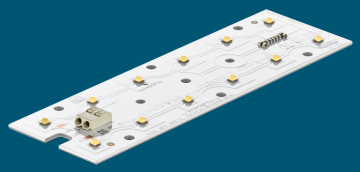
Xitanium

Datasheet

Fortimo FastFlex LED 2x6 DP G5



Protection on LED module level

FastFlex DP G5

Combine Fortimo FastFlex DP G5 with third-party lenses for instant protection
Application:

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

Key features and benefits

- IP66 protected LED module in combination with third-party lenses
- Module efficacy upgrade compared to previous generations
- Mechanically backwards compatible with Gen 4+
- Best-in-class reliability testing for OEM peace of mind
- Embedded module surge protection
- Philips system warranty



Ordering data

Commercial product name	EOC	12NC	EPREL No.	EPREL model ID	Box quantity
Fortimo FastFlex LED 2x6/730 DP G5	8719514 318571 00	9290 028 68306	2883584	929002868306X	25
Fortimo FastFlex LED 2x6/740 DP G5	8719514 318595 00	9290 028 68406	2883580	929002868406X	25
Fortimo FastFlex LED 2x6/757 DP G5	8719514 318632 00	9290 028 68606	2883633	929002868606X	25
Fortimo FastFlex LED 2x6/840 DP G5	8719514 318618 00	9290 028 68506	2883587	929002868506X	25

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex LED 2x6 DP G5	530	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

Fortimo FastFlex LED 2x6/730 DP G5
Fortimo FastFlex LED 2x6/740 DP G5
Fortimo FastFlex LED 2x6/757 DP G5

	3000K	4000K	5700K	Unit
Luminous flux (Φuse)*	2830	3065	3085	lm
Efficacy*	159	172	173	lm/W
Average Luminous flux (tolerance -5% + 5%)	3097	3324	3295	lm
Average Efficacy (tolerance -5% + 5%)	176	189	187	lm/W
Max. Efficacy	194	206	205	lm/W
Max. Color consistency	5	5	5	SDCM
Color coordinates (CIEx, CIEy)	0.436, 0.404	0.385, 0.383	0.330, 0.345	
Min. CRI	70	70	70	
Min. R9	-50	-50	-50	
Photometric code	730/579	740/579	757/579	
Max. Photobiological safety	RG2	RG2	RG2	
Ethr	860	860	860	
Energy label EPREL	D 	D 	C 	

Fortimo FastFlex LED 2x6/840 DP G5

	4000K	Unit
Luminous flux (Φuse)*	2680	lm
Efficacy*	151	lm/W
Average Luminous flux (tolerance -5% + 5%)	2962	lm
Average Efficacy (tolerance -5% + 5%)	169	lm/W
Max. Efficacy	184	lm/W
Max. Color consistency	5	SDCM
Color coordinates (CIEx, CIEy)	0.385, 0.383	
Min. CRI	80	
Min. R9	0	
Photometric code	840/579	
Max. Photobiological safety	RG2	
Ethr	860	
Energy label EPREL	D 	

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

* Luminous flux(Φuse) and Efficacy refer to Single Lighting Regulation (SLR). Luminous flux(Φuse) means the part of the luminous flux of a light source that is considered when determining its energy efficiency: – for non-directional light sources it is the total flux emitted in a solid angle of 4π sr (corresponding to a 360° sphere)

Tuning table

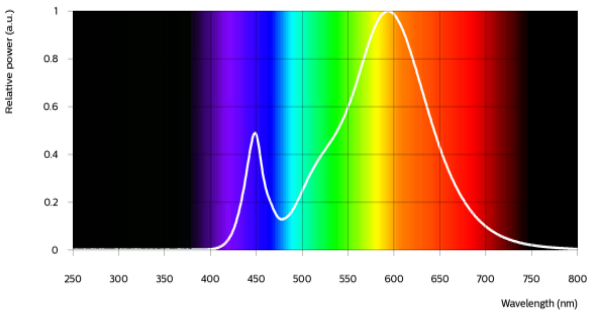
Operation Point		Current	3000K	4000K	5700K	Unit
Tc = 25°C	Luminous flux	80% I-nom 424mA	2438	2639	2656	lm
		I-nom 530mA	2976	3223	3243	lm
		I-max 1500mA	7272	7877	7927	lm
	Efficacy	80% I-nom 424mA	167	181	182	lm/W
		I-nom 530mA	162	175	177	lm/W
		I-max 1500mA	131	142	143	lm/W
Tc = 80°C	Luminous flux	80% I-nom 424mA	2318	2510	2526	lm
		I-nom 530mA	3097	3324	3295	lm
		I-max 1500mA	6831	7407	7455	lm
	Efficacy	80% I-nom 424mA	164	178	179	lm/W
		I-nom 530mA	176	189	187	lm/W
		I-max 1500mA	127	138	138	lm/W
Tc = 95°C	Luminous flux	80% I-nom 424mA	2259	2447	2462	lm
		I-nom 530mA	2757	2987	3006	lm
		I-max 1500mA	6612	7173	7220	lm
	Efficacy	80% I-nom 424mA	161	175	176	lm/W
		I-nom 530mA	156	169	170	lm/W
		I-max 1500mA	124	134	135	lm/W

