

PHILIPS

Fortimo

LED

Fortimo FastFlex LED 2x8
DA HE



Datasheet

High efficiency in familiar form factor

Fortimo FastFlex 2x8 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



Zhaga

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 2x8/722 DA HE	8720169 284746 00	9290 039 68206	25
Fortimo FastFlex LED 2x8/727 DA HE	8719514 403253 00	9290 034 01706	25
Fortimo FastFlex LED 2x8/730 DA HE	8719514 403277 00	9290 034 01806	25
Fortimo FastFlex LED 2x8/740 DA HE	8719514 403291 00	9290 034 01906	25
Fortimo FastFlex LED 2x8/750 DA HE		9290 027 71213	25
Fortimo FastFlex LED 2x8/840 DA HE	8720169 284760 00	9290 039 68306	25

*Some product types are region-specific. Please consult with your sales representative for more information.

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex LED 2x8 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)

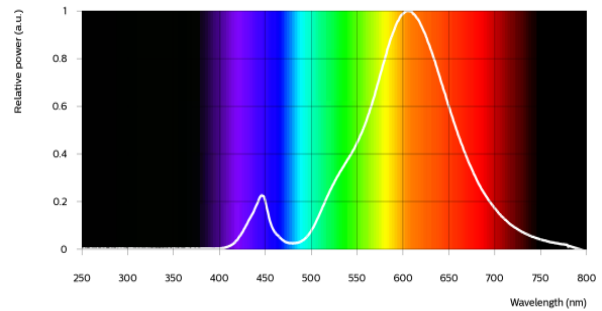
Fortimo FastFlex LED 2x8/722 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3114	3460	3806	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	2982	174
	Tc-nom 80 °C	2796	166
	Tc-max 95 °C	2731	164
I-nom 480mA	Tc 25 °C	3693	170
	Tc-nom 80 °C	3460	162
	Tc-max 95 °C	3379	160
I-max 1500mA	Tc 25 °C	10671	140
	Tc-nom 80 °C	9889	132
	Tc-max 95 °C	9614	129



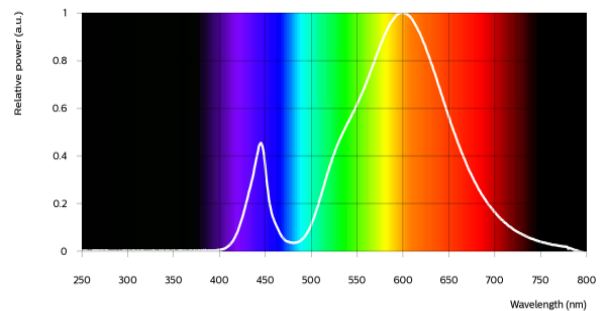
Fortimo FastFlex LED 2x8/727 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3190	3545	3985	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 $\pm 5\%$ 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	3055	179
	Tc-nom 80 °C	2865	172
	Tc-max 95 °C	2798	169
I-nom 480mA	Tc 25 °C	3783	174
	Tc-nom 80 °C	3545	167
	Tc-max 95 °C	3462	164
I-max 1500mA	Tc 25 °C	10936	144
	Tc-nom 80 °C	10137	136
	Tc-max 95 °C	9856	133



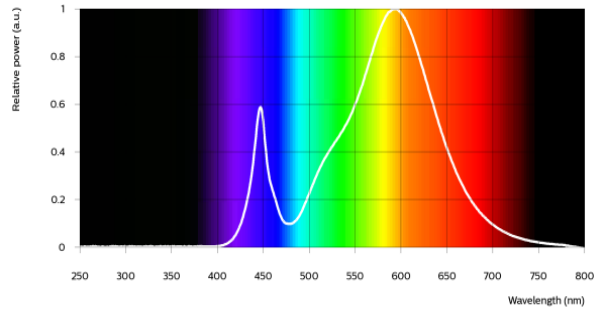
Fortimo FastFlex LED 2x8/730 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3501	3890	4283	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	3351	196
	Tc-nom 80 °C	3143	188
	Tc-max 95 °C	3070	185
I-nom 480mA	Tc 25 °C	4150	191
	Tc-nom 80 °C	3890	183
	Tc-max 95 °C	3799	180
I-max 1500mA	Tc 25 °C	12010	158
	Tc-nom 80 °C	11142	149
	Tc-max 95 °C	10837	146



