

# PHILIPS

## Fortimo

### LED

Fortimo LED Strip 1ft  
650lm 9xx LV5



## Datasheet

### Fortimo LED Strip 1ft 650lm 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 1ft 650lm 927 FC LV5	8718699 718572 00	9290 021 20606	168
Fortimo LED Strip 1ft 650lm 930 FC LV5	8718699 718596 00	9290 021 20706	168
Fortimo LED Strip 1ft 650lm 940 FC LV5	8718699 718619 00	9290 021 20806	168

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 1ft 650lm 9xx LV5	134	240	300	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 1ft 650lm 927 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	541	585	629	lm
Module efficacy	144	156		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.462, 0.408)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		927/369		
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	927	lm	lm/W
50% I-nom 67mA	Tc 25 °C	308	170
	Tc-nom 45 °C	301	168
	Tc-max 80 °C	285	161
I-nom 134mA	Tc 25 °C	599	159
	Tc-nom 45 °C	585	156
	Tc-max 80 °C	553	150
I-max 300mA	Tc 25 °C	1253	137
	Tc-nom 45 °C	1223	135
	Tc-max 80 °C	1155	129

Fortimo LED Strip 1ft 650lm 930 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	564	620	656	lm
Module efficacy	150	165		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 67mA	Tc 25 °C	326	181
	Tc-nom 45 °C	319	178
	Tc-max 80 °C	302	171
I-nom 134mA	Tc 25 °C	635	169
	Tc-nom 45 °C	620	165
	Tc-max 80 °C	587	159
I-max 300mA	Tc 25 °C	1328	145
	Tc-nom 45 °C	1297	143
	Tc-max 80 °C	1225	137

Fortimo LED Strip 1ft 650lm 940 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	601	650	699	lm
Module efficacy	160	173		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 67mA	Tc 25 °C	342	190
	Tc-nom 45 °C	333	186
	Tc-max 80 °C	314	178
I-nom 134mA	Tc 25 °C	667	178
	Tc-nom 45 °C	650	173
	Tc-max 80 °C	612	167
I-max 300mA	Tc 25 °C	1406	154
	Tc-nom 45 °C	1369	151
	Tc-max 80 °C	1288	144

## Electrical characteristics

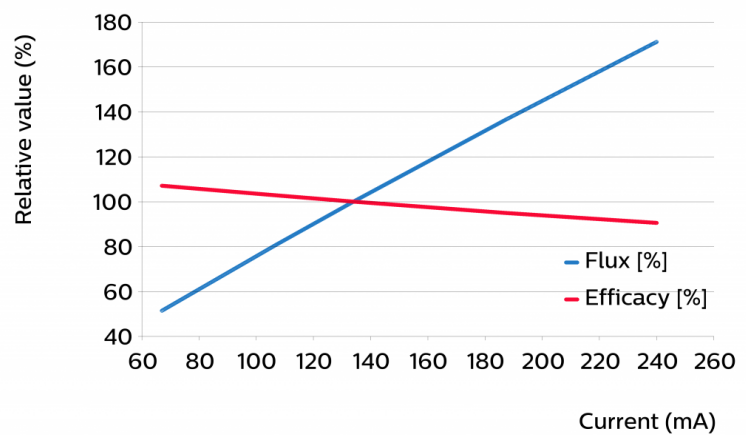
Parameter	Min	Typ	Max	Unit
Forward voltage	27.0	28.0	29.0	V
Power consumption	3.6	3.8	3.9	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel per chain			6	
Number of modules in parallel			6	

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

## Tuning information

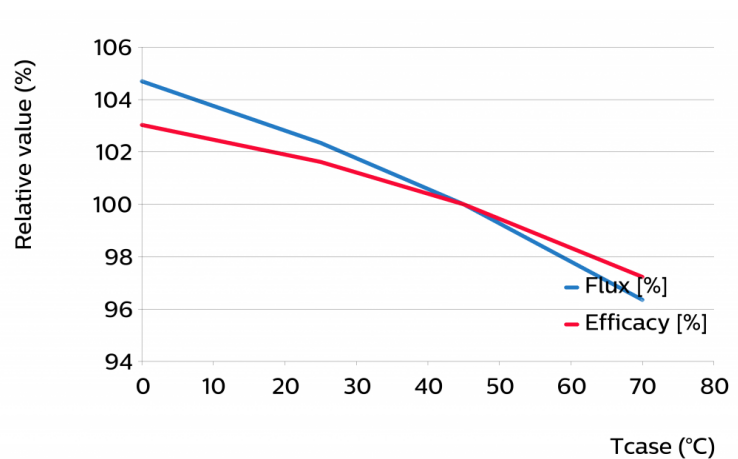
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
240	171	91
187	136	95
134	100	100
107	81	103
67	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