Operation Point		Current	4000K	Unit
Tc = 25°C	Luminous flux	80% I-nom 424mA	2309	lm
		I-nom 530mA	2820	lm
		I-max 1500mA	6887	lm
	Efficacy	80% I-nom 424mA	159	lm/W
		I-nom 530mA	154	lm/W
		I-max 1500mA	124	lm/W
Tc = 80°C	Luminous flux	80% I-nom 424mA	2195	lm
		I-nom 530mA	2962	lm
		I-max 1500mA	6465	lm
	Efficacy	80% I-nom 424mA	156	lm/W
		I-nom 530mA	169	lm/W
		I-max 1500mA	120	lm/W
Tc = 95°C	Luminous flux	80% I-nom 424mA	2139	lm
		I-nom 530mA	2611	lm
		I-max 1500mA	6255	lm
	Efficacy	80% I-nom 424mA	153	lm/W
		I-nom 530mA	148	lm/W
		I-max 1500mA	117	lm/W

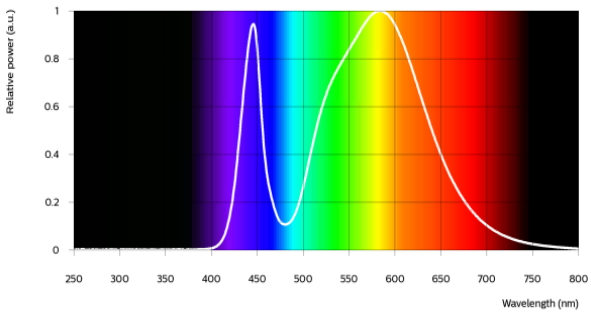
*Based on average value

Spectral characteristics

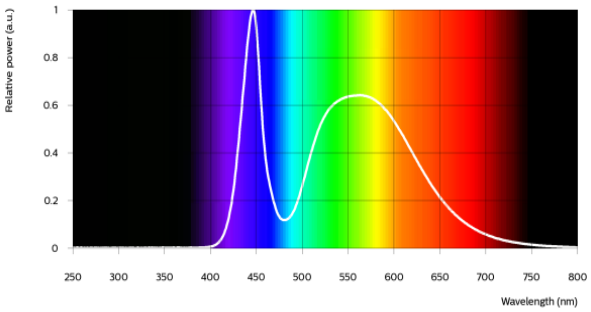
CRI70 3000K



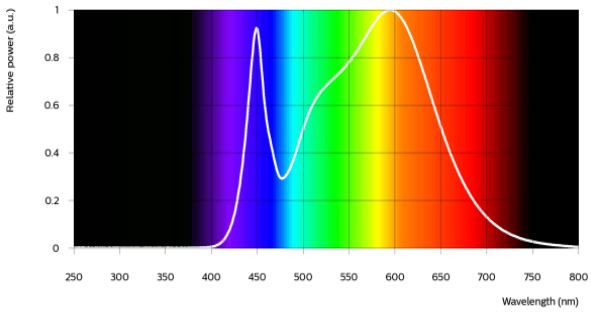
CRI70 4000K



CRI70 5700K



CRI80 4000K



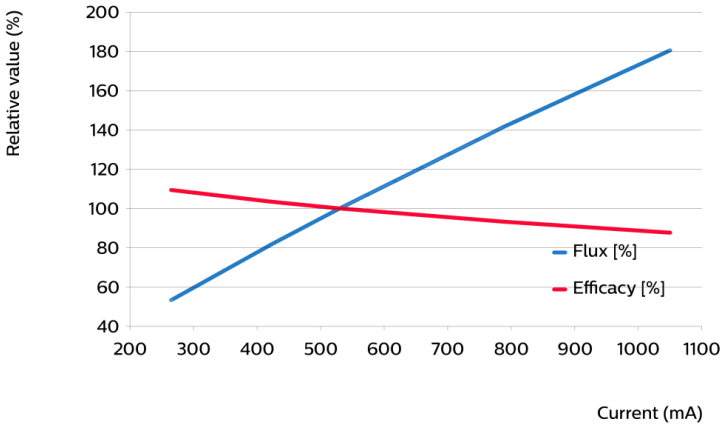
Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	31.8	33.6	34.8	V
Power consumption	16.9	17.8	18.4	W = kWh/1000h
Number of modules in series per chain			10	
Number of modules in parallel			1	

