

# PHILIPS

## Fortimo

### LED

Fortimo LED Strip OC  
2ft 2200lm 8xx LV5



## Datasheet

### Fortimo LED Strip OC 2ft 2200lm 8xx LV5

The Fortimo LED Strip OC generation 5 is specifically designed to match with a variety of different optics. Due to its efficient design there is a high efficiency possible of 182 Lm/W. The portfolio is available in 0.5ft, 1ft and 2ft, both in high voltage and low voltage. The optics are available in 30°/60°/90°/A-symmetrical/Double-A-symmetrical.

#### Key features and benefits

- Typical module efficacy of 182 lm/W (at 4000K CRI80)
- Long life-time: >50,000 hours
- Excellent color consistency of 3 SDCM
- Wide range of CCTs available: 3000K, 4000K, 5000K and 6500K
- Available in High Voltage (HV) and Low Voltage (LV)
- Small LED module width of only 20mm
- Wide temperature (Tc) range -40°C to +85°C
- Five year system warranty

January 2020



## Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip OC 2ft 2200lm 830 BC LV5	8718699 765125 00	9290 021 93906	63
Fortimo LED Strip OC 2ft 2200lm 840 BC LV5	8718699 765149 00	9290 021 94006	63
Fortimo LED Strip OC 2ft 2200lm 865 BC LV5	8718699 765163 00	9290 021 94106	63
Fortimo LED Strip OC 2ft 2200lm 830 FC LV5	8718699 765026 00	9290 021 94206	84
Fortimo LED Strip OC 2ft 2200lm 840 FC LV5	8718699 765040 00	9290 021 94306	84
Fortimo LED Strip OC 2ft 2200lm 865 FC LV5	8718699 761066 00	9290 021 94406	84

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip OC 2ft 2200lm 8xx LV5	360	600	800	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> point)	45	75	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)

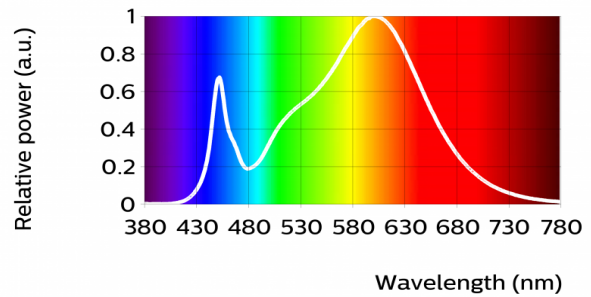
### Fortimo LED Strip OC 2ft 2200lm 830 BC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1986	2090	2194	lm
Module efficacy	166	175		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.429, 0.400)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		830/359		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



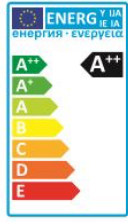
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	830	lm	
		lm	lm/W
80% I-nom 288mA	Tc 25 °C	1722	181
	Tc-nom 45 °C	1689	179
	Tc-max 85 °C	1632	174
I-nom 360mA	Tc 25 °C	2131	177
	Tc-nom 45 °C	2090	175
	Tc-max 85 °C	2019	170
I-max 800mA	Tc 25 °C	3447	166
	Tc-nom 45 °C	3381	163
	Tc-max 85 °C	3265	159



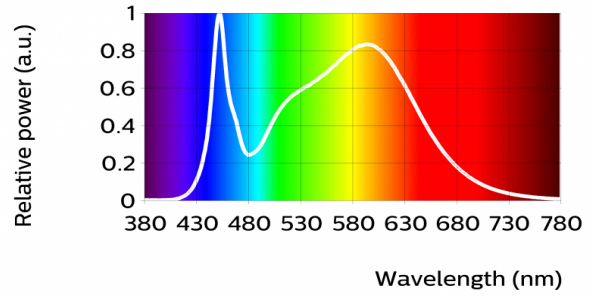
Fortimo LED Strip OC 2ft 2200lm 840 BC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	2090	2200	2310	lm
Module efficacy	175	184		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.378, 0.376)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		840/359		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



