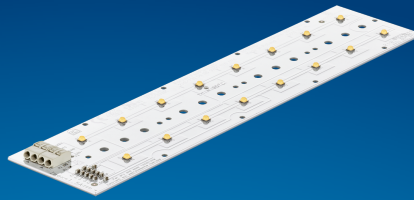


PHILIPS

Fortimo

LED

Fortimo FastFlex LED 2x8
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 2021



Zhaga

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 2x8/722 DA G5	8719514 318366 00	9290 028 67406	25
Fortimo FastFlex LED 2x8/727 DA G5	8719514 318380 00	9290 028 67506	25
Fortimo FastFlex LED 2x8/730 DA G5	8719514 318403 00	9290 028 67606	25
Fortimo FastFlex LED 2x8/740 DA G5	8719514 318427 00	9290 028 67706	25
Fortimo FastFlex LED 2x8/757 DA G5	8719514 318441 00	9290 028 67806	25
Fortimo FastFlex LED 2x8/827 DA G5	8719514 318502 00	9290 028 68006	25
Fortimo FastFlex LED 2x8/830 DA G5	8719514 318533 00	9290 028 68106	25
Fortimo FastFlex LED 2x8/840 DA G5	8719514 318557 00	9290 028 68206	25

Drive currents

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

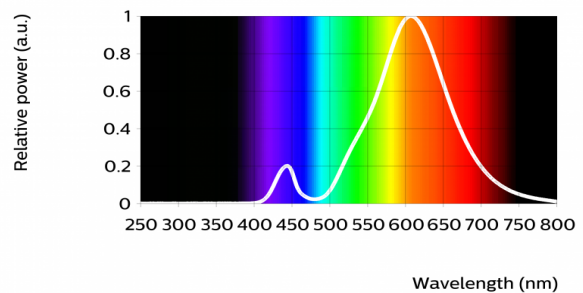
Optical characteristics - table per color (CCT)

Fortimo FastFlex LED 2x8/722 DA G5


Parameter	Min	Typ	Max	Unit
Luminous flux	2772	3080	3388	lm
Module efficacy	113	130	151	lm/W
Correlated color temperature (CCT)		2200		K
Color coordinates (CIEx, CIEy)		(0.504, 0.416)		-
Color consistency			5	SDCM
CRI	70			
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	2655	137
	Tc-nom 80 °C	2524	134
	Tc-max 85 °C	2458	132
I-nom 530mA	Tc 25 °C	3242	132
	Tc-nom 80 °C	3080	130
	Tc-max 85 °C	3000	127
I-max 1500mA	Tc 25 °C	7914	107
	Tc-nom 80 °C	7416	103
	Tc-max 85 °C	7169	101

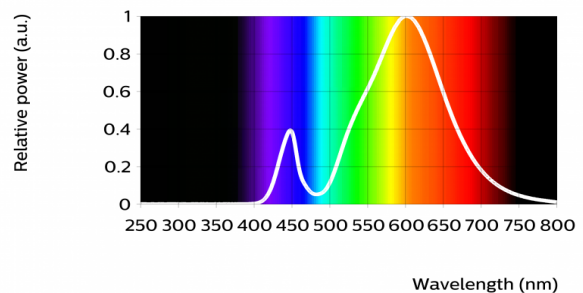


Fortimo FastFlex LED 2x8/727 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	3074	3415	3756	lm
Module efficacy	125	144	167	lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.460, 0.408)		-
Color consistency			5	SDCM
CRI	70			
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	2943	152
	Tc-nom 80 °C	2798	149
	Tc-max 85 °C	2726	146
I-nom 530mA	Tc 25 °C	3593	147
	Tc-nom 80 °C	3415	144
	Tc-max 85 °C	3327	141
I-max 1500mA	Tc 25 °C	8775	119
	Tc-nom 80 °C	8233	115
	Tc-max 85 °C	7963	112



