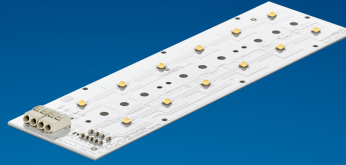


PHILIPS

Fortimo

LED

Fortimo FastFlex LED 2x6
DA G5



Datasheet

One-fits-all solution

FastFlex DA G5

Choose Fortimo FastFlex DA G5 for unlimited optical configurations

Application:

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

Key features and benefits

- One-fits-all solution thanks to the familiar array
- Large selection of sizes, CRI and CCT combinations
- Module efficacy upgrade compared to previous generations
- Mechanically backwards compatible with Gen 4+
- Best-in-class reliability testing for OEM peace of mind
- Patented module surge protection
- Philips system warranty

September 2023



Zhaga

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 2x6/722 DA G5	8719514 318229 00	9290 028 66706	25
Fortimo FastFlex LED 2x6/727 DA G5	8719514 318243 00	9290 028 66806	25
Fortimo FastFlex LED 2x6/730 DA G5	8719514 318267 00	9290 028 66906	25
Fortimo FastFlex LED 2x6/740 DA G5	8719514 318281 00	9290 028 67006	25
Fortimo FastFlex LED 2x6/827 DA G5	8719514 318304 00	9290 028 67106	25
Fortimo FastFlex LED 2x6/830 DA G5	8719514 318328 00	9290 028 67206	25
Fortimo FastFlex LED 2x6/840 DA G5	8719514 318342 00	9290 028 67306	25

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex LED 2x6 DA 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 - table per color (CCT)

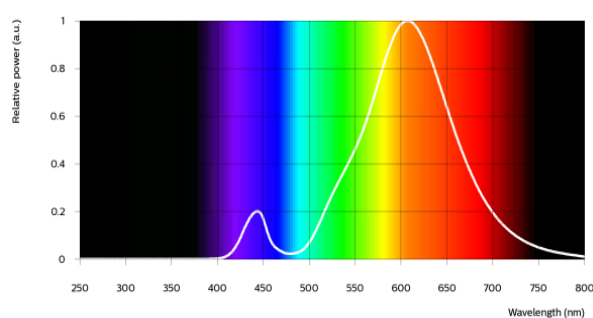
Fortimo FastFlex LED 2x6/722 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	2079	2310	2541	lm
Efficacy	113	130	157	lm/W
Correlated color temperature (CCT)		2200		K
Color coordinates (CIEx, CIEy)		(0.505, 0.417)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photometric code		722/579		
Photobiological safety			RG2	
Ethr			860	lux



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

Operation point	722	lm	lm/W
80% I-nom 424mA	Tc 25 °C	1992	137
	Tc-nom 80 °C	1893	134
	Tc-max 95 °C	1844	132
I-nom 530mA	Tc 25 °C	2432	132
	Tc-nom 80 °C	2310	130
	Tc-max 95 °C	2250	127
I-max 1500mA	Tc 25 °C	5935	107
	Tc-nom 80 °C	5562	103
	Tc-max 95 °C	5377	101



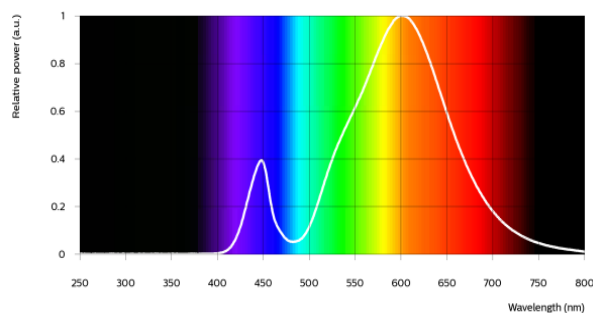
Fortimo FastFlex LED 2x6/727 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	2304	2560	2816	lm
Efficacy	125	144	177	lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.460, 0.408)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photometric code		727/579		
Photobiological safety			RG2	
Ethr			860	lux



