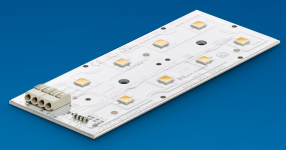
PHILIPS

Fortimo

LED

Fortimo FastFlex LED 2x4 DA HE



Datasheet

High efficiency in familiar form factor

Fortimo FastFlex 2x4 DA HE

Choose Fortimo FastFlex DA HE for high efficiencies in industry familiar form factors
Application:
- Road lighting
- Urban street lighting
- Flood and area lighting
- Tunnel lighting
- High bay lighting

Key features and benefits

- High efficiencies on LED module level in familiar form factors
- Various combinations of size, CRI and CCT available
- Mechanically backwards compatible with DA Gen 4+/Gen 5
- Reliability testing for OEM peace of mind
- Embedded module surge protection
- Philips system warranty

March 2025

indirect

100%
instant

Zhaga

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 2x4/722 DA HE	8720169 284623 00	9290 039 67606	25
Fortimo FastFlex LED 2x4/727 DA HE	8719514 403130 00	9290 034 01106	25
Fortimo FastFlex LED 2x4/730 DA HE	8719514 403154 00	9290 034 01206	25
Fortimo FastFlex LED 2x4/740 DA HE	8719514 403178 00	9290 034 01306	25

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex LED 2x4 DA HE	480	1050	1500	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	80	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

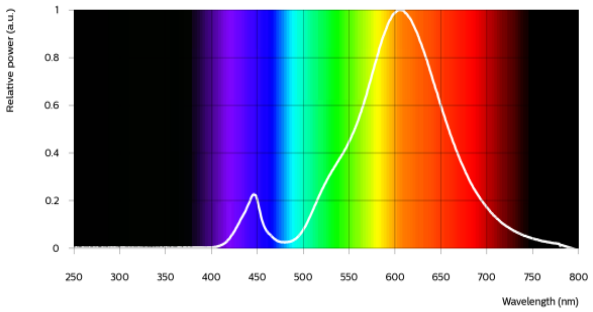
Optical characteristics - table per color (CCT)

Fortimo FastFlex LED 2x4/722 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1557	1730	1903	lm
Efficacy	145	162	178	lm/W
Correlated color temperature (CCT)		2200		K
Color coordinates (CIEx, CIEy)		(0.505, 0.417)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photobiological safety			RG1 unlimited	

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	722	lm	lm/W
80% I-nom 384mA	Tc 25 °C	1491	173
	Tc-nom 80 °C	1398	165
	Tc-max 95 °C	1366	163
I-nom 480mA	Tc 25 °C	1846	169
	Tc-nom 80 °C	1730	162
	Tc-max 95 °C	1689	159
I-max 1500mA	Tc 25 °C	5335	139
	Tc-nom 80 °C	4943	131
	Tc-max 95 °C	4805	128

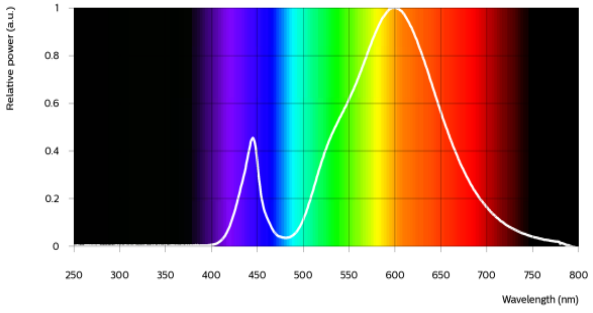


Fortimo FastFlex LED 2x4/727 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1593	1770	1989	lm
Efficacy	150	167	197	lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.455, 0.409)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photobiological safety			RG1 unlimited	

Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	727	lm	lm/W
80% I-nom 384mA	Tc 25 °C	1525	178
	Tc-nom 80 °C	1430	171
	Tc-max 95 °C	1397	168
I-nom 480mA	Tc 25 °C	1889	174
	Tc-nom 80 °C	1770	167
	Tc-max 95 °C	1728	164
I-max 1500mA	Tc 25 °C	5460	144
	Tc-nom 80 °C	5061	136
	Tc-max 95 °C	4921	132

