

PHILIPS

Fortimo

LED

Fortimo FastFlex LED
4x16 DHE G4



Datasheet

Best in class efficacy enabling optical flexibility with third party lenses

Fortimo FastFlex LED 4x16 DHE G4

Applications

- High bay lighting
- Flood and Area lighting
- Urban street lighting
- Road lighting

Key features and benefits

- Best efficiency for fixture performance
- Enabled OEM optical differentiation with lenses from third party portfolios matching every project's needs
- Best in class reliability testing for OEM peace of mind
- Philips system warranty
- Wide operating thermal range
- Temperature and driving current designed for fixture optimization
- Patented module surge protection
- Flexible lumen output
- Instant full light
- Zhaga book 15 compatible

February 2018

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 4x16/830 DHE G4	8718696 803349 00	9290 016 16506	100
Fortimo FastFlex LED 4x16/840 DHE G4	8718696 803363 00	9290 016 16606	100
Fortimo FastFlex LED 4x16/850 DHE G4	8718696 803387 00	9290 016 16706	100

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex LED 4x16 DHE G4	530	700	700	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	75	90	90	°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)

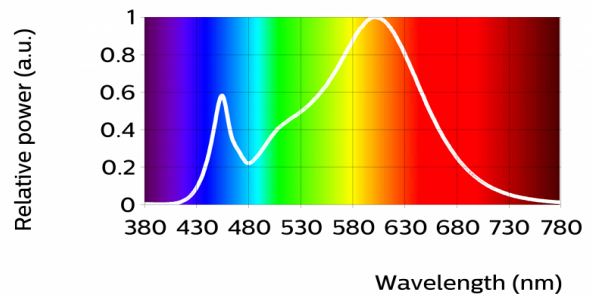
Fortimo FastFlex LED 4x16/830 DHE G4

Parameter	Min	Typ	Max	Unit
Luminous flux	3608	3900	4293	lm
Module efficacy	132	165		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.426, 0.395)		-
Color consistency			3	SDCM
CRI	80			
Radiation angle		115		deg
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

Above data are initial data.

Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5

A maximum color shift of 7 SDCM is specified for 50000 h at reference operating conditions.



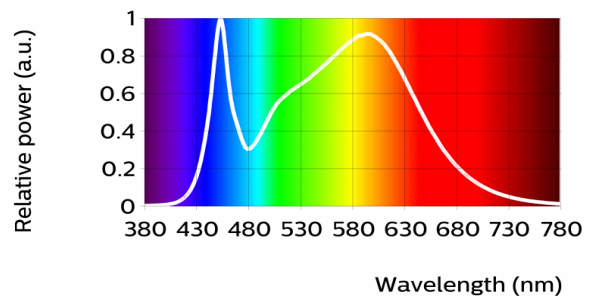
Fortimo FastFlex LED 4x16/840 DHE G4

Parameter	Min	Typ	Max	Unit
Luminous flux	3792	4213	4634	lm
Module efficacy	142	178		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.377, 0.373)		-
Color consistency			3	SDCM
CRI	80			
Radiation angle		115		deg
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

Above data are initial data.

Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5

A maximum color shift of 7 SDCM is specified for 50000 h at reference operating conditions.



