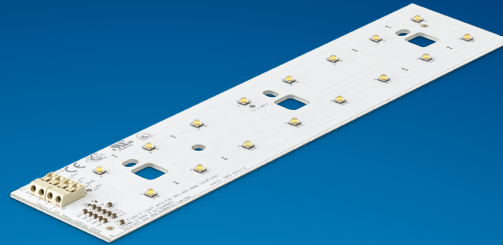


PHILIPS

Fortimo

LED

Fortimo FastFlex 2x8
G4+



Datasheet

Short time to market with lenses from standard FastFlex portfolio

FastFlex G4+

Applications

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

Key features and benefits

- Short time to market with lenses from standard FastFlex portfolio matching every project's needs
- High module efficiency for fixture performance
- Best in class reliability testing for OEM peace of mind
- Philips system warranty
- State of the art specifications
- Temperature and driving current designed for fixture optimization
- Patented module surge protection
- Optical flexibility via FastFlex lenses
- Flexible lumen output
- Range of CCT and CRI versions
- Mechanically and Optically backwards compatible with Gen4

April 2020



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo FastFlex LED 2x8/730 G4+	8718699 708344 00	9290 021 16206	25
Fortimo FastFlex LED 2x8/740 G4+	8718699 708368 00	9290 021 16306	25
Fortimo FastFlex LED 2x8/757 G4+	8718699 708382 00	9290 021 16406	25
Fortimo FastFlex LED 2x8/830 G4+	8718699 708412 00	9290 021 16506	25
Fortimo FastFlex LED 2x8/840 G4+	8718699 708436 00	9290 021 16606	25

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo FastFlex 2x8 G4+	530	see performance window	1500	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	80	see performance window	85	°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)

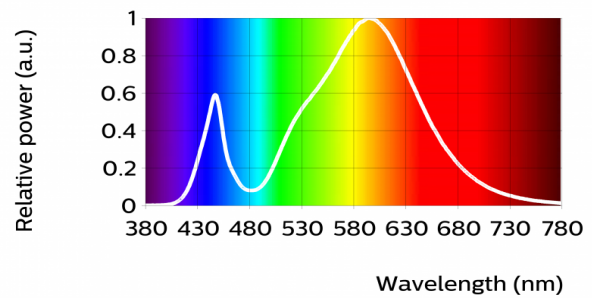
Fortimo FastFlex LED 2x8/730 G4+

Parameter	Min	Typ	Max	Unit
Luminous flux	3315	3683	4051	lm
Module efficacy	141	157		lm/W
Correlated color temperature (CCT)		3000		K
Color consistency			4	SDCM
CRI	70			
Photometric code		730/349		
Photobiological safety			RG2	
Ethr			540	lux



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	730	lm	lm/W
50% I-nom 265mA	Tc 25 °C	2159	183
	Tc-nom 80 °C	2000	175
	Tc-max 85 °C	1983	174
I-nom 530mA	Tc 25 °C	4021	166
	Tc-nom 80 °C	3683	157
	Tc-max 85 °C	3647	155
I-max 1500mA	Tc 25 °C	9282	128
	Tc-nom 80 °C	8217	116
	Tc-max 85 °C	8102	115



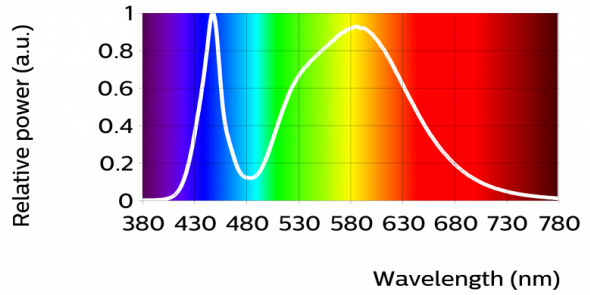
Fortimo FastFlex LED 2x8/740 G4+

Parameter	Min	Typ	Max	Unit
Luminous flux	3496	3885	4274	lm
Module efficacy	149	165		lm/W
Correlated color temperature (CCT)		4000		K
Color consistency			4	SDCM
CRI	70			
Photometric code		740/349		
Photobiological safety			RG2	
Ethr			540	lux



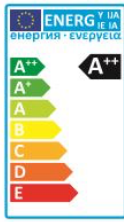
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	740	lm	lm/W
	Tc 25 °C	2275	193
50% I-nom 265mA	Tc-nom 80 °C	2109	184
	Tc-max 85 °C	2091	183
	Tc 25 °C	4240	175
I-nom 530mA	Tc-nom 80 °C	3885	165
	Tc-max 85 °C	3847	164
	Tc 25 °C	9806	135
I-max 1500mA	Tc-nom 80 °C	8691	123
	Tc-max 85 °C	8570	122



