

# PHILIPS

## Fortimo

### LED

Fortimo LED Strip OC  
0.5ft 550lm 8xx LV5



## Datasheet

### Fortimo LED Strip OC 0.5ft 550lm 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 0.5ft 550lm 830 BC LV5	8718699 760984 00	9290 021 91306	56
Fortimo LED Strip OC 0.5ft 550lm 840 BC LV5	8718699 761004 00	9290 021 91406	56
Fortimo LED Strip OC 0.5ft 550lm 830 FC LV5	8718699 760908 00	9290 021 91506	56
Fortimo LED Strip OC 0.5ft 550lm 840 FC LV5	8718699 760922 00	9290 021 91606	56

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip OC 0.5ft 550lm 8xx LV5	90	150	200	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 0.5ft 550lm 830 BC LV5

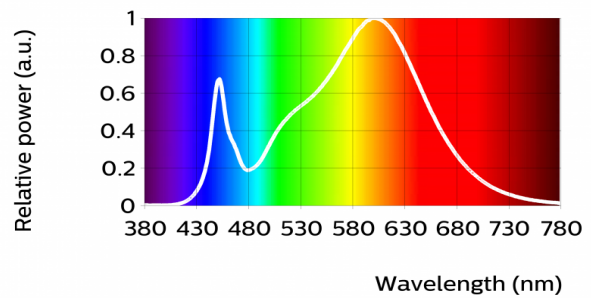
Fortimo LED Strip OC 0.5ft 550lm 830 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	496	522	548	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/W
80% I-nom 72mA	Tc 25 °C	430	181
	Tc-nom 45 °C	422	179
	Tc-max 85 °C	408	174
I-nom 90mA	Tc 25 °C	532	177
	Tc-nom 45 °C	522	175
	Tc-max 85 °C	504	170
I-max 200mA	Tc 25 °C	861	165
	Tc-nom 45 °C	844	163
	Tc-max 85 °C	816	159



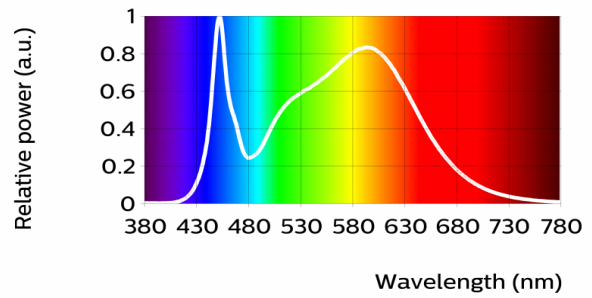
Fortimo LED Strip OC 0.5ft 550lm 840 BC LV5  
 Fortimo LED Strip OC 0.5ft 550lm 840 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	522	550	578	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 72mA	Tc 25 °C	453	191
	Tc-nom 45 °C	444	188
	Tc-max 85 °C	429	183
I-nom 90mA	Tc 25 °C	561	187
	Tc-nom 45 °C	550	184
	Tc-max 85 °C	531	179
I-max 200mA	Tc 25 °C	907	174
	Tc-nom 45 °C	890	172
	Tc-max 85 °C	859	167



## Electrical characteristics

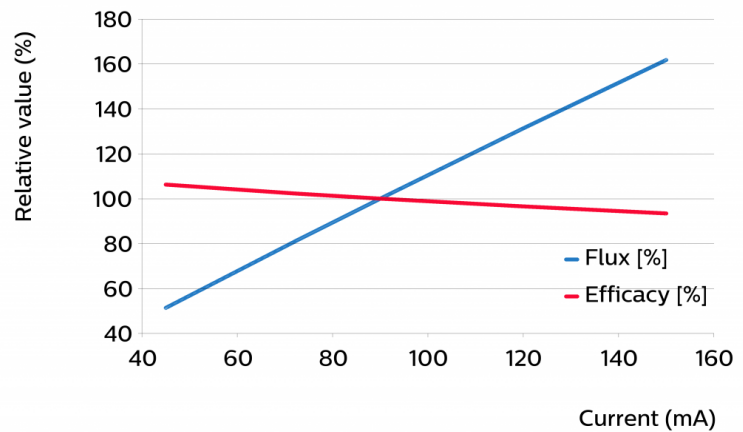
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	33.2	33.9	V
Power consumption	2.9	3.0	3.0	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel per chain			10	

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

## Tuning information

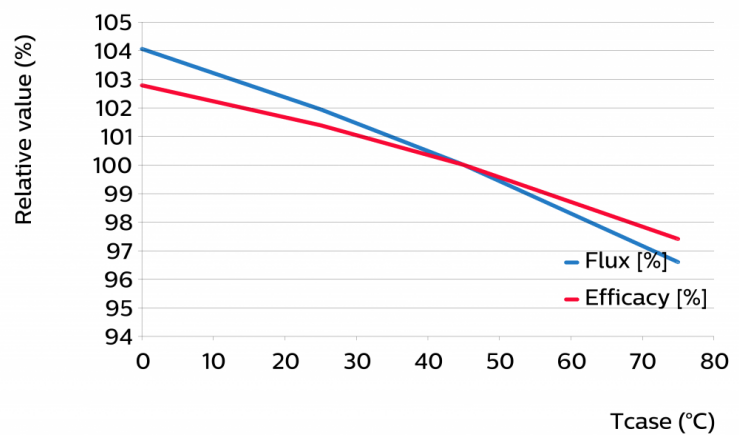
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
150	162	93
120	131	96
90	100	100
72	81	102
45	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