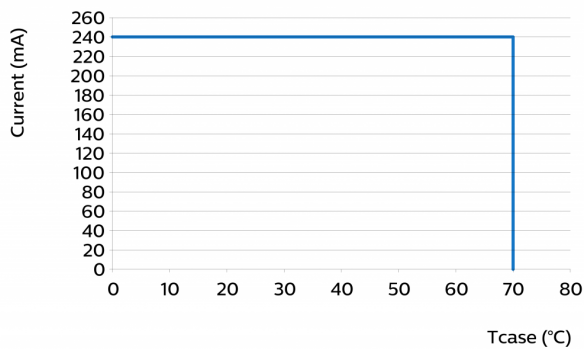
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 107 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	52	50	49
	Tc life 70°C	>60	>60	>60	>60	>60	>60	40	38	37
I nom 134 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>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 240 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

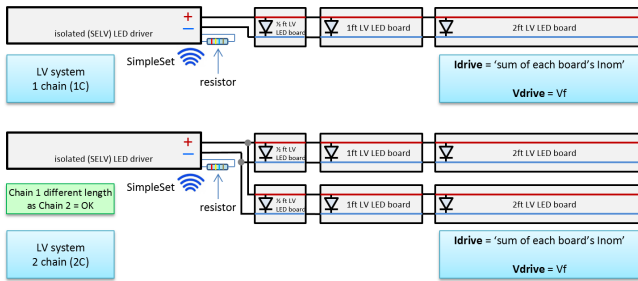
Switching cycles in accordance to EU 1194/2012: >15000

## Performance Window

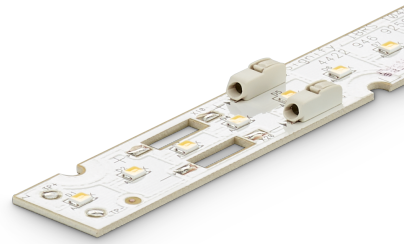


## Wiring

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	

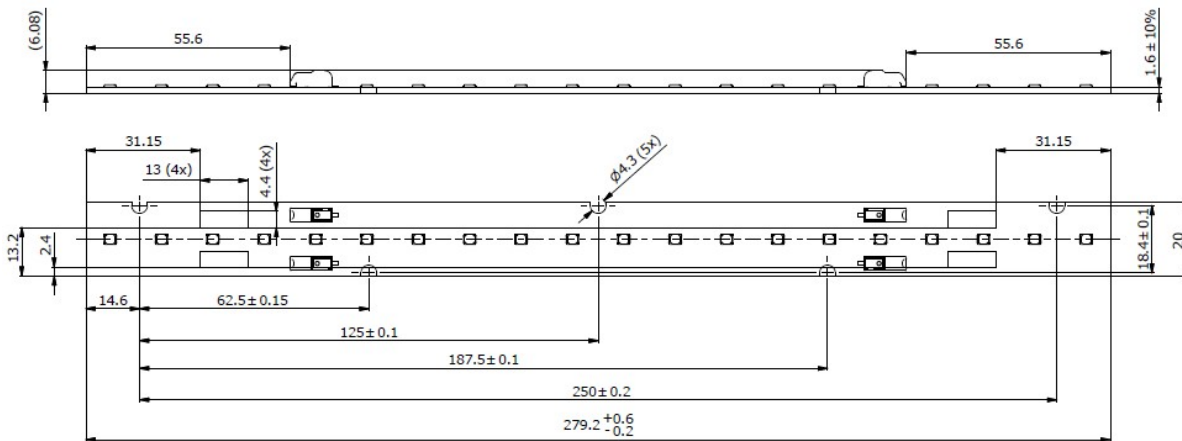


More information in the design-in guide of LED Linear modules.



## Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height excl. connector		1.6		mm
Height incl. connector		6.1		mm
Product mass		20		gram



## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		300	mA
Case temperature (Tc-max)		80	°C
ESD (direct contact)		8	kV
Working voltage		120	V <sub>dc</sub>



## Application information

---

### Certificates and Standards

CE  
ENEC  
ENEC+  
UL

### Environmental

RoHS/REACH

### Application

---

Dimming	Yes
---------	-----



© 2019 Signify Holding, IBRS 10461, 5600VB, NL. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

[www.philips.com/oem](http://www.philips.com/oem)

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.

10/10/2019