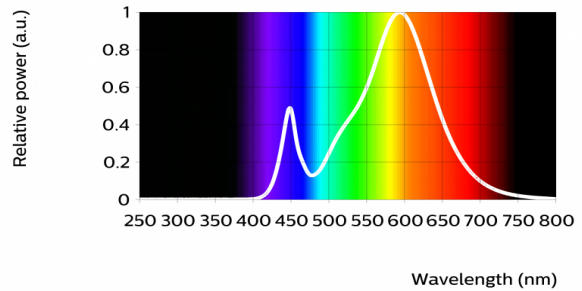
Fortimo FastFlex LED 2x8/730 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	3416	3795	4174	lm
Module efficacy	139	160	186	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.436, 0.404)		-
Color consistency			5	SDCM
CRI	70			
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	3269	168
	Tc-nom 80 °C	3109	165
	Tc-max 85 °C	3029	162
I-nom 530mA	Tc 25 °C	3991	163
	Tc-nom 80 °C	3795	160
	Tc-max 85 °C	3698	157
I-max 1500mA	Tc 25 °C	9752	132
	Tc-nom 80 °C	9161	128
	Tc-max 85 °C	8867	125



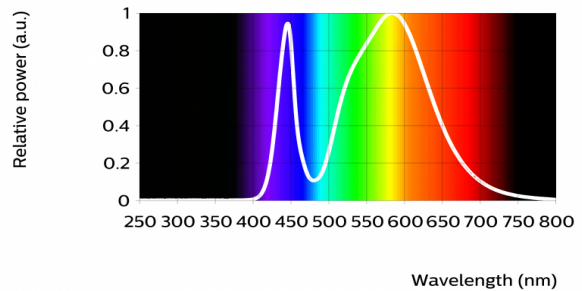
Fortimo FastFlex LED 2x8/740 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	3690	4100	4510	lm
Module efficacy	150	173	201	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.385, 0.383)		-
Color consistency			5	SDCM
CRI	70			
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	3530	182
	Tc-nom 80 °C	3358	178
	Tc-max 85 °C	3273	175
I-nom 530mA	Tc 25 °C	4311	176
	Tc-nom 80 °C	4100	173
	Tc-max 85 °C	3996	170
I-max 1500mA	Tc 25 °C	10537	143
	Tc-nom 80 °C	9909	138
	Tc-max 85 °C	9596	135



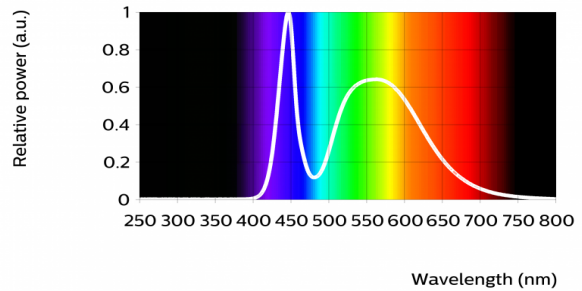
Fortimo FastFlex LED 2x8/757 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	3730	4145	4560	lm
Module efficacy	152	175	203	lm/W
Correlated color temperature (CCT)		5700		K
Color coordinates (CIEx, CIEy)		(0.334, 0.353)		-
Color consistency			5	SDCM
CRI	70			
Photometric code		757/579		
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	757	lm	lm/W
80% I-nom 424mA	Tc 25 °C	3569	184
	Tc-nom 80 °C	3395	180
	Tc-max 85 °C	3309	177
I-nom 530mA	Tc 25 °C	4358	178
	Tc-nom 80 °C	4145	175
	Tc-max 85 °C	4039	171
I-max 1500mA	Tc 25 °C	10652	144
	Tc-nom 80 °C	10018	139
	Tc-max 85 °C	9703	136



