

PHILIPS

Fortimo

LED

Fortimo FastFlex LED 2x2
DA CR



Datasheet

Light up your city with ColorRevive

Fortimo FastFlex 2x2 DA CR

Experience exceptional Quality of Light with ColorRevive

Application:

- Urban and residential street lighting
- Parks and recreation area lighting
- Road lighting
- Flood and area lighting
- Tunnel lighting
- High bay lighting

Key features and benefits

- Enhanced color contrast at low light levels
- Increased feeling of safety and comfort
- Zhaga Book 15 compliancy for easy design-in and maintenance
- Embedded module surge protection
- Philips system warranty

March 2025



Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
Fortimo FastFlex LED 2x2/827 DA CR	8721103 060006 00	9290 040 01406	2250001	25
Fortimo FastFlex LED 2x2/830 DA CR	8721103 060020 00	9290 040 01506	2249997	25

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex LED 2x2 DA CR	450	900	1500	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	65	85	95	°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)

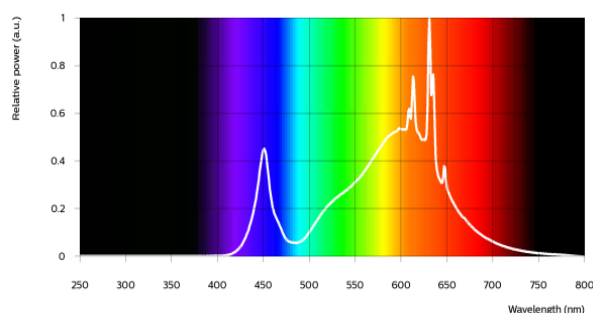
Fortimo FastFlex LED 2x2/827 DA CR

Parameter	Min	Typ	Max	Unit
Luminous flux	749	788	867	lm
Efficacy	142	158	174	lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.440, 0.375)		-
Color consistency			5	SDCM
CRI	80			
R9	0			
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	827	lm	lm/W
80% I-nom 360mA	Tc 25 °C	664	166
	Tc-nom 65 °C	636	163
	Tc-max 95 °C	609	156
I-nom 450mA	Tc 25 °C	824	165
	Tc-nom 65 °C	788	158
	Tc-max 95 °C	755	154
I-max 1500mA	Tc 25 °C	2542	132
	Tc-nom 65 °C	2416	128
	Tc-max 95 °C	2299	122



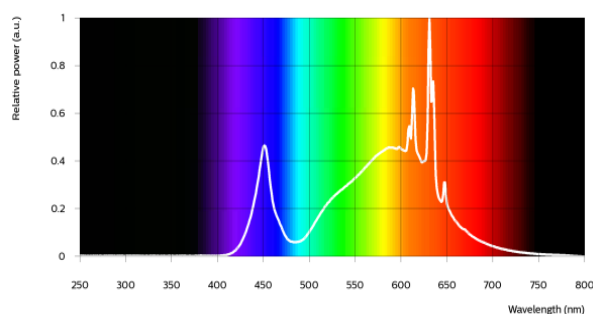
Fortimo FastFlex LED 2x2/830 DA CR

Parameter	Min	Typ	Max	Unit
Luminous flux	784	825	908	lm
Efficacy	149	166	182	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.421, 0.378)		-
Color consistency			5	SDCM
CRI	80			
R9	0			
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 360mA	Tc 25 °C	703	176
	Tc-nom 65 °C	666	171
	Tc-max 95 °C	636	163
I-nom 450mA	Tc 25 °C	871	174
	Tc-nom 65 °C	825	166
	Tc-max 95 °C	788	161
I-max 1500mA	Tc 25 °C	2665	140
	Tc-nom 65 °C	2515	133
	Tc-max 95 °C	2394	128



Electrical characteristics

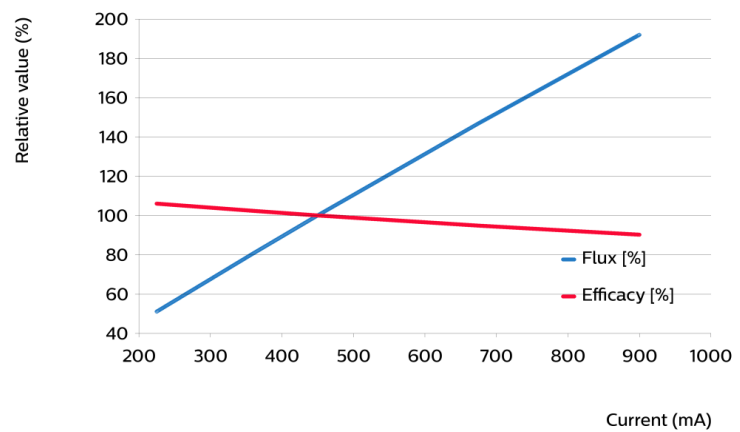
Parameter	Min	Typ	Max	Unit
Forward voltage	10.5	11.1	11.3	V
Power consumption	4.7	5.0	5.1	W = kWh/1000h
Number of modules in series per chain			10	
Number of modules in parallel			1	