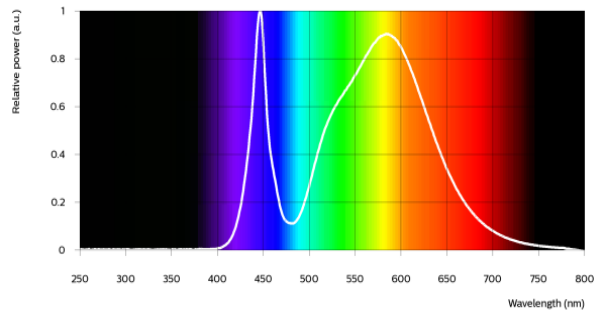
Fortimo FastFlex LED 2x8/740 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3609	4010	4475	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	3454	202
	Tc-nom 80 °C	3240	194
	Tc-max 95 °C	3165	191
I-nom 480mA	Tc 25 °C	4278	197
	Tc-nom 80 °C	4010	189
	Tc-max 95 °C	3916	186
I-max 1500mA	Tc 25 °C	12385	163
	Tc-nom 80 °C	11493	154
	Tc-max 95 °C	11179	150



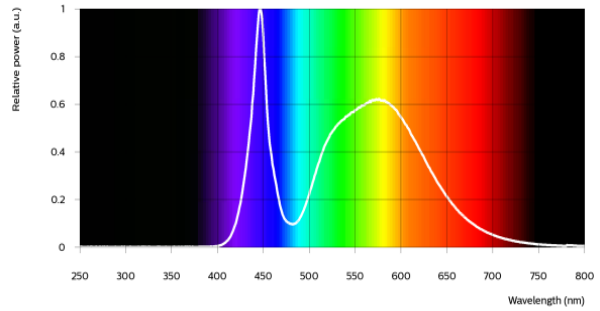
Fortimo FastFlex LED 2x8/750 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3580	3980	4380	lm
Efficacy	170	189	208	lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.341, 0.350)		-
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	750	lm	lm/W
80% I-nom 384mA	Tc 25 °C	3479	205
	Tc-nom 80 °C	3210	192
	Tc-max 95 °C	3122	188
I-nom 480mA	Tc 25 °C	4314	201
	Tc-nom 80 °C	3980	189
	Tc-max 95 °C	3870	184
I-max 1500mA	Tc 25 °C	12576	170
	Tc-nom 80 °C	11550	159
	Tc-max 95 °C	11211	155



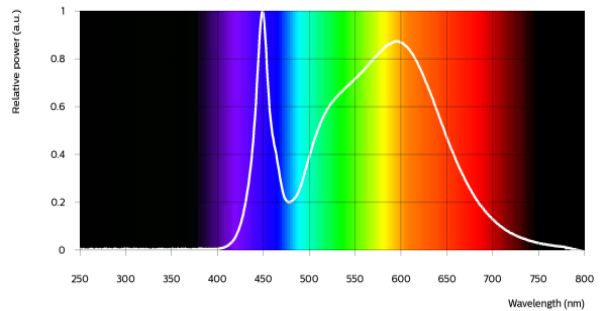
Fortimo FastFlex LED 2x8/840 DA HE

Parameter	Min	Typ	Max	Unit
Luminous flux	3456	3840	4224	lm
Efficacy	163	180	199	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.385, 0.383)		-
Color consistency			5	SDCM
CRI	80			
R9	0			
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	840	lm	lm/W
80% I-nom 384mA	Tc 25 °C	3308	193
	Tc-nom 80 °C	3103	185
	Tc-max 95 °C	3031	181
I-nom 480mA	Tc 25 °C	4097	189
	Tc-nom 80 °C	3840	180
	Tc-max 95 °C	3750	178
I-max 1500mA	Tc 25 °C	11854	156
	Tc-nom 80 °C	10996	147
	Tc-max 95 °C	10693	144



Electrical characteristics

[Fortimo FastFlex LED 2x8/727 DA HE](#)

[Fortimo FastFlex LED 2x8/730 DA HE](#)

[Fortimo FastFlex LED 2x8/740 DA HE](#)

Parameter	Min	Typ	Max	Unit
Forward voltage	42.3	44.2	45.6	V
Power consumption	20.3	21.2	21.9	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 2x8/722 DA HE](#)

[Fortimo FastFlex LED 2x8/750 DA HE](#)

[Fortimo FastFlex LED 2x8/840 DA HE](#)