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

Operation point	727	lm	lm/W
80% I-nom 424mA	Tc 25 °C	2206	152
	Tc-nom 80 °C	2097	149
	Tc-max 95 °C	2043	146
I-nom 530mA	Tc 25 °C	2694	147
	Tc-nom 80 °C	2560	144
	Tc-max 95 °C	2494	141
I-max 1500mA	Tc 25 °C	6578	119
	Tc-nom 80 °C	6171	115
	Tc-max 95 °C	5969	112



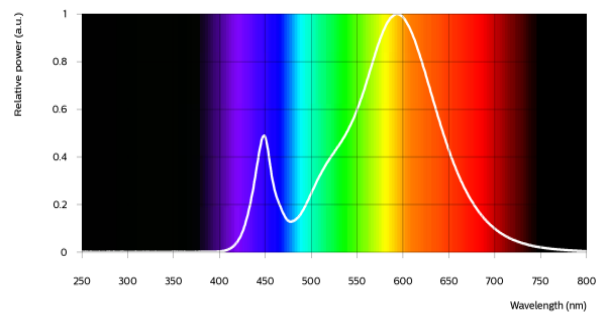
Fortimo FastFlex LED 2x6/730 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	2560	2845	3130	lm
Efficacy	139	160	195	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.436, 0.404)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photometric code		730/579		
Photobiological safety			RG2	
Ethr			860	lux



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

Operation point	730	lm	lm/W
80% I-nom 424mA	Tc 25 °C	2451	168
	Tc-nom 80 °C	2330	165
	Tc-max 95 °C	2271	162
I-nom 530mA	Tc 25 °C	2992	163
	Tc-nom 80 °C	2845	160
	Tc-max 95 °C	2772	157
I-max 1500mA	Tc 25 °C	7311	132
	Tc-nom 80 °C	6868	128
	Tc-max 95 °C	6648	124



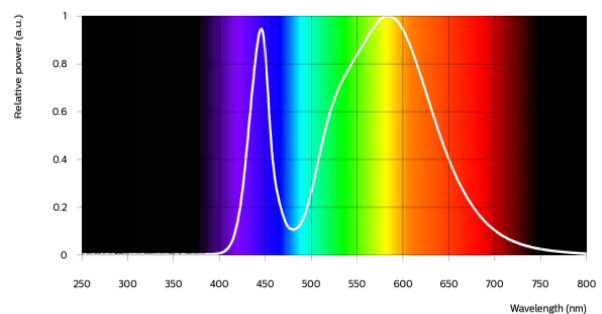
Fortimo FastFlex LED 2x6/740 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	2758	3065	3372	lm
Efficacy	150	172	206	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.385, 0.383)		-
Color consistency			5	SDCM
CRI	70			
R9	-50			
Photometric code		740/579		
Photobiological safety			RG2	
Ethr			860	lux



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

Operation point	740	lm	lm/W
80% I-nom 424mA	Tc 25 °C	2639	181
	Tc-nom 80 °C	2510	178
	Tc-max 95 °C	2447	175
I-nom 530mA	Tc 25 °C	3223	175
	Tc-nom 80 °C	3065	172
	Tc-max 95 °C	2987	169
I-max 1500mA	Tc 25 °C	7877	142
	Tc-nom 80 °C	7407	138
	Tc-max 95 °C	7173	134

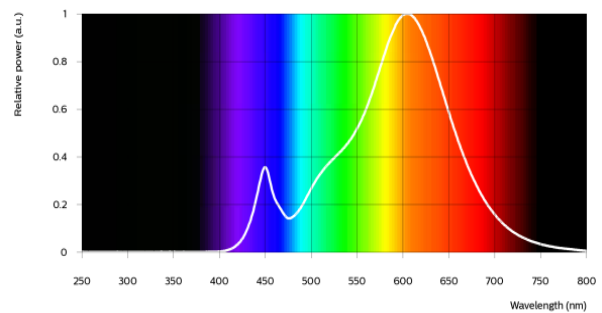


Fortimo FastFlex LED 2x6/827 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	2164	2405	2646	lm
Efficacy	117	135	167	lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.460, 0.408)		-
Color consistency			5	SDCM
CRI	80			
R9	0			
Photometric code		827/579		
Photobiological safety			RG2	
Ethr			860	lux