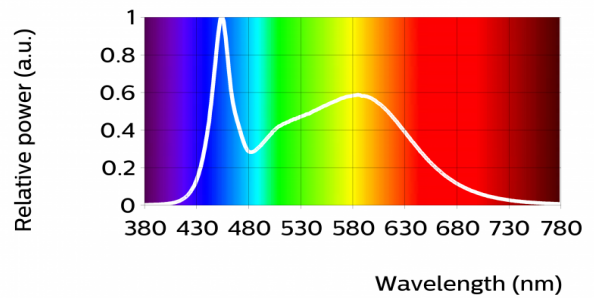
Fortimo FastFlex LED 4x16/850 DHE G4

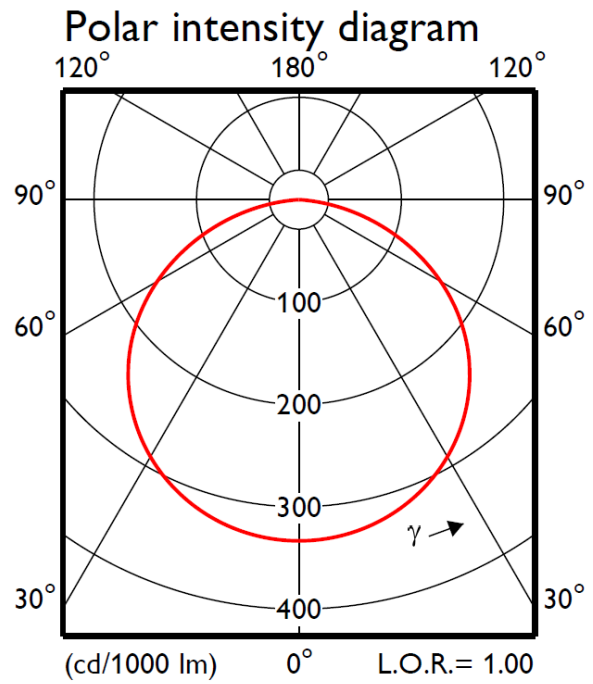
Parameter	Min	Typ	Max	Unit
Luminous flux	3792	4213	4634	lm
Module efficacy	142	178		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.339, 0.345)		-
Color consistency			3	SDCM
CRI	80			
Radiation angle		115		deg
Photobiological safety			RG1 unlimited	
Energy efficiency label		A++		

Above data are initial data.

Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5

A maximum color shift of 7 SDCM is specified for 50000 h at reference operating conditions.





Electrical characteristics

- [Fortimo FastFlex LED 4x16/830 DHE G4](#)
- [Fortimo FastFlex LED 4x16/840 DHE G4](#)
- [Fortimo FastFlex LED 4x16/850 DHE G4](#)

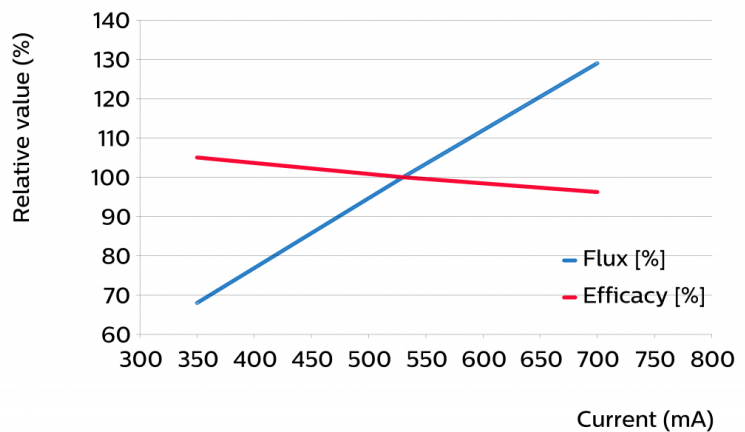
Parameter	Min	Typ	Max	Unit
Forward voltage	43.8	44.6	45.6	V
Power consumption	23.2	23.6	24.2	W
Number of modules in series per chain			5	
Number of modules in parallel per chain			4	

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 [%]
350	68	105
530	100	100
700	129	96



Lifetime

Parameter	Value	Unit
C10 at Tc life	50000	hours

Switching cycles in accordance to EU 1194/2012: >15000

At I life L70B50>50000 hours.

Charts presenting module's lumen maintenance data are available via your sales representative.

