

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
- Embedded module surge protection
- Flexible lumen output
- Instant full light
- Zhaga book 15 compatible

March 2025



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

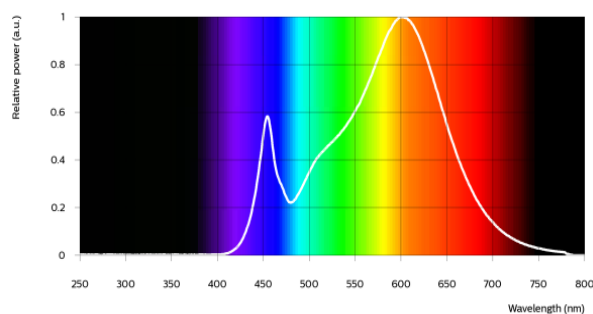
Parameter	Min	Typ	Max	Unit
Luminous flux	3608	3900	4293	lm
Efficacy		166		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.426, 0.395)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photobiological safety			RG1 unlimited	

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.

Operation point	830	lm	lm/W
80% I-nom 424mA	Tc 25 °C	3608	188
	Tc-nom 75 °C	3420	183
	Tc-max 90 °C	3356	181
I-nom 530mA	Tc 25 °C	4444	183
	Tc-nom 75 °C	3900	166
	Tc-max 90 °C	4133	176
I-max 700mA	Tc 25 °C	5744	176
	Tc-nom 75 °C	5443	171
	Tc-max 90 °C	5340	169



Fortimo FastFlex LED 4x16/840 DHE G4

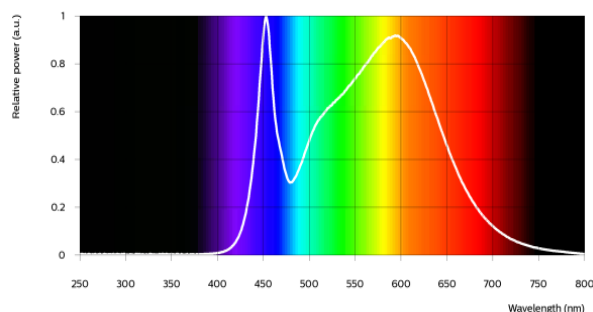
Parameter	Min	Typ	Max	Unit
Luminous flux	3897	4213	4529	lm
Efficacy		179		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.377, 0.373)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photobiological safety			RG1 unlimited	

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.

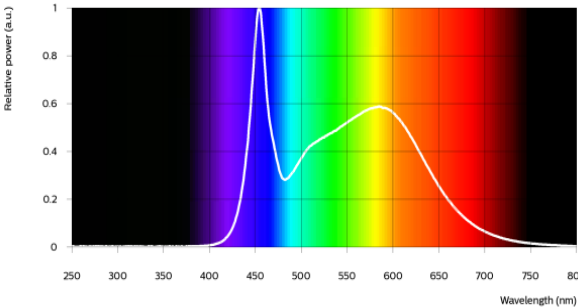
Operation point	840	lm	lm/W
80% I-nom 424mA	Tc 25 °C	3608	188
	Tc-nom 75 °C	3420	183
	Tc-max 90 °C	3356	181
I-nom 530mA	Tc 25 °C	4444	183
	Tc-nom 75 °C	4213	179
	Tc-max 90 °C	4133	176
I-max 700mA	Tc 25 °C	5744	176
	Tc-nom 75 °C	5443	171
	Tc-max 90 °C	5340	169



Parameter	Min	Typ	Max	Unit
Luminous flux	3897	4213	4529	lm
Efficacy		179		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.339, 0.345)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photobiological safety			RG1 unlimited	

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.

Operation point	850	lm	lm/W
80% I-nom 424mA	Tc 25 °C	3608	188
	Tc-nom 75 °C	3420	183
	Tc-max 90 °C	3356	181
I-nom 530mA	Tc 25 °C	4444	183
	Tc-nom 75 °C	4213	179
	Tc-max 90 °C	4133	176
I-max 700mA	Tc 25 °C	5744	176
	Tc-nom 75 °C	5443	171
	Tc-max 90 °C	5340	169



Electrical characteristics

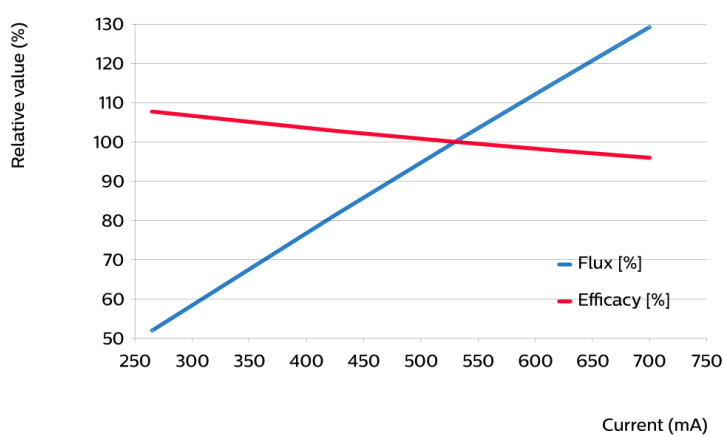
Parameter	Min	Typ	Max	Unit
Forward voltage	43.6	44.4	45.6	V
Power consumption	23.1	23.5	24.2	W = kWh/1000h
Number of modules in series per chain			5	
Number of modules per chain			1	
Number of modules in parallel			4	