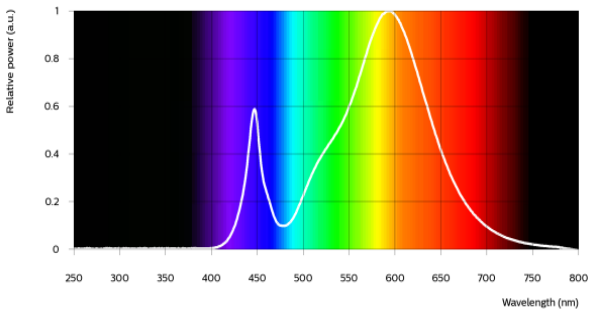


Fortimo FastFlex LED 2x4/730 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1750	1945	2141	lm
Efficacy	165	183	211	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.433, 0.404)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photobiological safety			RG1 unlimited	

Measurement precision ± 5% for the flux data and ± 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 384mA	Tc 25 °C	1676	196
	Tc-nom 80 °C	1571	188
	Tc-max 95 °C	1535	184
I-nom 480mA	Tc 25 °C	2075	192
	Tc-nom 80 °C	1945	183
	Tc-max 95 °C	1899	180
I-max 1500mA	Tc 25 °C	6005	158
	Tc-nom 80 °C	5571	149
	Tc-max 95 °C	5418	146

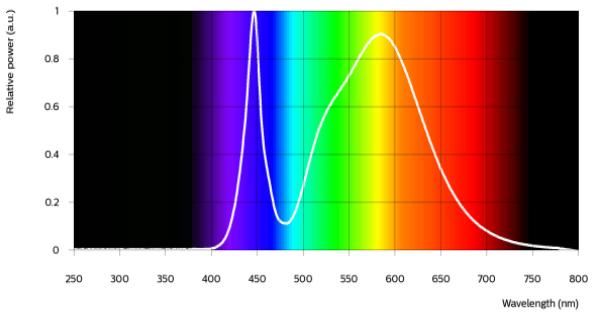


Fortimo FastFlex LED 2x4/740 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	1804	2005	2238	lm
Efficacy	170	189	221	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.379, 0.379)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photobiological safety			RG1 unlimited	

Measurement precision ± 5% for the flux data and ± 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 384mA	Tc 25 °C	1727	202
	Tc-nom 80 °C	1620	194
	Tc-max 95 °C	1582	190
I-nom 480mA	Tc 25 °C	2139	198
	Tc-nom 80 °C	2005	189
	Tc-max 95 °C	1958	186
I-max 1500mA	Tc 25 °C	6192	163
	Tc-nom 80 °C	5746	154
	Tc-max 95 °C	5589	150



Electrical characteristics

Fortimo FastFlex LED 2x4/727 DA HE
Fortimo FastFlex LED 2x4/730 DA HE
Fortimo FastFlex LED 2x4/740 DA HE

Parameter	Min	Typ	Max	Unit
Forward voltage	21.2	22.1	22.8	V
Power consumption	10.2	10.6	10.9	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%

Fortimo FastFlex LED 2x4/722 DA HE

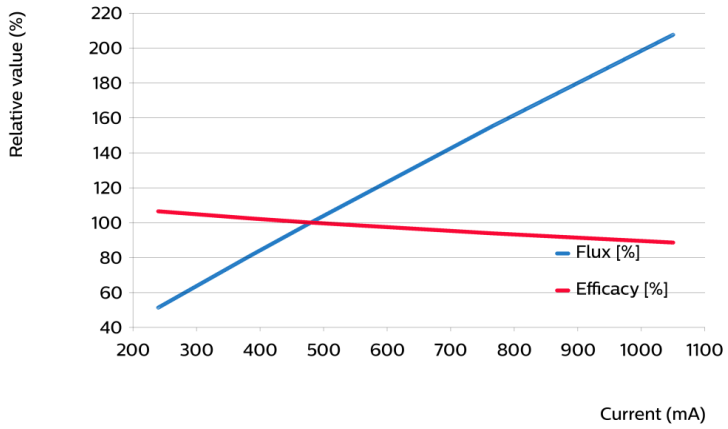
Parameter	Min	Typ	Max	Unit
Forward voltage	21.2	22.3	22.8	V
Power consumption	10.2	10.7	10.9	W = kWh/1000h
Number of modules in series per chain			10	
Number of modules in parallel			1	

