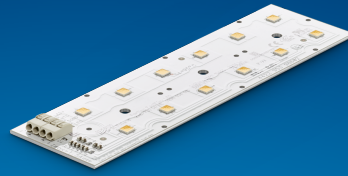


PHILIPS

Fortimo

LED

Fortimo FastFlex LED 2x6
DA HE



Datasheet

High efficiency in familiar form factor

Fortimo FastFlex 2x6 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
- Patented module surge protection
- Philips system warranty

December 2023



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 2x6/722 DA HE	8720169 284685 00	9290 039 67906	25
Fortimo FastFlex LED 2x6/727 DA HE	8719514 403192 00	9290 034 01406	25
Fortimo FastFlex LED 2x6/730 DA HE	8719514 403215 00	9290 034 01506	25
Fortimo FastFlex LED 2x6/740 DA HE	8719514 403239 00	9290 034 01606	25

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex LED 2x6 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)

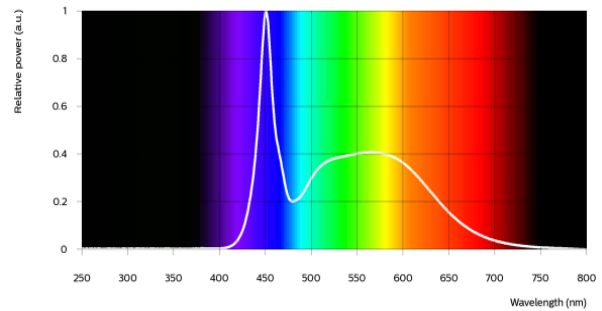
Fortimo FastFlex LED 2x6/722 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2336	2595	2855	lm
Efficacy	146	162	179	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 $\pm 5\%$ 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	722	lm	lm/W
80% I-nom 384mA	Tc 25 °C	2236	174
	Tc-nom 80 °C	2097	166
	Tc-max 95 °C	2048	163
I-nom 480mA	Tc 25 °C	2770	170
	Tc-nom 80 °C	2595	162
	Tc-max 95 °C	2534	159
I-max 1500mA	Tc 25 °C	8003	140
	Tc-nom 80 °C	7416	132
	Tc-max 95 °C	7210	129



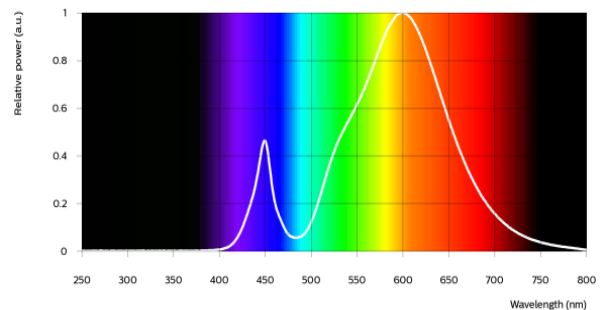
Fortimo FastFlex LED 2x6/727 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2390	2655	2984	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			
Photometric code		727/569		
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	727	lm	lm/W
80% I-nom 384mA	Tc 25 °C	2288	178
	Tc-nom 80 °C	2145	171
	Tc-max 95 °C	2096	168
I-nom 480mA	Tc 25 °C	2833	174
	Tc-nom 80 °C	2655	167
	Tc-max 95 °C	2593	164
I-max 1500mA	Tc 25 °C	8190	143
	Tc-nom 80 °C	7592	135
	Tc-max 95 °C	7381	132