Wiring

Specification item	Value	Unit	Condition
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	
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	

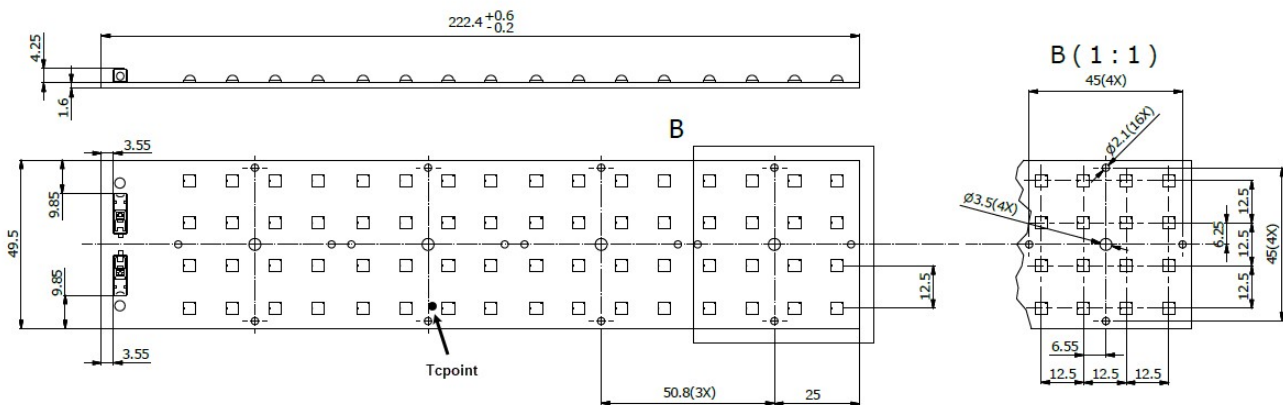
Mechanical characteristics

Fortimo FastFlex LED 4x16/830 DHE G4

Fortimo FastFlex LED 4x16/840 DHE G4

Fortimo FastFlex LED 4x16/850 DHE G4

Parameter	Min	Typ	Max	Unit
Length	222.2	222.4	223	mm
Width	49.35	49.5	49.65	mm
Height with connector	4.1	4.25	4.4	mm
Height without connector	1.45	1.6	1.75	mm



Absolute ratings

Parameter	Min	Typ	Max	Unit
Current through the LED module (I-max)			700	mA
Case temperature (Tc-max)			90	°C
Power at rated Vf-max and I-max			31.9	W
ESD (direct contact)			8	kV
ESD (air)			15	kV
Working voltage			260	V _{dc}
Ambient temperature	-40			°C

Surge capability at module level up to 6kV when operating in combination with a Xitanium outdoor driver.

Working voltage 570V in combination with lens optics of minimum 2 mm thickness.

Application information

Certificates and Standards

CE

ENEC (Ensures products are tested for safety and operation before factory exit AND products are IEC approved by an accredited testhouse)

UL 8750

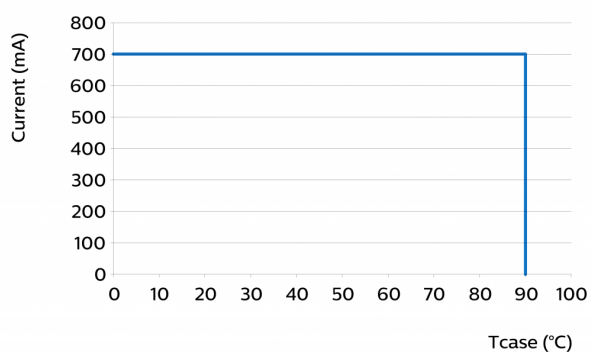
Environmental

RoHS/REACH

Application

IP rating	No IP-rating
Overheating protection	No
Dimming	Yes

Performance Window





© 2018 Philips Lighting Holding B.V. All rights reserved.

This document contains information relating to the Philips Lighting portfolio, intended for companies who may be interested in developing their product offering. Note that the information provided is subject to change. Philips Lighting 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.

www.philips.com/technology

02/2018