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

Tuning information

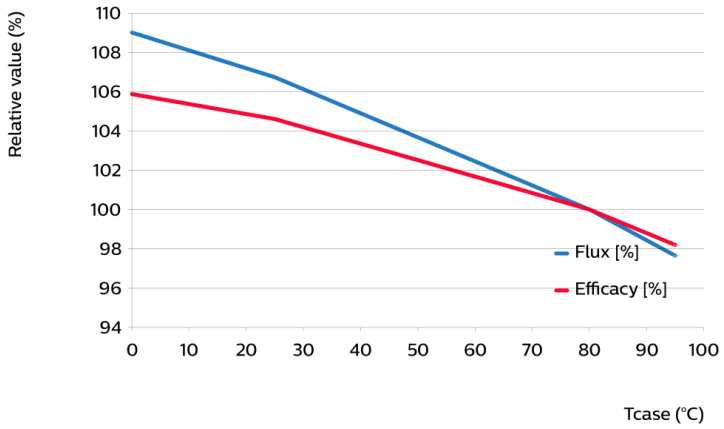
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1050	208	89
765	155	94
480	100	100
384	81	102
240	51	106



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

Tc [°C]	Flux [%]	Efficacy [%]
95	98	98
80	100	100
25	107	105
0	109	106



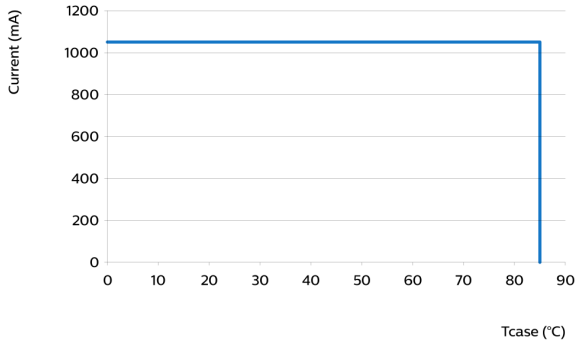
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
I 480mA	Tc 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 65°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 85°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
I 700mA	Tc 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 65°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 85°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
I 1050mA	Tc 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 65°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 85°C	>100	>100	>100	>100	>100	>100	>100	>100	>100

Lifetime

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

Performance Window

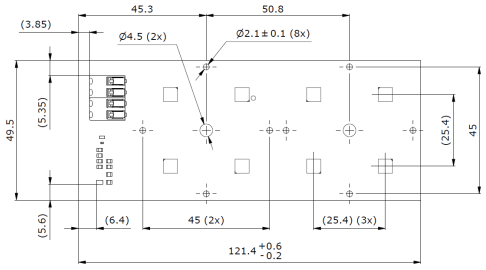


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25…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

Parameter	Min	Typ	Max	Unit
Length	121.2	121.4	122	mm
Width	49.3	49.5	49.7	mm
Height including connector		6.1		mm
Height PCB		1.6		mm
Product mass		27.7		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		37.6	W
ESD (direct contact)	8		kV
ESD (air)	15		kV
Working voltage		575	V_{dc}
Ambient temperature	-40	50	°C
Storage temperature	-20	80	°C

Application information

Certificates and Standards
CE
ENEC
cULus
ENEC+

Environmental
RoHS/REACH

Zhaga	Compliant*

*Book 15, 2x4-DA. Certification applies to selected products. Visit the Zhaga website for details: https://www.zhagastandard.org/

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

UK importer address: Signify Commercial UK Limited, 3 Guildford Business Park, GU2 8XG

18/03/2025

www.philips.com/oem