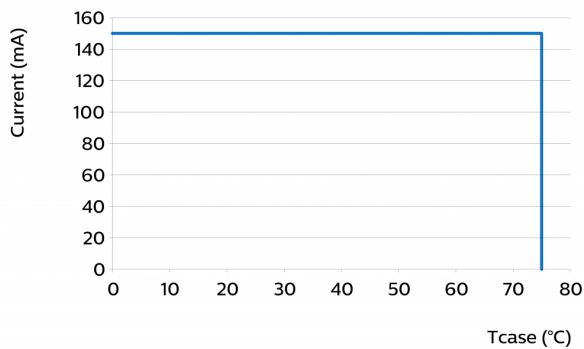
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I <sub>nom</sub> 72mA	Tc 25°C	>70	>70	>70	>70	>70	>70	64	60	57
	Tc <sub>nom</sub> 45°C	>70	>70	>70	>70	>70	>70	51	47	45
	Tc <sub>life</sub> 75°C	>70	>70	>70	>70	>70	>70	37	35	33
I <sub>nom</sub> 90 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> 150 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

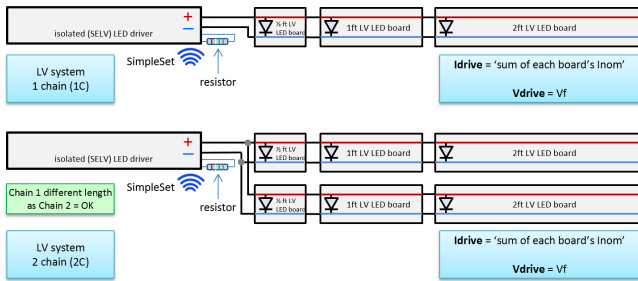
Switching cycles in accordance to EU 1194/2012: >15000

## Performance Window

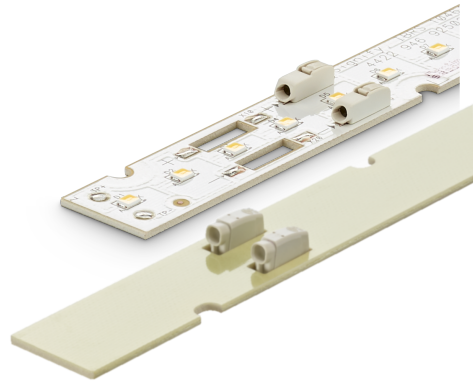


## Wiring

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	



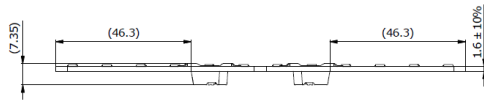
More information in the design-in guide of LED Linear modules.



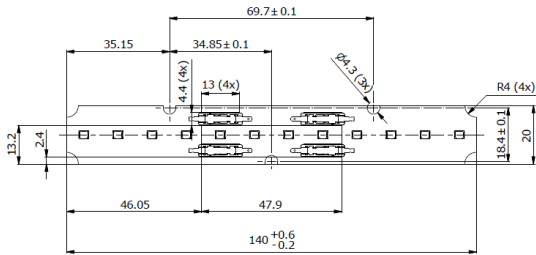
## Mechanical characteristics

Fortimo LED Strip OC 0.5ft 550lm 830 BC LV5  
 Fortimo LED Strip OC 0.5ft 550lm 840 BC LV5

Parameter	Min	Typ	Max	Unit
Length	139.8	140	140.6	mm
Width	19.8	20	20.2	mm
Height PCB	1.44	1.6	1.76	mm
Height incl. connector	7.15	7.35	7.55	mm
Product mass		10		gram

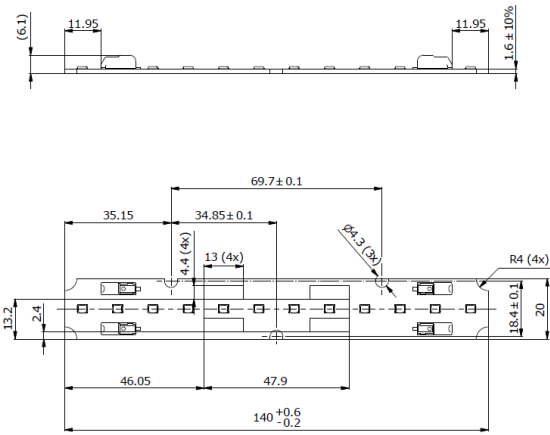


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Fortimo LED Strip OC 0.5ft 550lm 830 FC LV5  
 Fortimo LED Strip OC 0.5ft 550lm 840 FC LV5

Parameter	Min	Typ	Max	Unit
Length	139.8	140	140.6	mm
Width	19.8	20	20.2	mm
Height PCB	1.44	1.6	1.76	mm
Height incl. connector	5.9	6.1	6.3	mm
Product mass		10		gram



## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		200	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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