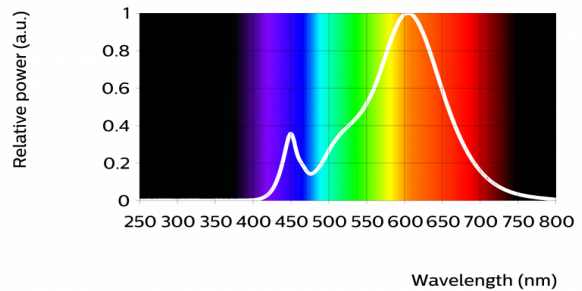
Fortimo FastFlex LED 2x8/827 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	2884	3205	3526	lm
Module efficacy	117	135	157	lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.460, 0.408)		-
Color consistency			5	SDCM
CRI	80			
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	2763	142
	Tc-nom 80 °C	2626	140
	Tc-max 85 °C	2558	137
I-nom 530mA	Tc 25 °C	3373	138
	Tc-nom 80 °C	3205	135
	Tc-max 85 °C	3122	133
I-max 1500mA	Tc 25 °C	8235	112
	Tc-nom 80 °C	7721	108
	Tc-max 85 °C	7465	105



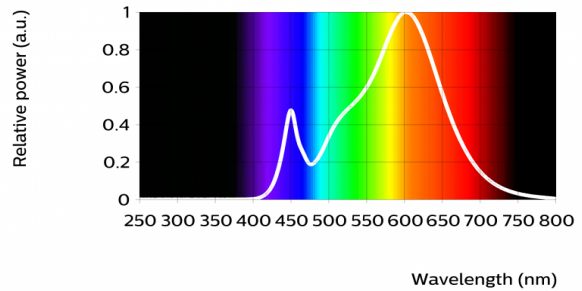
Fortimo FastFlex LED 2x8/830 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	3038	3375	3712	lm
Module efficacy	123	142	165	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.436, 0.404)		-
Color consistency			5	SDCM
CRI	80			
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	2908	150
	Tc-nom 80 °C	2765	147
	Tc-max 85 °C	2694	144
I-nom 530mA	Tc 25 °C	3551	145
	Tc-nom 80 °C	3375	142
	Tc-max 85 °C	3287	140
I-max 1500mA	Tc 25 °C	8671	117
	Tc-nom 80 °C	8134	113
	Tc-max 85 °C	7867	111



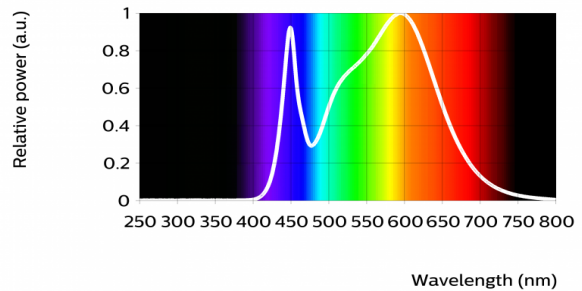
Fortimo FastFlex LED 2x8/840 DA G5

Parameter	Min	Typ	Max	Unit
Luminous flux	3218	3575	3932	lm
Module efficacy	131	151	175	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.385, 0.383)		-
Color consistency			5	SDCM
CRI	80			
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	3080	159
	Tc-nom 80 °C	2929	156
	Tc-max 85 °C	2854	153
I-nom 530mA	Tc 25 °C	3761	154
	Tc-nom 80 °C	3575	151
	Tc-max 85 °C	3483	148
I-max 1500mA	Tc 25 °C	9187	124
	Tc-nom 80 °C	8624	120
	Tc-max 85 °C	8344	117



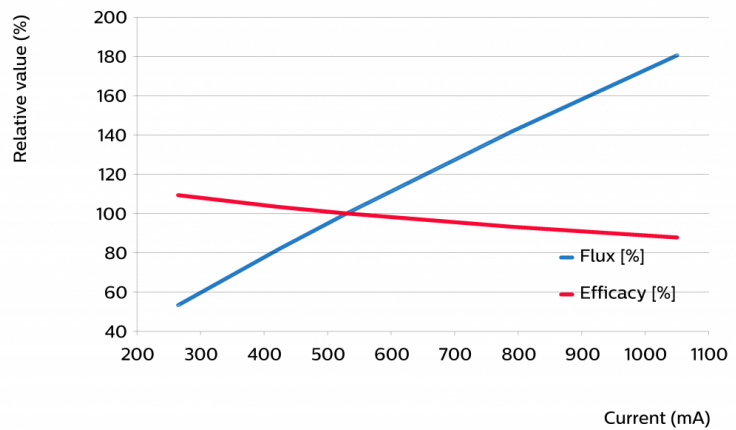
Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	42.4	44.8	46.4	V
Power consumption	22.5	23.7	24.6	W = kWh/1000h
Number of modules in series per chain			10	
Number of modules in parallel			1	