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

Operation point	827	lm	lm/W
80% I-nom 424mA	Tc 25 °C	2073	142
	Tc-nom 80 °C	1970	140
	Tc-max 95 °C	1920	137
I-nom 530mA	Tc 25 °C	2531	138
	Tc-nom 80 °C	2405	135
	Tc-max 95 °C	2343	133
I-max 1500mA	Tc 25 °C	6180	112
	Tc-nom 80 °C	5794	108
	Tc-max 95 °C	5602	105

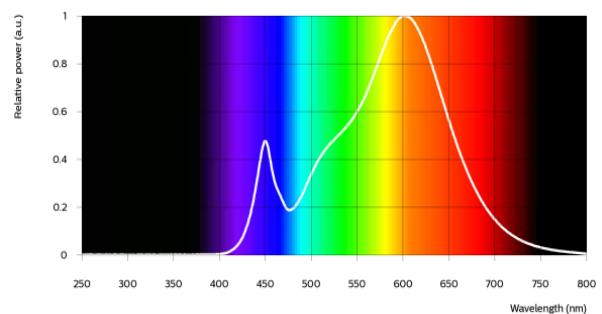


Fortimo FastFlex LED 2x6/830 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	2282	2535	2788	lm
Efficacy	124	142	174	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.436, 0.404)		-
Color consistency			5	SDCM
CRI	80			
R9	0			
Photometric code		830/579		
Photobiological safety			RG2	
Ethr			860	lux

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

Operation point	830	lm	lm/W
80% I-nom 424mA	Tc 25 °C	2184	150
	Tc-nom 80 °C	2077	147
	Tc-max 95 °C	2023	145
I-nom 530mA	Tc 25 °C	2667	145
	Tc-nom 80 °C	2535	142
	Tc-max 95 °C	2469	140
I-max 1500mA	Tc 25 °C	6513	118
	Tc-nom 80 °C	6110	114
	Tc-max 95 °C	5910	111



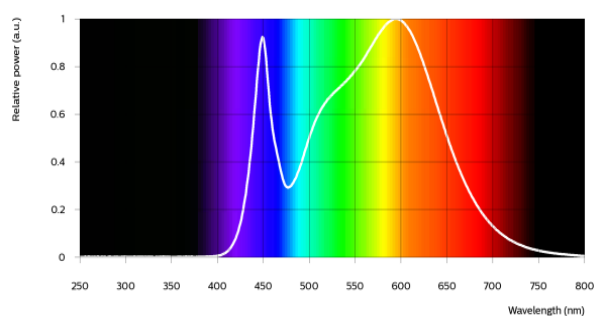
Fortimo FastFlex LED 2x6/840 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	2412	2680	2948	lm
Efficacy	131	150	184	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.385, 0.383)		-
Color consistency			5	SDCM
CRI	80			
R9	0			
Photometric code		840/579		
Photobiological safety			RG2	
Ethr			860	lux



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

Operation point	840	lm	lm/W
80% I-nom 424mA	Tc 25 °C	2309	159
	Tc-nom 80 °C	2195	156
	Tc-max 95 °C	2139	153
I-nom 530mA	Tc 25 °C	2820	154
	Tc-nom 80 °C	2680	150
	Tc-max 95 °C	2611	148
I-max 1500mA	Tc 25 °C	6887	124
	Tc-nom 80 °C	6465	120
	Tc-max 95 °C	6255	117