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

Tuning information

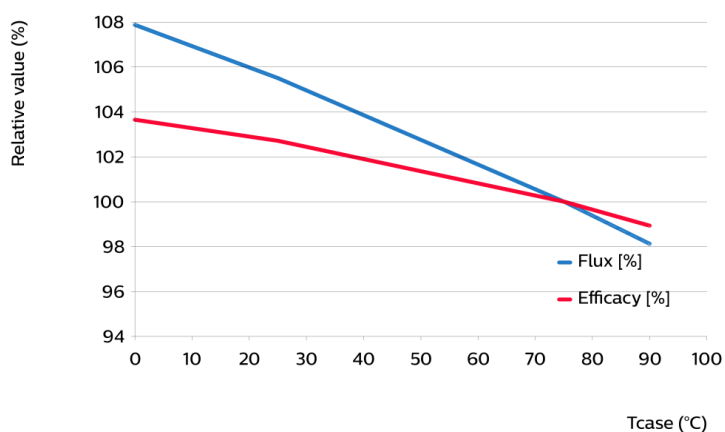
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
700	129	96
615	115	98
530	100	100
424	81	103
265	52	108



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

Tc [°C]	Flux [%]	Efficacy [%]
90	98	99
75	100	100
25	106	103
0	108	104



Lifetime

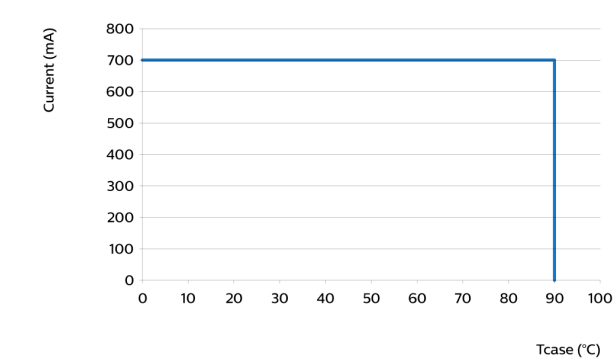
Parameter	Value	Unit
C10 at Tc life	50000	hours

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.

Performance Window

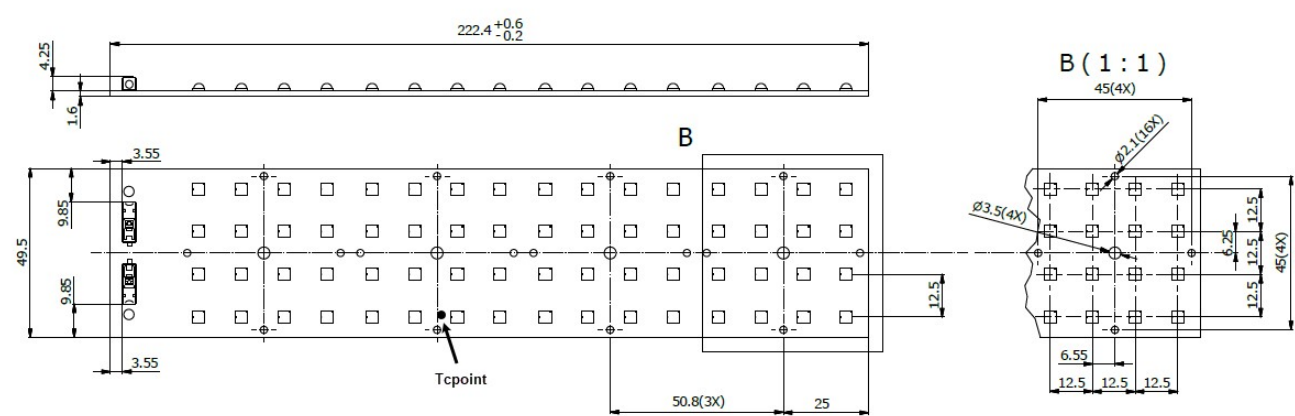


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25...0.75	mm²	solid wire
	18...24	AWG	solid wire
Input wire strip length	7.5...8.5	mm	
Input wire cross-section	0.33...0.5	mm²	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	7.5...8.5	mm	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	222.2	222.4	223	mm
Width	49.35	49.5	49.65	mm
Height excl.connector	1.45	1.6	1.75	mm
Height incl. connector	4.1	4.25	4.4	mm
Product mass		35		gram



Absolute ratings

Parameter	Min	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		350	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

UL 2108

Environmental

RoHS/REACH

Application

IP rating	No IP-rating
Overheating protection	No
Dimming	Yes



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