

PHILIPS

Fortimo

LED

Fortimo FastFlex LED 2x8
DA UHE



Datasheet

Ultra-High Efficiency with Zhaga standards

Fortimo FastFlex 2x8 DA UHE

Experience increased efficiency levels of $\geq 200\text{lm/W}$ – all within Zhaga standards

Application:

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

Key features and benefits

- Ultra-High Efficiency on LED module level in Zhaga standards
- Extensive reliability testing for OEM peace of mind
- Mechanically backwards compatible with DA Gen 4+/Gen 5 and DA HE
- Patented module surge protection
- Philips system warranty

December 2023



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 2x8/730 DA UHE	8720169 284784 00	9290 039 68406	25
Fortimo FastFlex LED 2x8/740 DA UHE	8720169 284807 00	9290 039 68506	25

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex LED 2x8 DA UHE	450	1050	1500	mA

Module temperatures

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

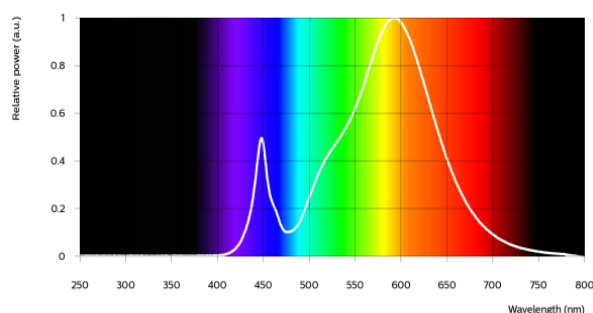
Optical characteristics - table per color (CCT)

Fortimo FastFlex LED 2x8/730 DA UHE

Parameter	Min	Typ	Max	Unit
Luminous flux	3600	4000	4400	lm
Efficacy	180	200	220	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.435, 0.419)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
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	730	lm	lm/W
80% I-nom 360mA	Tc 25 °C	3372	211
	Tc-nom 65 °C	3229	205
	Tc-max 85 °C	3140	201
I-nom 450mA	Tc 25 °C	4179	206
	Tc-nom 65 °C	4000	200
	Tc-max 85 °C	3889	196
I-max 1500mA	Tc 25 °C	12874	169
	Tc-nom 65 °C	12241	163
	Tc-max 85 °C	11846	158

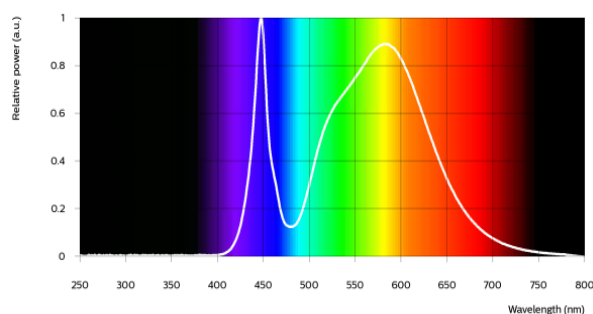


Fortimo FastFlex LED 2x8/740 DA UHE

Parameter	Min	Typ	Max	Unit
Luminous flux	3654	4060	4466	lm
Efficacy	183	203	224	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.379, 0.391)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
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	740	lm	lm/W
80% I-nom 360mA	Tc 25 °C	3423	214
	Tc-nom 65 °C	3278	208
	Tc-max 85 °C	3187	204
I-nom 450mA	Tc 25 °C	4242	209
	Tc-nom 65 °C	4060	203
	Tc-max 85 °C	3947	199
I-max 1500mA	Tc 25 °C	13069	171
	Tc-nom 65 °C	12428	165
	Tc-max 85 °C	12027	161



Electrical characteristics

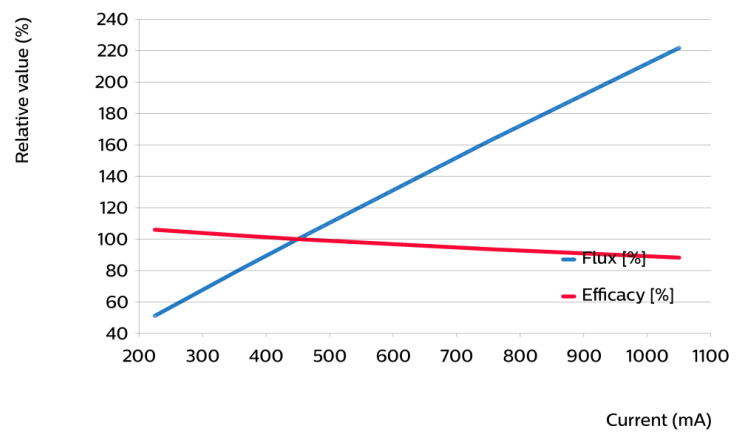
Parameter	Min	Typ	Max	Unit
Forward voltage	42.2	44.4	45.5	V
Power consumption	19.0	20.0	20.5	W = kWh/1000h
Number of modules in series per chain			10	
Number of modules in parallel			1	