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

Operation point	840	lm	lm/W
80% I-nom 288mA	Tc 25 °C	1812	191
	Tc-nom 45 °C	1778	188
	Tc-max 85 °C	1717	183
I-nom 360mA	Tc 25 °C	2243	187
	Tc-nom 45 °C	2200	184
	Tc-max 85 °C	2125	179
I-max 800mA	Tc 25 °C	3629	174
	Tc-nom 45 °C	3559	172
	Tc-max 85 °C	3437	167



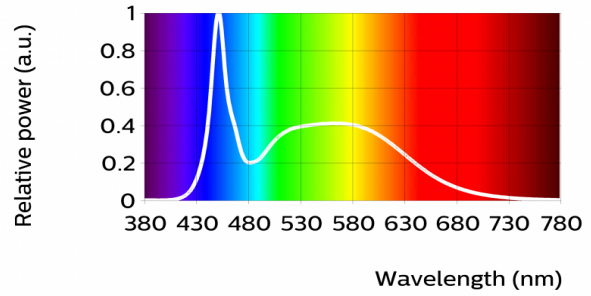
Fortimo LED Strip OC 2ft 2200lm 865 BC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	2090	2200	2310	lm
Module efficacy	175	184		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.311, 0.326)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		865/359		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



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

Operation point	865	lm	lm/W
80% I-nom 288mA	Tc 25 °C	1812	191
	Tc-nom 45 °C	1778	188
	Tc-max 85 °C	1717	183
I-nom 360mA	Tc 25 °C	2243	187
	Tc-nom 45 °C	2200	184
	Tc-max 85 °C	2125	179
I-max 800mA	Tc 25 °C	3629	174
	Tc-nom 45 °C	3559	172
	Tc-max 85 °C	3437	167



## Electrical characteristics

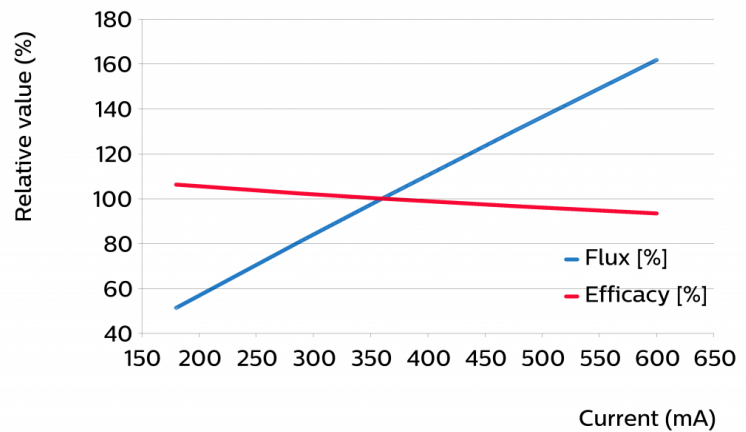
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	33.2	33.9	V
Power consumption	11.7	12.0	12.2	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel per chain			2	

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

## Tuning information

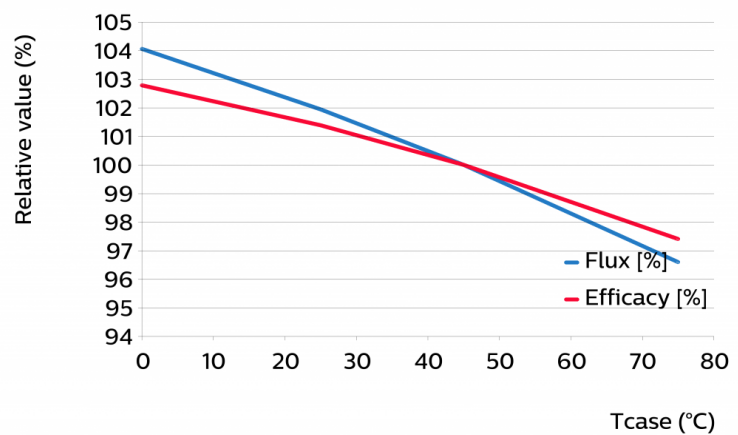
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
600	162	93
480	131	96
360	100	100
288	81	102
180	51	106