Measurement precision for Vf +/- 3%. Measurement precision for power +/- 3.3%

Tuning information

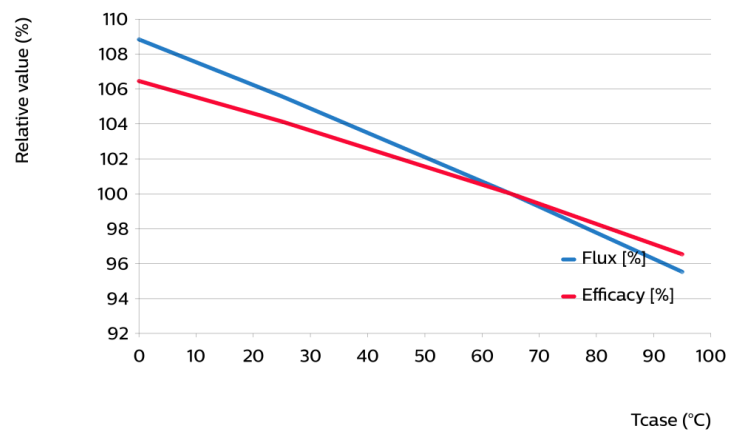
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
900	192	90
675	147	95
450	100	100
360	81	102
225	51	106



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

Tc [°C]	Flux [%]	Efficacy [%]
95	96	97
65	100	100
25	106	104
0	109	106



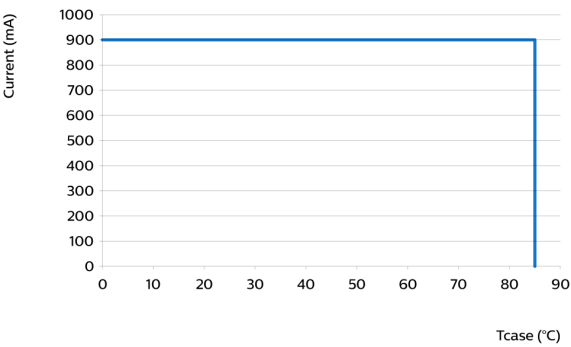
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=360mA	Tc= 25C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc= 45C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc= 65C	>100	>100	>100	>100	>100	>100	>100	>100	>100
Inom=450mA	Tc= 25C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc= 45C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc= 65C	>100	>100	>100	>100	>100	>100	>100	>100	>100
I=600mA	Tc= 25C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc= 45C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc= 65C	>100	>100	>100	>100	>100	>100	>100	>100	>100

Lifetime

Parameter	Value	Unit
M70F50 nominal	>100000	hours
M70F50 life	>100000	hours

Performance Window

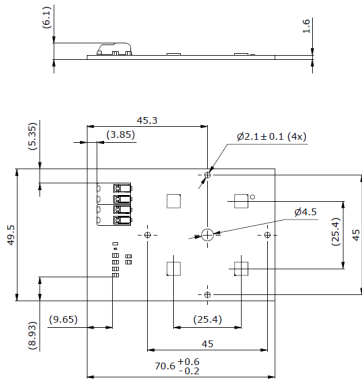


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.33...0.5	mm ²	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	7.5...8.5	mm	
Input wire cross-section	0.25...0.75	mm ²	solid wire
	18...24	AWG	solid wire
Input wire strip length	7.5...8.5	mm	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	70.4	70.6	71.2	mm
Width	49.2	49.5	49.8	mm
Height PCB	1.44	1.6	1.76	mm
Height total	5.5	6.1	6.7	mm
Product mass		16		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1500	mA
Case temperature (Tc-max)		95	°C
Power at rated Vf-max and I-max		18.05	W
ESD (direct contact)	8		kV
ESD (air)	15		kV
Working voltage		575	V _{dc}
Ambient temperature	-30	50	°C
Storage temperature	-20	80	°C

Application information

Certificates and Standards

CE
cULus
ENEC
ENEC+

Environmental

RoHS/REACH

Application

Overheating protection	NTC 15L Ohm B=3987K + 390 Ohm in series
Dimming	Yes



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