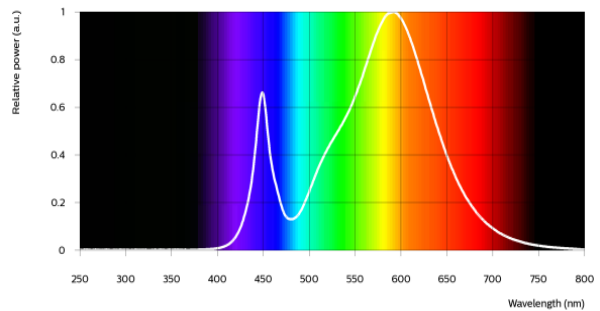


Fortimo FastFlex LED 2x6/730 DA HE


Parameter	Min	Typ	Max	Unit
Luminous flux	2628	2920	3215	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			
Photometric code		730/569		
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	2515	196
	Tc-nom 80 °C	2359	188
	Tc-max 95 °C	2305	184
I-nom 480mA	Tc 25 °C	3116	192
	Tc-nom 80 °C	2920	183
	Tc-max 95 °C	2852	180
I-max 1500mA	Tc 25 °C	9015	158
	Tc-nom 80 °C	8364	149
	Tc-max 95 °C	8134	146

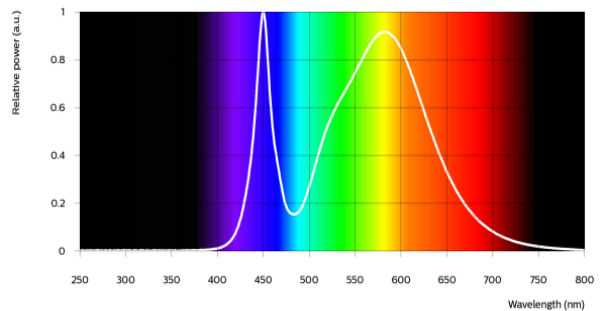


Fortimo FastFlex LED 2x6/740 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	2700	3000	3348	lm
Efficacy	169	188	220	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.379, 0.379)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photometric code		740/569		
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	2584	201
	Tc-nom 80 °C	2424	193
	Tc-max 95 °C	2368	189
I-nom 480mA	Tc 25 °C	3201	197
	Tc-nom 80 °C	3000	188
	Tc-max 95 °C	2930	185
I-max 1500mA	Tc 25 °C	9265	162
	Tc-nom 80 °C	8597	153
	Tc-max 95 °C	8362	150



Electrical characteristics

[Fortimo FastFlex LED 2x6/727 DA HE](#)

[Fortimo FastFlex LED 2x6/730 DA HE](#)

[Fortimo FastFlex LED 2x6/740 DA HE](#)

Parameter	Min	Typ	Max	Unit
Forward voltage	31.8	33.2	34.2	V
Power consumption	15.3	15.9	16.4	W = kWh/1000h
Number of modules in series per chain			10	
Number of modules in parallel			1	

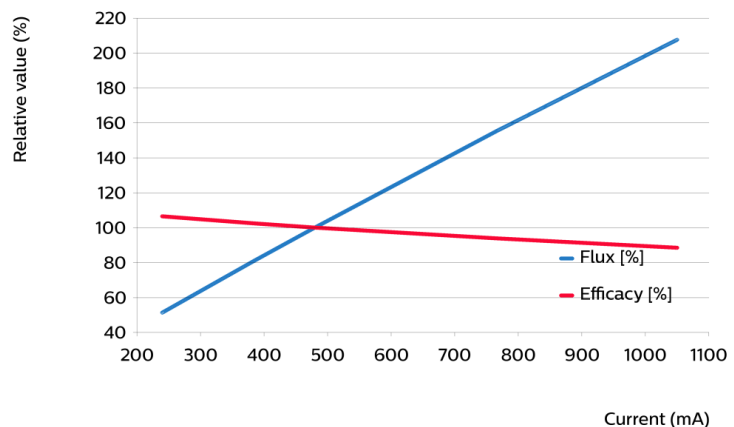
[Fortimo FastFlex LED 2x6/722 DA HE](#)

Parameter	Min	Typ	Max	Unit
Forward voltage	31.6	33.3	34.0	V
Power consumption	15.2	16.0	16.4	W = kWh/1000h
Number of modules in series per chain			10	
Number of modules in parallel			1	