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

Tc [°C]	Flux [%]	Efficacy [%]
75	97	97
45	100	100
25	102	101
0	104	103



## Lumen maintenance

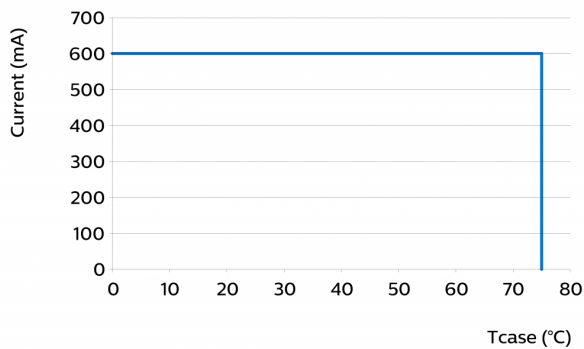
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I <sub>nom</sub> 288mA	Tc 25°C	>70	>70	>70	>70	>70	>70	64	60	57
	Tc <sub>nom</sub> 45°C	>70	>70	>70	>70	>70	>70	51	47	45
	Tc <sub>life</sub> 75°C	>70	>70	>70	>70	>70	>70	37	35	33
I <sub>nom</sub> 360 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	61	57	55
	Tc <sub>nom</sub> 45°C	>70	>70	>70	>70	>70	>70	49	45	43
	Tc <sub>life</sub> 75°C	>70	>70	>70	>70	70	67	36	33	32
I <sub>life</sub> 600 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	55	51	49
	Tc <sub>nom</sub> 45°C	>70	>70	>70	>70	>70	>70	44	41	39
	Tc <sub>life</sub> 75°C	>70	>70	>70	68	63	61	32	30	29

## Lifetime

Parameter	Value	Unit
M70F50 nominal	>70000	hours
M70F50 life	>70000	hours

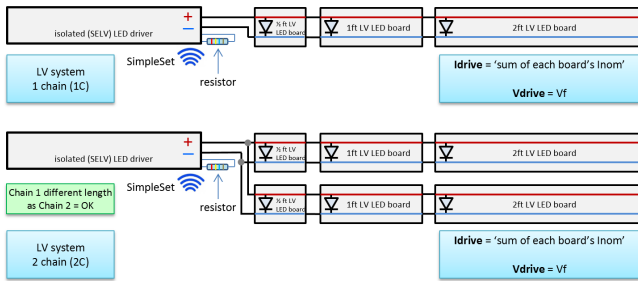
Switching cycles in accordance to EU 1194/2012: >15000

## Performance Window

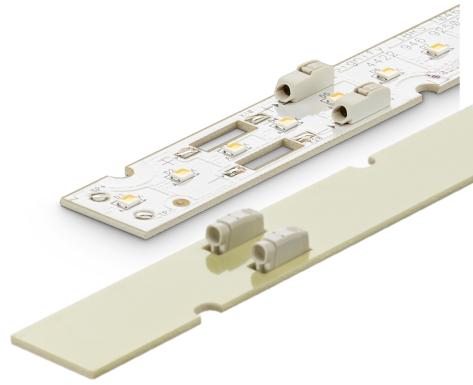


## Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25...0.75	mm <sup>2</sup>	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 <sup>2</sup>	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	7.5...8.5	mm	