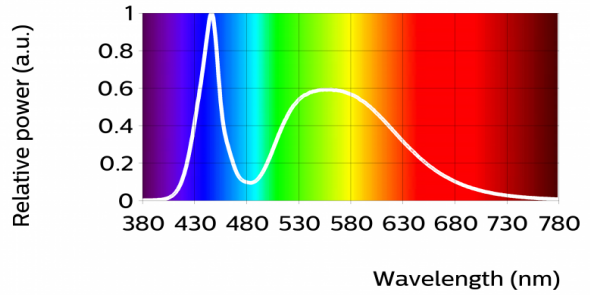
Fortimo FastFlex LED 2x8/757 G4+

Parameter	Min	Typ	Max	Unit
Luminous flux	3315	3683	4051	lm
Module efficacy	141	157		lm/W
Correlated color temperature (CCT)		5700		K
Color consistency			4	SDCM
CRI	70			
Photometric code		757/349		
Photobiological safety			RG2	
Ethr			540	lux



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	757	lm	lm/W
50% I-nom 265mA	Tc 25 °C	2159	183
	Tc-nom 80 °C	2000	175
	Tc-max 85 °C	1983	174
I-nom 530mA	Tc 25 °C	4021	166
	Tc-nom 80 °C	3683	157
	Tc-max 85 °C	3647	155
I-max 1500mA	Tc 25 °C	9282	128
	Tc-nom 80 °C	8217	116
	Tc-max 85 °C	8102	115



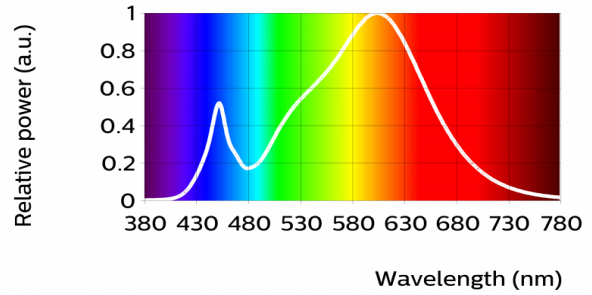
Fortimo FastFlex LED 2x8/830 G4+

Parameter	Min	Typ	Max	Unit
Luminous flux	2988	3319	3651	lm
Module efficacy	126	140		lm/W
Correlated color temperature (CCT)		3000		K
Color consistency			4	SDCM
CRI	80			
Photometric code		830/349		
Photobiological safety			RG2	
Ethr			540	lux



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	830	lm	lm/W
50% I-nom 265mA	Tc 25 °C	1944	163
	Tc-nom 80 °C	1797	157
	Tc-max 85 °C	1780	156
I-nom 530mA	Tc 25 °C	3612	146
	Tc-nom 80 °C	3319	140
	Tc-max 85 °C	3287	139
I-max 1500mA	Tc 25 °C	8386	111
	Tc-nom 80 °C	7449	103
	Tc-max 85 °C	7344	102



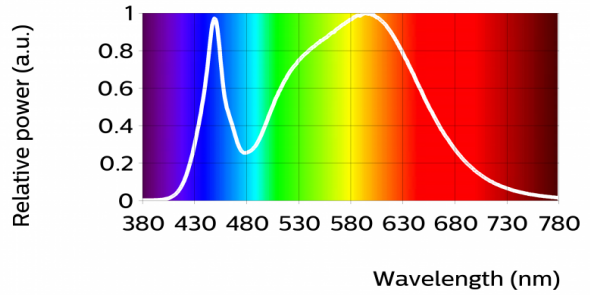
Fortimo FastFlex LED 2x8/840 G4+

Parameter	Min	Typ	Max	Unit
Luminous flux	3168	3520	3872	lm
Module efficacy	134	149		lm/W
Correlated color temperature (CCT)		4000		K
Color consistency			4	SDCM
CRI	80			
Photometric code		840/349		
Photobiological safety			RG2	
Ethr			540	lux



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
50% I-nom 265mA	Tc 25 °C	2054	172
	Tc-nom 80 °C	1898	166
	Tc-max 95 °C	1844	163
I-nom 530mA	Tc 25 °C	3817	155
	Tc-nom 80 °C	3520	149
	Tc-max 95 °C	3402	145
I-max 1500mA	Tc 25 °C	8875	118
	Tc-nom 80 °C	7894	109
	Tc-max 95 °C	7550	105



Electrical characteristics

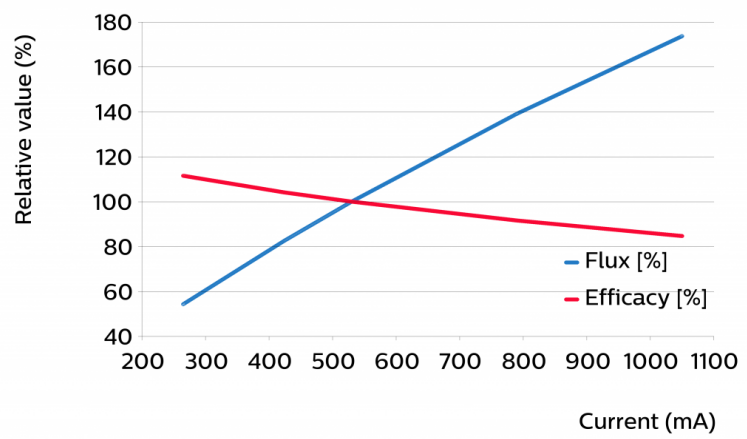
Parameter	Min	Typ	Max	Unit
Forward voltage	40.7	44.4	48.8	V
Power consumption	21.6	23.5	25.9	W = kWh/1000h
Number of modules in series per chain			6	
Number of modules in parallel			1	

Measurement precision for Vf ± 3%. Measurement precision for power ± 3.3%
 Specifications stated at Tc-nom and I-nom.

