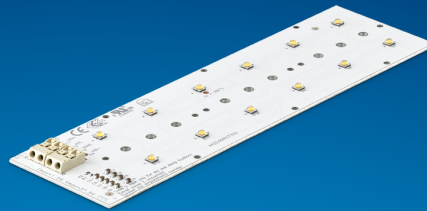


PHILIPS

Fortimo

LED

FastFlex 2x6 DA G4



Datasheet

Optical differentiation with third party lenses

FastFlex 2x6 DA G4

Applications

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

Key features and benefits

- Enables OEM optical differentiation with lenses from third party portfolios matching every project's needs
- High module efficiency for fixture performance
- 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
- Optical flexibility via third party lenses
- Instant full light
- Flexible lumen output
- Range of CCT and CRI versions

December 2017

 Zhaga

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 2x6/730 DA G4	8718696 725146 00	9290 015 65006	25
Fortimo FastFlex LED 2x6/740 DA G4	8718696 724033 00	9290 015 65106	25
Fortimo FastFlex LED 2x6/827 DA G4	8718696 801307 00	9290 016 20406	25
Fortimo FastFlex LED 2x6/830 DA G4	8718696 801321 00	9290 016 20506	25
Fortimo FastFlex LED 2x6/840 DA G4	8718696 725207 00	9290 015 65706	25

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
FastFlex 2x6 DA G4	530	see performance window	1500	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	80	see performance window	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)

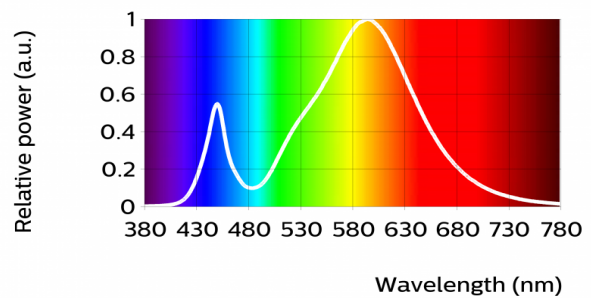
Fortimo FastFlex LED 2x6/730 DA G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2329	2588	2846	lm
Module efficacy	113	142		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			4	SDCM
CRI	70			
Radiation angle		115		deg
Photobiological safety			RG2	
Ethr			520	lux

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 55000 h at reference operating conditions.



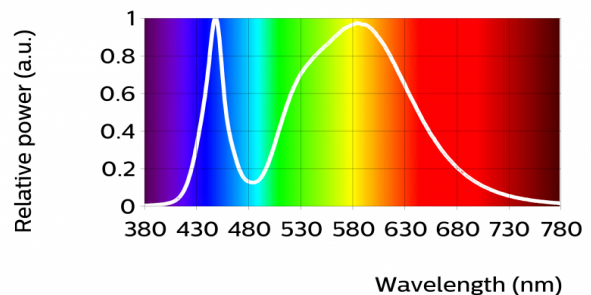
Fortimo FastFlex LED 2x6/740 DA G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2518	2798	3077	lm
Module efficacy	123	154		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			4	SDCM
CRI	70			
Radiation angle		115		deg
Photobiological safety			RG2	
Ethr			520	lux

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 55000 h at reference operating conditions.

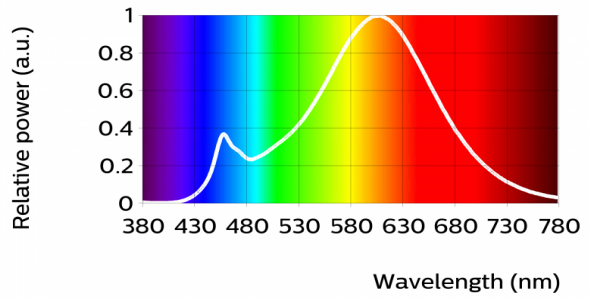


Fortimo FastFlex LED 2x6/827 DA G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2002	2224	2446	lm
Module efficacy	98	122		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			4	SDCM
CRI	80			
Radiation angle		115		deg
Photobiological safety			RG2	
Ethr			520	lux

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 55000 h at reference operating conditions.