Tuning information

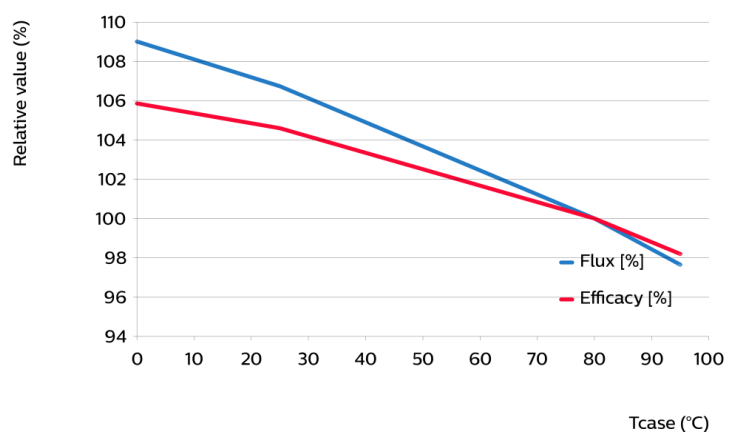
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1050	208	88
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



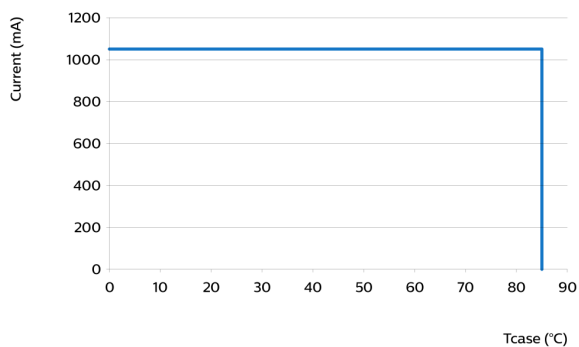
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=384mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc_nom=80°C	>100	>100	>100	>100	>100	>100	72	68	66
	Tc_life=85°C	>100	>100	>100	>100	>100	>100	67	64	62
Inom=480mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc_nom=80°C	>100	>100	>100	>100	>100	>100	68	65	64
	Tc_life=85°C	>100	>100	>100	>100	>100	>100	64	61	60
Ilife=700mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc_nom=80°C	>100	>100	>100	>100	>100	>100	64	60	59
	Tc_life=85°C	>100	>100	>100	>100	>100	>100	60	57	55

Lifetime

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

Performance Window

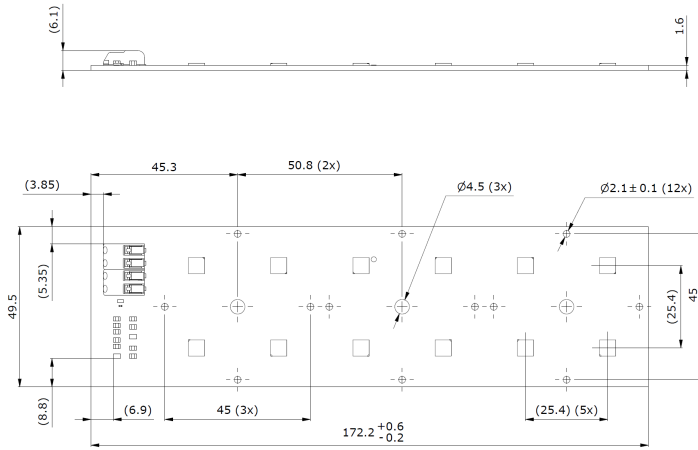


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.33...0.5	mm ²	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	7.5...8.5	mm	
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	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	172	172.2	172.8	mm
Width	49.3	49.5	49.7	mm
Height including connector		6.1		mm
Height PCB		1.6		mm
Product mass		39.2		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		56.2	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

Environmental

RoHS/REACH

Application

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



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