Tuning information

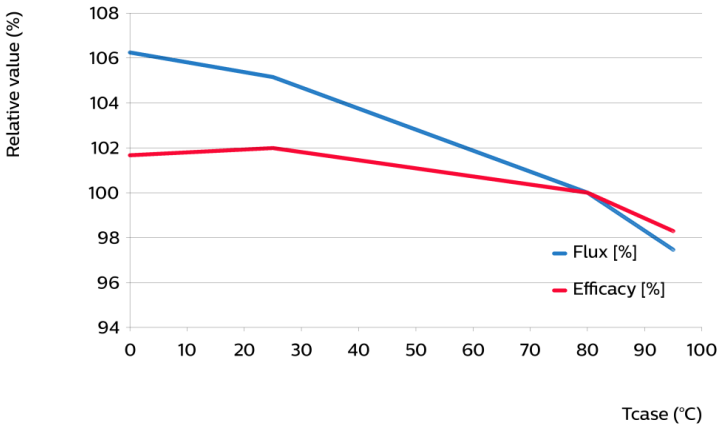
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1050	180	88
790	142	93
530	100	100
424	82	103
265	53	109



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

Tc [°C]	Flux [%]	Efficacy [%]
95	97	98
80	100	100
25	105	102
0	106	102



Lumen maintenance

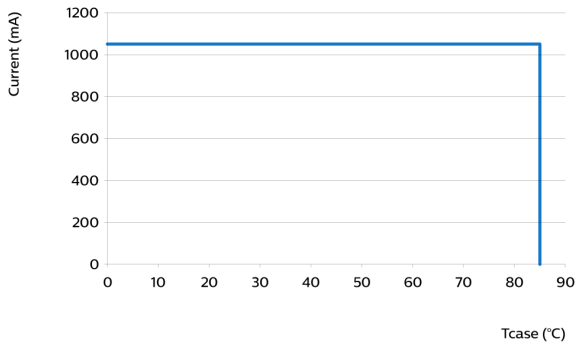
Operation point	Lumen maintenance x 1000 hours	L70 B50	L70 B20	L70 B10	L80 B50	L80 B20	L80 B10	L90 B50	L90 B20	L90 B10
I 530 mA	Tc 60°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 70°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 80°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
I 700 mA	Tc 60°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 70°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 80°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
I 1050 mA	Tc 60°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 70°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 80°C	>100	>100	>100	>100	>100	>100	>100	>100	>100

We use a Philips designed lifetime model, which uses LM80 data as only one of its inputs and assumes a continues operation of the module.
*B20 and B10 values are calculated by means of statistical techniques.

Lifetime

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

Performance Window

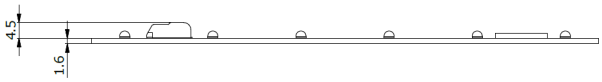


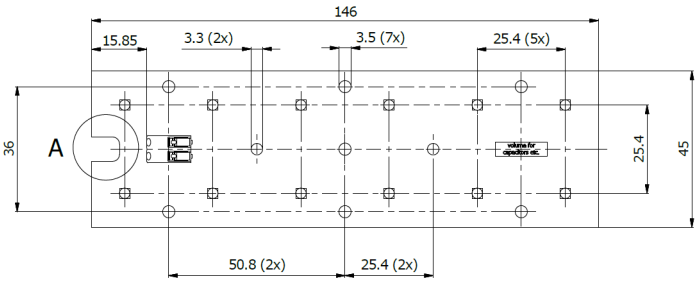
Wiring

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

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	145.9	146	146.1	mm
Width	44.9	45	45.1	mm
Height excl.connector	1.5	1.6	1.7	mm
Height incl. connector	6	6.1	6.2	mm
Product mass		29		gram





Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1500	mA
Case temperature (Tc-max)		95	°C
Thermal power at I-max and Tc-max (Pth)		36.01	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
ENEC+
UL

Zhaga	Compliant*

*Book 19, 2x6-IP

Application	
Overheating protection	No
Dimming	Yes

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