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

Tuning information

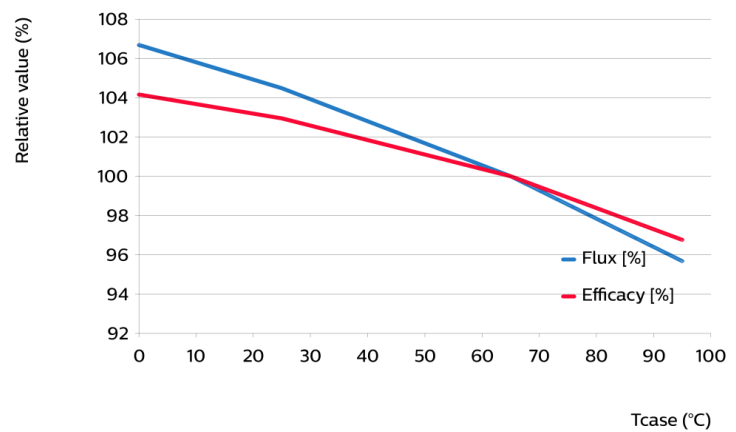
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1050	222	88
750	162	94
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	104	103
0	107	104



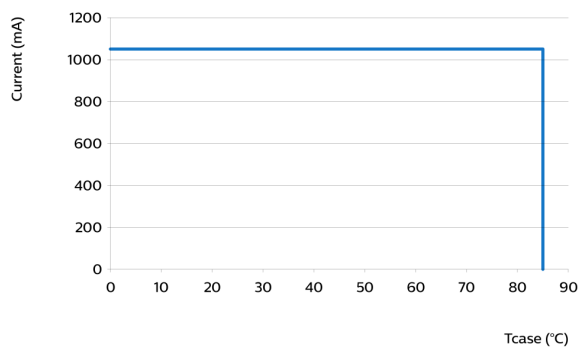
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=360mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc_nom=65°C	>100	>100	>100	>100	>100	>100	89	85	83
	Tc_life=85°C	>100	>100	>100	>100	>100	>100	68	65	64
Inom=450mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc_nom=65°C	>100	>100	>100	>100	>100	>100	85	81	80
	Tc_life=85°C	>100	>100	>100	>100	>100	>100	65	62	61
Ilife=700mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc_nom=65°C	>100	>100	>100	>100	>100	>100	78	74	73
	Tc_life=85°C	>100	>100	>100	>100	>100	>100	60	57	56

Lifetime

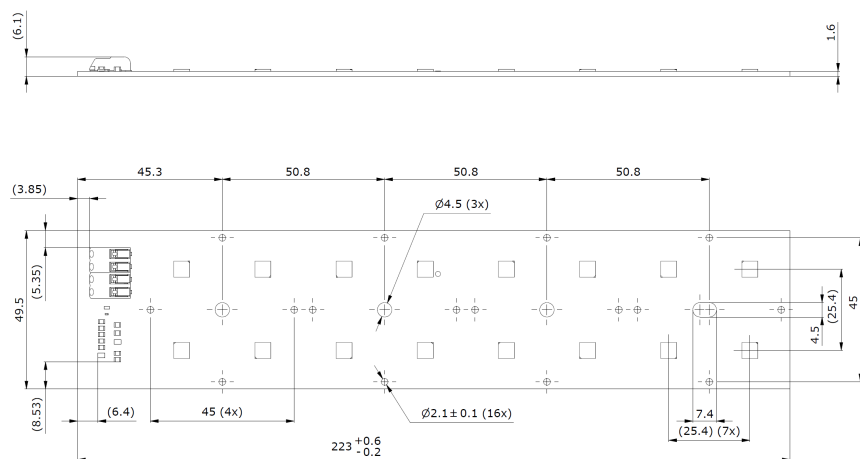
Parameter	Value	Unit
M70F50 nominal	>100000	hours
M70F50 life	>100000	hours

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	222.8	223	223.6	mm
Width	49.3	49.5	49.7	mm
Height including connector		6.1		mm
Height PCB		1.6		mm
Product mass		49.7		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1500	mA
Case temperature (Tc-max)		85	°C
Power at rated Vf-max and I-max		75.1	W
ESD (direct contact)	8		kV
ESD (air)	15		kV
Working voltage		575	V _{dc}
Ambient temperature	-30	40	°C
Storage temperature	-20	80	°C

Application information

Certificates and Standards

CE
ENEC
cULus

Environmental

RoHS/REACH

Application

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



© 2023 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.

www.philips.com/oem

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.
UK importer address: Signify Commercial UK Limited, 3 Guildford Business Park, GU2 8XG

08/12/2023