	Tc-nom 45 °C	3905	102
	Tc-max 75 °C	3675	97



Beam shape

The CertaFlux LED panel creates a Lambertian light distribution.



Electrical characteristics

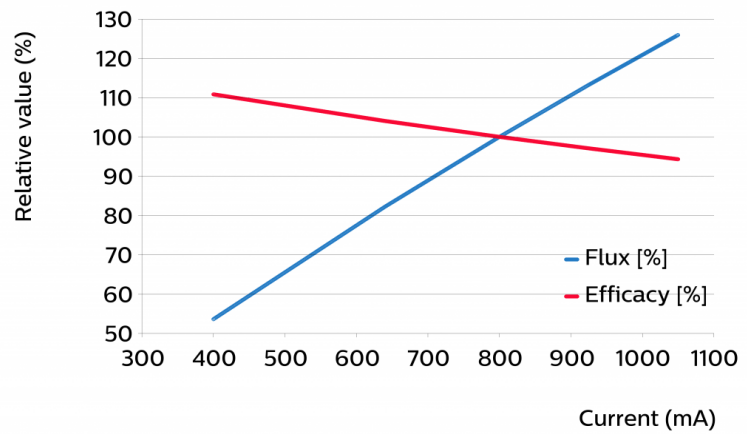
Parameter	Min	Typ	Max	Unit
Forward voltage	33.5	36.0	38.5	V
Power consumption	26.8	28.8	30.8	W = kWh/1000h

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

Tuning information

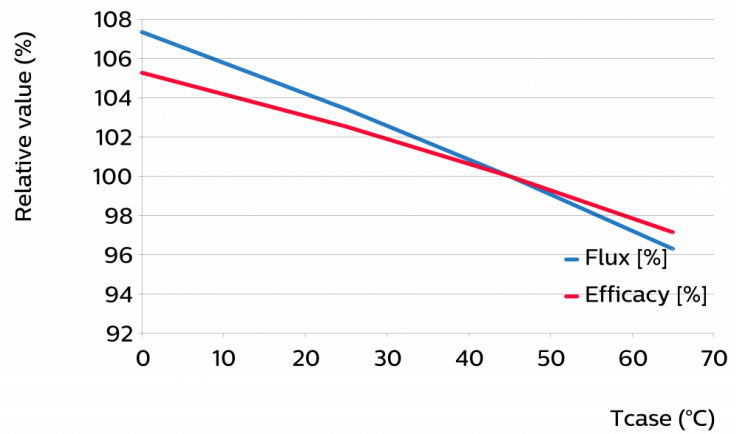
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1050	126	94
925	113	97
800	100	100
640	82	104
400	54	111



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

Tc [°C]	Flux [%]	Efficacy [%]
65	96	97
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	>30	>30	>30
	Tc 65°C	>30	>30	>30
	Tc 75°C	26	23	21
I life 1050 mA	Tc 45°C	>30	>30	>30
	Tc 65°C	>30	>30	>30
	Tc 75°C	21	18	17

Lifetime

Parameter	Value	Unit
C10 at Tc life	>50000	hours
M70F50 nominal	>30000	hours
M70F50 life	>30000	hours

Wiring

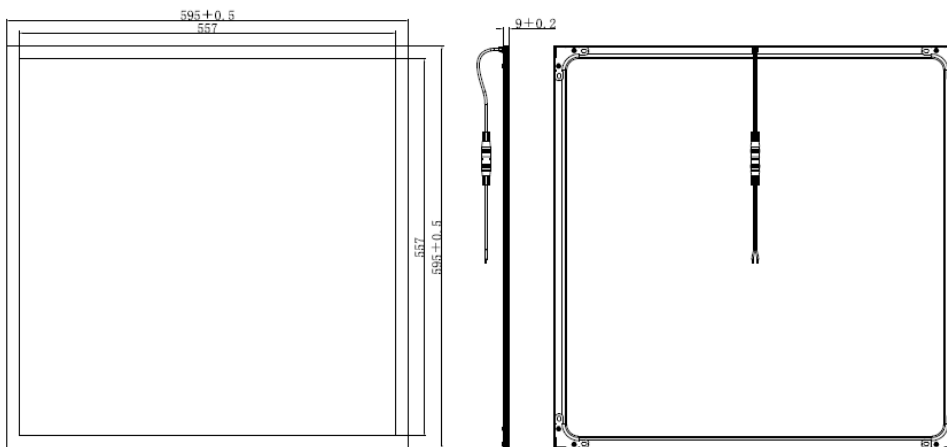
Specification item	Value	Unit	Condition
Input wire cross-section	0.5	mm ²	stranded
	20	AWG	
Input wire strip length	7...9	mm	



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	594.5	595	595.5	mm
Width	594.5	595	595.5	mm
Height	8.8	9	9.2	mm
Product mass		2000		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
IEC 62031
IEC 60598-1
IEC 60598-2-1
IEC 60598-2-2

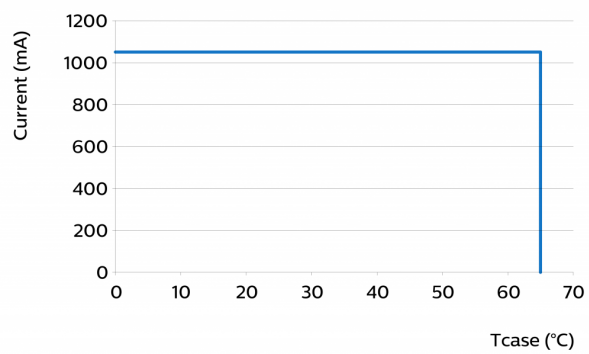
Environmental

RoHS/REACH

Application

IP rating	IP20
Luminaire class	IEC Class I, II and III. SELV input only
Dimming	Yes

Performance Window



© 2019 Signify Holding, IBRS 10461, 5600VB, NL. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

11/04/2019