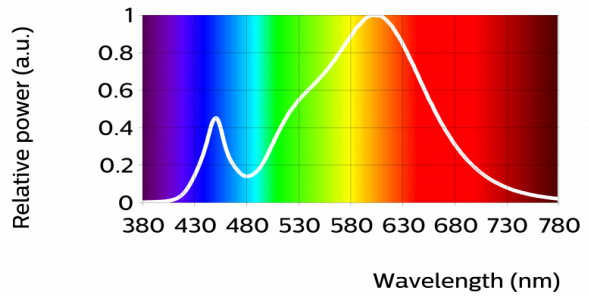


Fortimo FastFlex LED 2x6/830 DA G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2165	2406	2647	lm
Module efficacy	105	131		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			4	SDCM
CRI	80			
Radiation angle		115		deg
Photobiological safety			RG2	
Ethr			520	lux

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 55000 h at reference operating conditions.



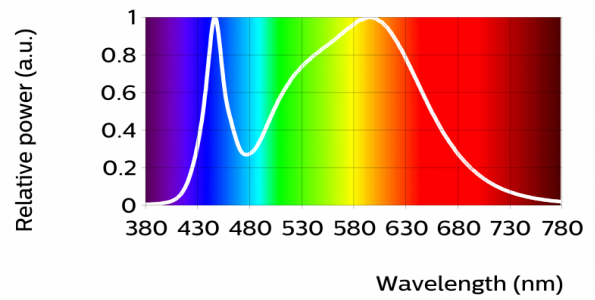
Fortimo FastFlex LED 2x6/840 DA G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2266	2518	2770	lm
Module efficacy	111	138		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			4	SDCM
CRI	80			
Radiation angle		115		deg
Photobiological safety			RG2	
Ethr			520	lux

Above data are initial data.

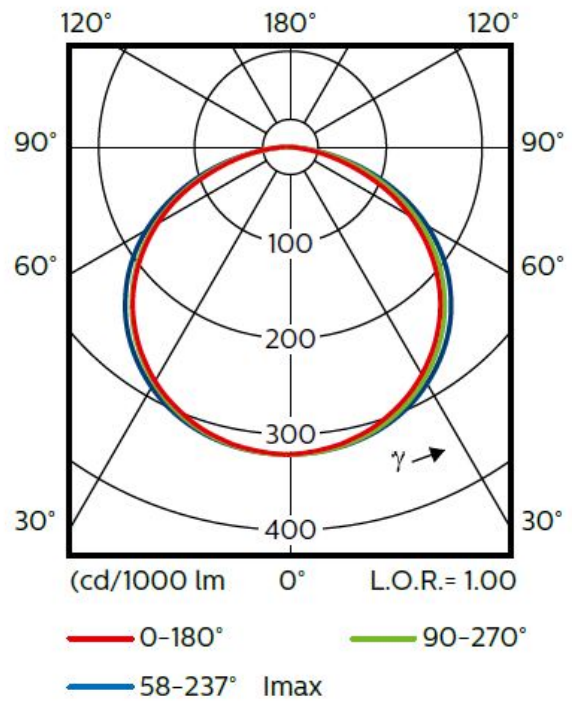
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5

A maximum color shift of 7 SDCM is specified for 55000 h at reference operating conditions.



Beam shape

The Philips LED module generates a Lambertian beam shape, which is a pragmatic starting point for OEMs wishing to design secondary optics.



Electrical characteristics

[Fortimo FastFlex LED 2x6/730 DA G4](#)
[Fortimo FastFlex LED 2x6/740 DA G4](#)
[Fortimo FastFlex LED 2x6/827 DA G4](#)
[Fortimo FastFlex LED 2x6/830 DA G4](#)
[Fortimo FastFlex LED 2x6/840 DA G4](#)

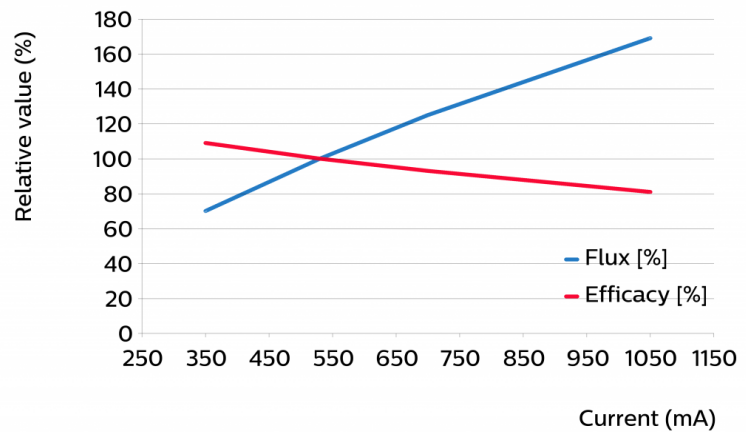
Parameter	Min	Typ	Max	Unit
Forward voltage	32.7	34.3	36.0	V
Power consumption		18.2	19.2	W