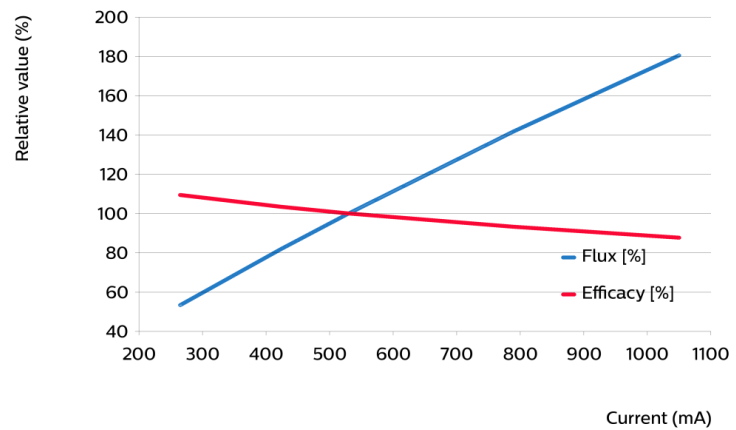
Electrical characteristics

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

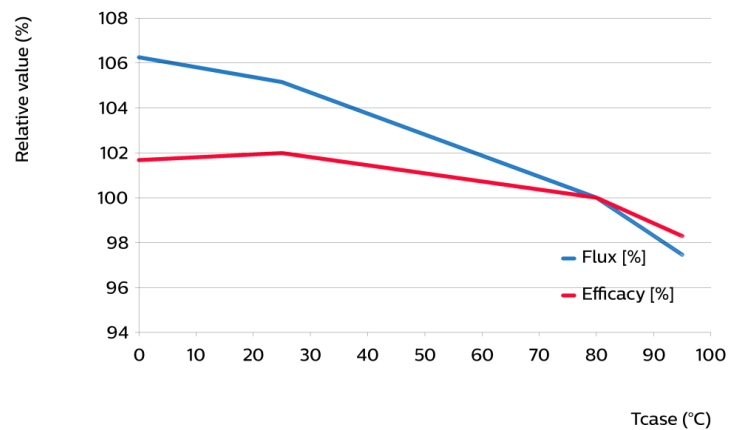
Flux and efficacy versus current (at Tc nominal)

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



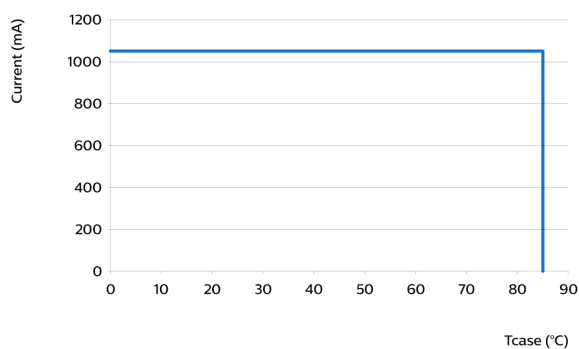
Lumen maintenance

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

Lifetime

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

Performance Window

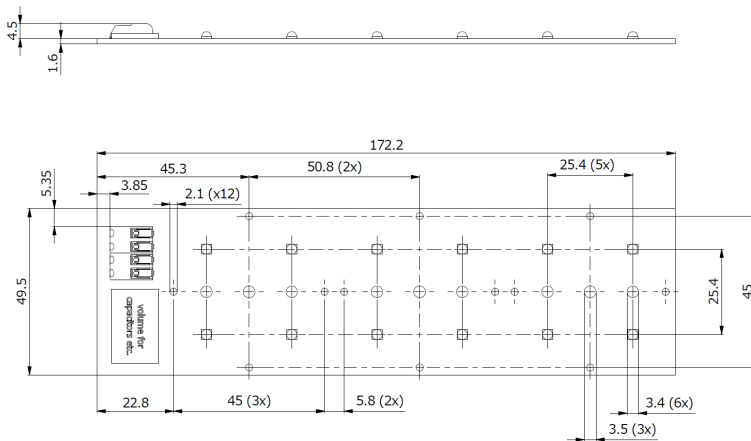


Wiring

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	171.1	172.2	172.3	mm
Width	49.4	49.5	49.6	mm
Height excl. connector	1.5	1.6	1.7	mm
Height incl. connector	6	6.1	6.2	mm
Product mass		39		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)		34.2	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
ENEC+
UL

Zhaga

Compliant*

*Book 15, 2x6-DA

Application

Overheating protection

NTC 15kOhm + 1100 Ohm in series

Dimming

Yes



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