Tuning information

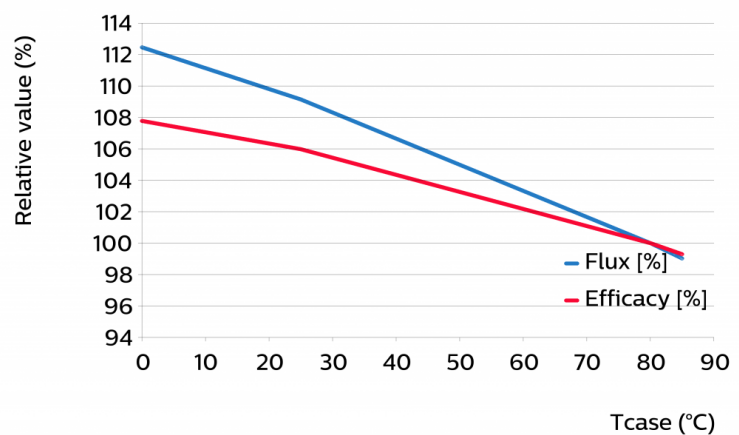
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1050	174	85
790	139	92
530	100	100
424	83	104
265	54	112



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

Tc [°C]	Flux [%]	Efficacy [%]
85	99	99
80	100	100
25	109	106
0	112	108



Lumen maintenance

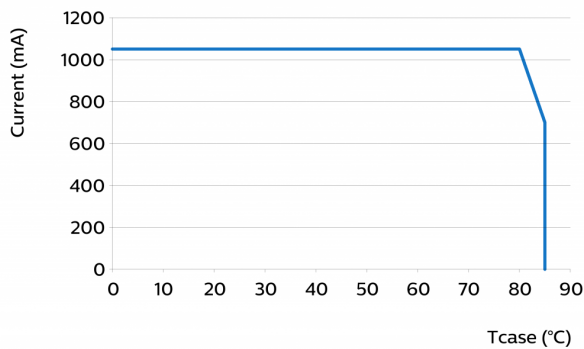
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
I 530 mA	Tc 60°C	>100	>100	>100	>100	100	90	60	50	45
	Tc 70°C	>100	>100	>100	>100	90	85	55	45	40
	Tc 80°C	>100	>100	>100	>100	85	75	50	40	35
I 700 mA	Tc 60°C	>100	>100	>100	>100	90	80	50	40	35
	Tc 70°C	>100	>100	>100	100	80	70	45	35	35
	Tc 80°C	>100	>100	>100	90	70	65	45	35	30
I 1050 mA	Tc 60°C	>100	>100	>100	90	70	65	45	35	30
	Tc 70°C	>100	>100	95	80	65	60	40	30	25
	Tc 80°C	>100	95	85	75	60	55	35	30	25

Lifetime

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

We use a Philips designed lifetime model, which uses LM80 data as one of its inputs and assumes a continuous operation of the module. >120k hour is based on extrapolating LM80-data by using statistical techniques.

Performance Window

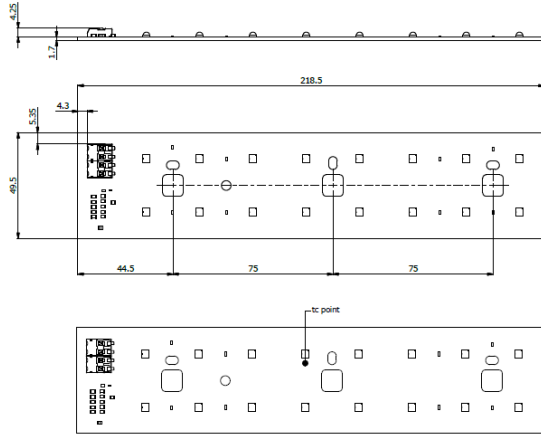


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25...0.75	mm ²	Solid wire. Wire length 300mm. Tolerance +/-
	18...24	AWG	Solid wire. Wire length 300mm. Tolerance +/-
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	218.4	218.5	218.6	mm
Width	49.4	49.5	49.6	mm
Height excl.connector	1.5	1.7	1.7	mm
Height incl. connector	5.75	5.95	6.15	mm
Product mass		49		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1500	mA
Case temperature (Tc-max)		85	°C
Power at rated Vf-max and I-max		52.5	W
ESD (direct contact)		8	kV
Working voltage		575	V _{dc}
Ambient temperature	-40		°C

Application information

Certificates and Standards

CE
ENEC
ENEC+
IEC 62031
IEC 62717
UL 8750

Application

IP rating	No IP-rating
Overheating protection	Yes
Dimming	Yes



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16/04/2020