

# PHILIPS

## Fortimo

### LED

Fortimo LED Strip 2ft  
1300lm 9xx LV5



## Datasheet

### Fortimo LED Strip 2ft 1300lm 9xx LV5

The Fortimo LED Strip is a uniquely wide portfolio which can be used in all kind of linear indoor luminaire types. It's form factor makes it easy to design-in and handle in production as it complies to Zhaga standards. Due to the availability from 0.5ft up to 5ft lengths only one product family is needed to cover a wide range of needs.

#### Key features and benefits

- Typical module efficacy of 185 lm/W (at 4000K CRI80)
- High performance for CRI90 of 175 lm/W (at 4000K CRI90)
- Long life-time: >50,000 hours
- Excellent color consistency of 3 SDCM
- Two lumen packages per length available
- Wide range of CCTs available: 2700K, 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 +80°C
- Five year system warranty

October 2019



## Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip 2ft 1300lm 930 FC LV5	8718699 717070 00	9290 021 24006	84
Fortimo LED Strip 2ft 1300lm 940 FC LV5	8718699 717094 00	9290 021 24106	84

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 2ft 1300lm 9xx LV5	270	480	600	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> point)	45	70	80	°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 2ft 1300lm 930 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1130	1235	1314	lm
Module efficacy	149	163		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.437, 0.399)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		930/369		
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	930	lm	lm/W
50% I-nom 135mA	Tc 25 °C	650	178
	Tc-nom 45 °C	635	176
	Tc-max 80 °C	601	169
I-nom 270mA	Tc 25 °C	1264	167
	Tc-nom 45 °C	1235	163
	Tc-max 80 °C	1168	157
I-max 600mA	Tc 25 °C	2626	144
	Tc-nom 45 °C	2565	141
	Tc-max 80 °C	2423	135

Fortimo LED Strip 2ft 1300lm 940 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1202	1300	1398	lm
Module efficacy	159	172		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.384, 0.377)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		940/369		
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	940	lm	lm/W
50% I-nom 135mA	Tc 25 °C	683	188
	Tc-nom 45 °C	666	185
	Tc-max 80 °C	627	177
I-nom 270mA	Tc 25 °C	1334	176
	Tc-nom 45 °C	1300	172
	Tc-max 80 °C	1225	165
I-max 600mA	Tc 25 °C	2793	153
	Tc-nom 45 °C	2719	150
	Tc-max 80 °C	2558	143

## Electrical characteristics

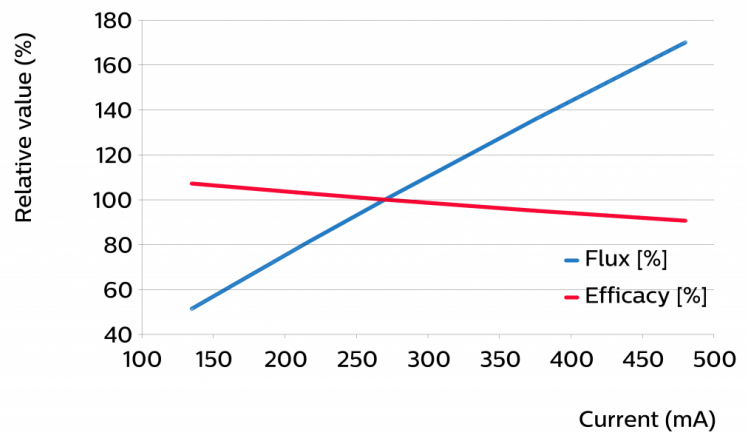
Parameter	Min	Typ	Max	Unit
Forward voltage	27.0	28.0	29.0	V
Power consumption	7.3	7.6	7.8	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel per chain			3	
Number of modules in parallel			3	

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

## Tuning information

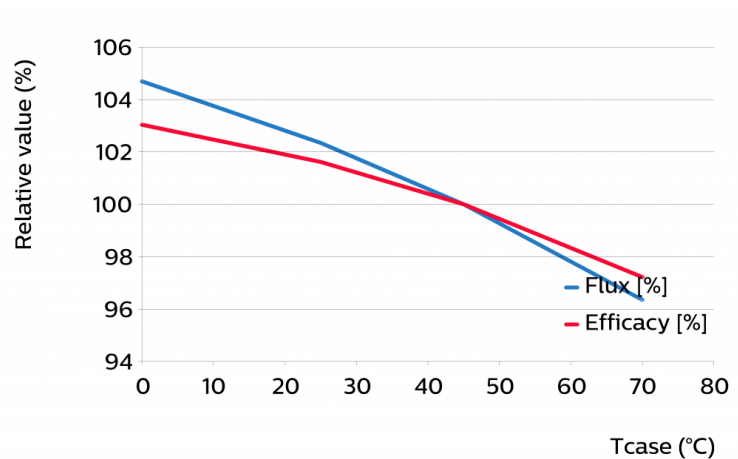
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
480	170	91
375	136	95
270	100	100
216	81	103
135	51	107