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	70	109
530	100	100
700	125	93
1050	169	81



Lumen maintenance

Operation point	Lumen maintenance x 1000 hours

Lifetime

Parameter	Value	Unit
C10 at Tc life	55000	hours

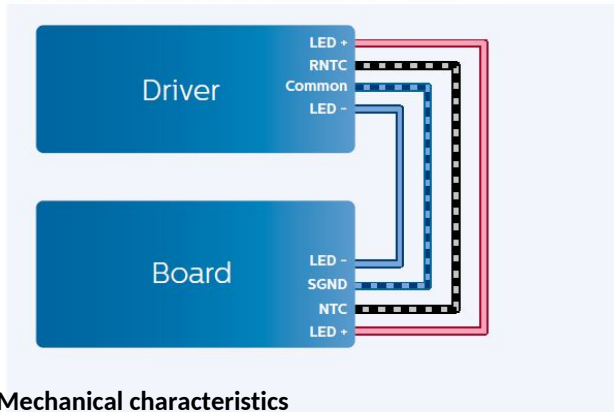
At I life L70B50>55000 hours.

Charts presenting module's Tc and current vs expected lifetime, as well as module's Tc and current vs expected lumen depreciation (L70 and above) are available via your sales representative.

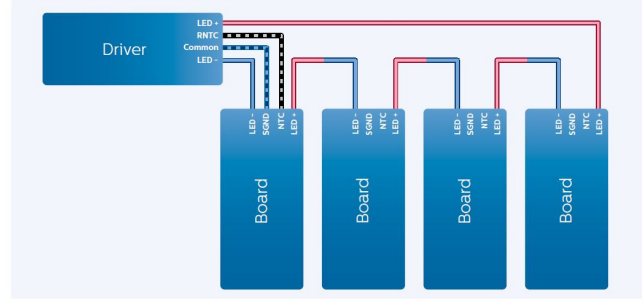
Wiring

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	

Connection between driver and FF-module



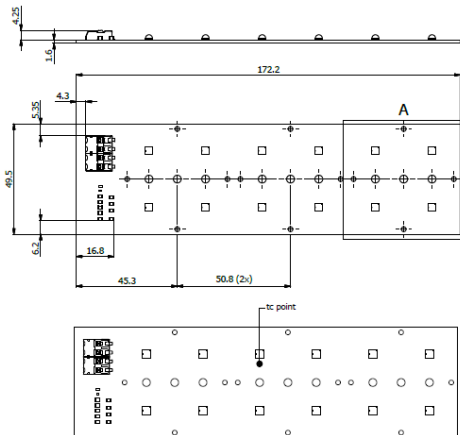
Multiple boards on one driver



Mechanical characteristics

- Fortimo FastFlex LED 2x6/730 DA G4
- Fortimo FastFlex LED 2x6/740 DA G4
- Fortimo FastFlex LED 2x6/827 DA G4
- Fortimo FastFlex LED 2x6/830 DA G4
- Fortimo FastFlex LED 2x6/840 DA G4

Parameter	Min	Typ	Max	Unit
Length	171.1	172.2	172.3	mm
Width	49.4	49.5	49.6	mm
Height excl.connector	1.5	1.6	1.7	mm
Height incl. connector	5.75	5.85	5.95	mm



Absolute ratings

Parameter	Min	Typ	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			40.2	W
ESD (direct contact)			8	kV
ESD (air)			15	kV
Working voltage			575	V _{dc}
Ambient temperature	-40		50	°C

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

Application information

Certificates and Standards

CE
ENEC
UL 8750

Environmental

RoHS/REACH

Zhaga

Compliant*

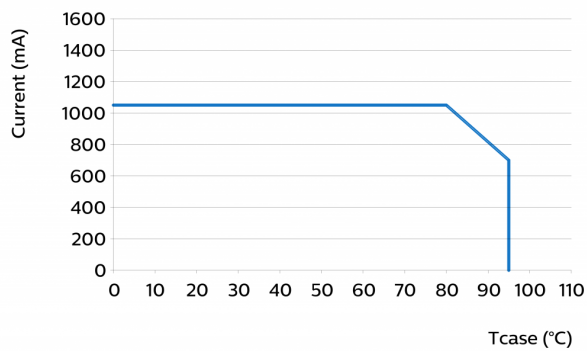
*Book 15, 2x6-DA

Application

IP rating	No IP-rating
Overheating protection	NTC 15k Ohm + 1100 Ohm resistor in series
Luminaire class	IEC Class I and Class II
Dimming	Yes

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

Performance Window





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