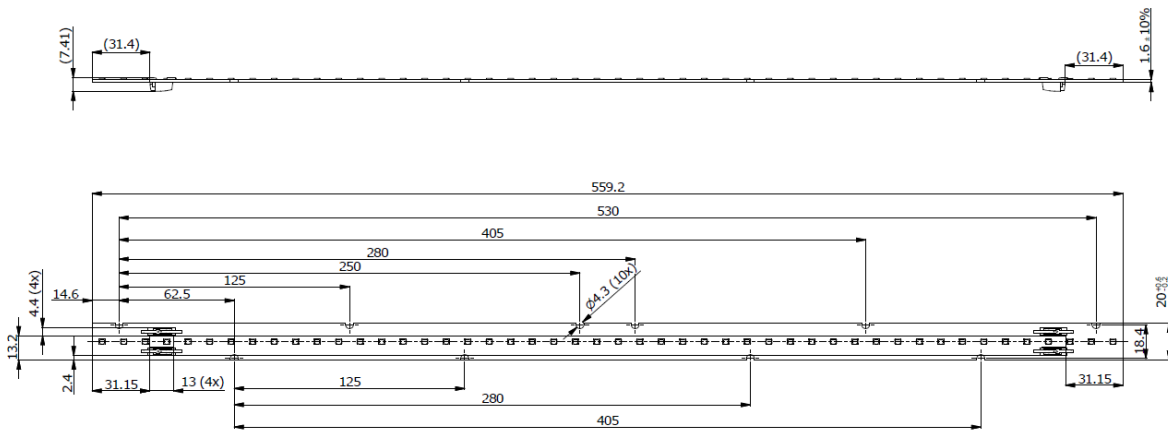
More information in the design-in guide of LED Linear modules.



## Mechanical characteristics

Fortimo LED Strip OC 2ft 2200lm 830 BC LV5  
 Fortimo LED Strip OC 2ft 2200lm 840 BC LV5  
 Fortimo LED Strip OC 2ft 2200lm 865 BC LV5

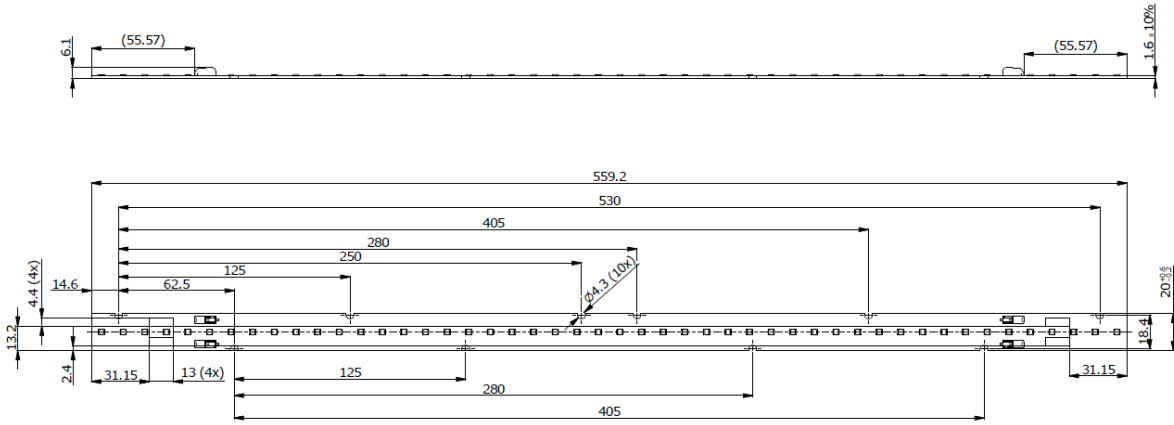
Parameter	Min	Typ	Max	Unit
Length	558.9	559.2	559.5	mm
Width	19.8	20	20.6	mm
Height PCB	1.44	1.6	1.76	mm
Height incl. connector	7.15	7.35	7.55	mm
Product mass		40		gram



Fortimo LED Strip OC 2ft 2200lm 830 FC LV5  
 Fortimo LED Strip OC 2ft 2200lm 840 FC LV5  
 Fortimo LED Strip OC 2ft 2200lm 865 FC LV5

Parameter	Min	Typ	Max	Unit
Length	558.9	559.2	559.5	mm
Width	19.8	20	20.6	mm
Height PCB	1.44	1.6	1.76	mm
Height incl. connector	5.9	6.1	6.3	mm
Product mass		40		gram





## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		800	mA
Case temperature (Tc-max)		85	°C
ESD (direct contact)		8	kV
Working voltage		120	V <sub>dc</sub>

## Application information

### Certificates and Standards

CE

### Environmental

RoHS/REACH

### Application

Dimming	Yes
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