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

Tc [°C]	Flux [%]	Efficacy [%]
70	96	97
45	100	100
25	102	102
0	105	103



## Lumen maintenance

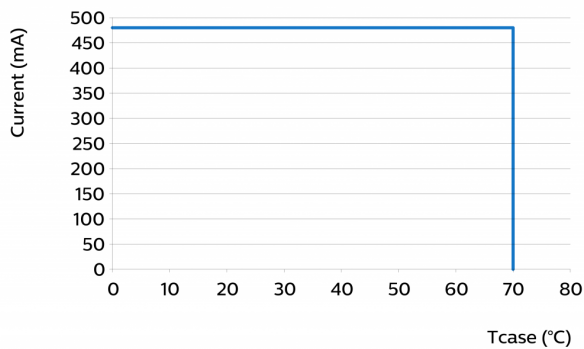
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 216 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	52	50	49
	Tc life 70°C	>60	>60	>60	>60	>60	>60	40	38	37
I nom 270 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	52	50	49
	Tc life 70°C	>60	>60	>60	>60	>60	>60	40	38	37
I life 480 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	58	55	54
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	45	43	42
	Tc life 70°C	>60	>60	>60	>60	>60	>60	35	33	32

## Lifetime

Parameter	Value	Unit
M70F50 nominal	>60000	hours
M70F50 life	>60000	hours

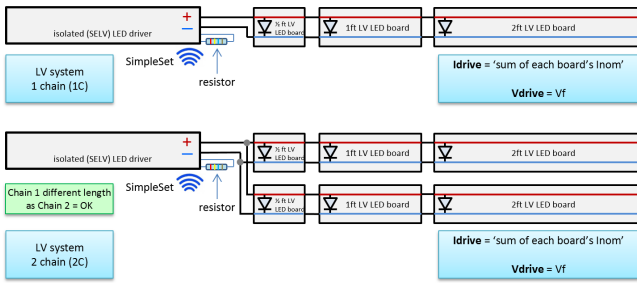
Switching cycles in accordance to EU 1194/2012: >15000

## Performance Window

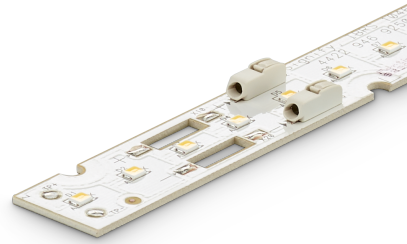


## Wiring

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	

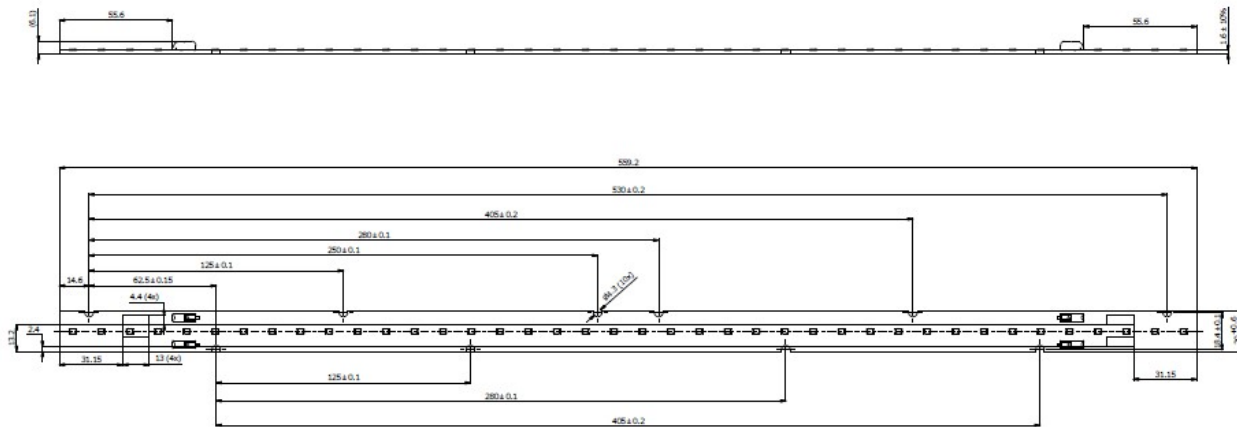


More information in the design-in guide of LED Linear modules.



## Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	558.9	559.2	559.5	mm
Width	19.8	20	20.2	mm
Height excl. connector		1.6		mm
Height incl. connector		6.1		mm
Product mass		40		gram



## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		600	mA
Case temperature (Tc-max)		80	°C
ESD (direct contact)		8	kV
Working voltage		120	V <sub>dc</sub>

## Application information

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### Certificates and Standards

CE  
ENEC  
ENEC+  
UL

### Environmental

RoHS/REACH

### Application

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Dimming

Yes





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