Tuning information

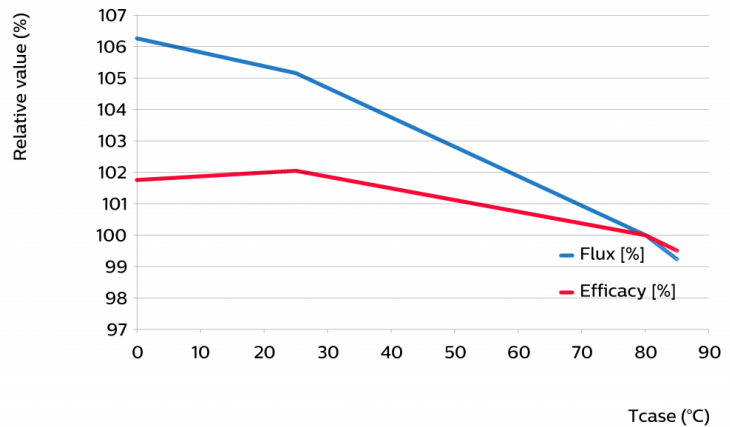
Flux and efficacy versus current (at Tc nominal)

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 [%]
85	99	100
80	100	100
25	105	102
0	106	102



Lumen maintenance

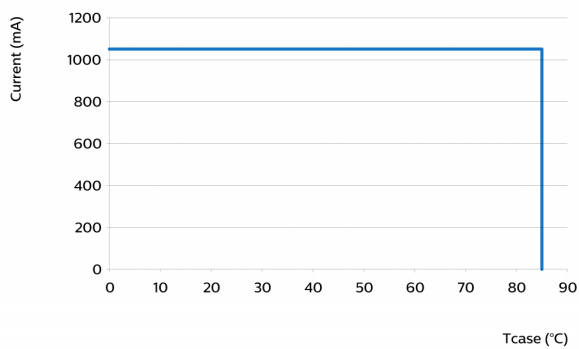
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
I 530 mA	Tc 60°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 70°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc 80°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
I 700 mA	Tc 60°C	>100	>100	>100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

Switching cycles in accordance to EU 1194/2012: >15000

Performance Window

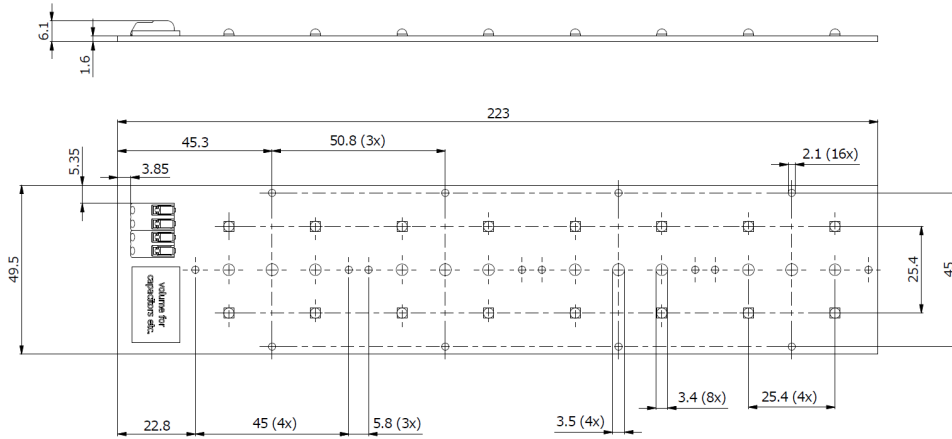


Wiring

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	222.9	223	223.1	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		50		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)		48.73	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, 2x8-DA

Application

Overheating protection

NTC 15kOhm + 1100 Ohm in series

Dimming

Yes



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