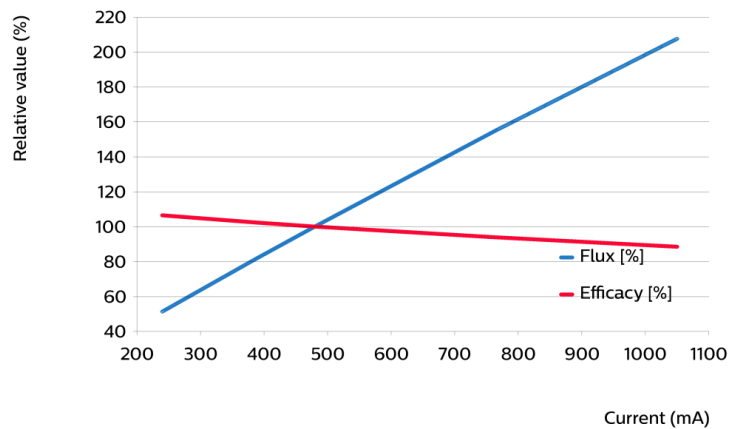
Parameter	Min	Typ	Max	Unit
Forward voltage	42.1	44.3	45.3	V
Power consumption	20.2	21.3	21.7	W = kWh/1000h
Number of modules in series per chain			10	
Number of modules in parallel			1	

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

Tuning information

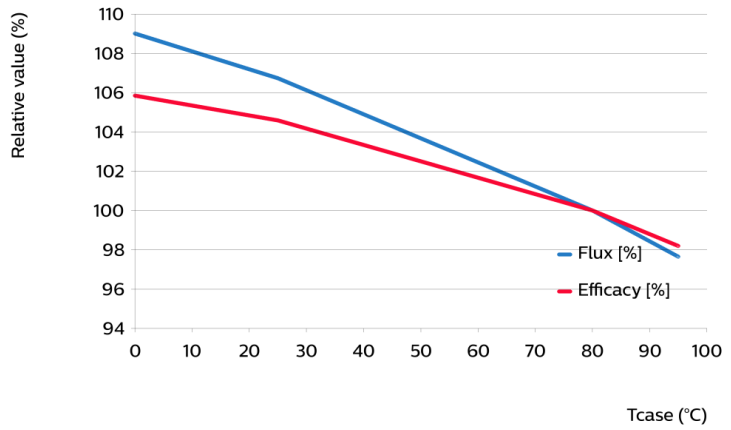
Flux and efficacy versus current (at Tc nominal)

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



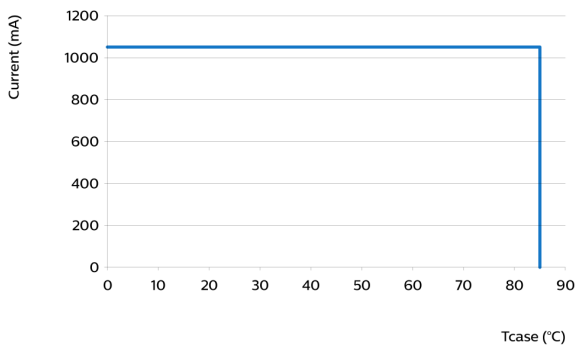
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
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

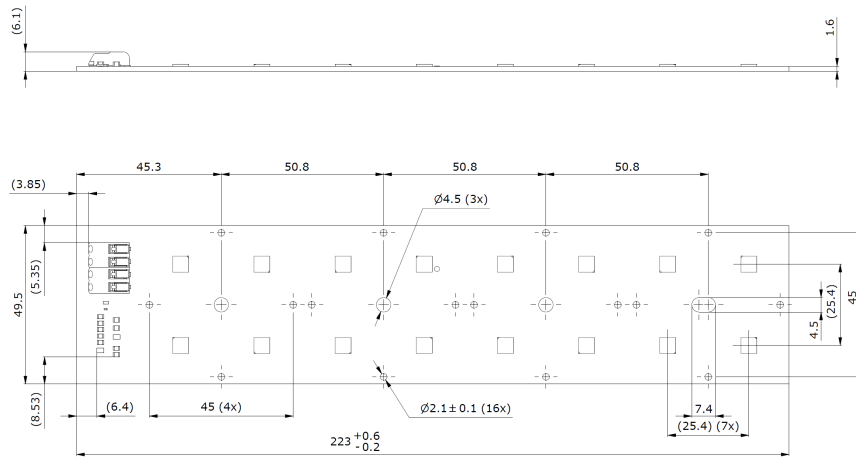


Wiring

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	222.8	223	223.6	mm
Width	49.3	49.5	49.7	mm
Height including connector		6.1		mm
Height PCB		1.6		mm
Product mass		49.7		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1500	mA
Case temperature (T _c -max)		95	°C
Power at rated V _f -max and I-max		74.7	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, 2x8-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



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