

# PHILIPS

## Fortimo

### LED

Fortimo LED Strip  
1400mm 5500lm 9xx  
LV5



## Datasheet

### Fortimo LED Strip 1400mm 5500lm 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
- CCTs available: 3000K and 4000K
- 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

May 2020



## Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip 1400mm 5500lm 930 LV5F	8718699 760786 00	9290 021 77806	96
Fortimo LED Strip 1400mm 5500lm 940 LV5F	8718699 760809 00	9290 021 77906	96

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 1400mm 5500lm 9xx LV5	954	1800	2000	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

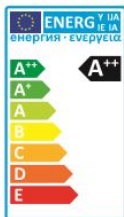
\*\* Value at which life time is specified

\*\*\* Maximum value for safe operation, do not operate above this value

## Optical characteristics - table per color (CCT)

### Fortimo LED Strip 1400mm 5500lm 930 LV5F

Parameter	Min	Typ	Max	Unit
Luminous flux	4833	5225	5617	lm
Module efficacy	148	160		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.437, 0.399)		-
CRI	90			
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 477mA	Tc 25 °C	2743	178
	Tc-nom 45 °C	2681	175
	Tc-max 80 °C	2538	168
I-nom 954mA	Tc 25 °C	5347	167
	Tc-nom 45 °C	5225	160
	Tc-max 80 °C	4944	157
I-max 2000mA	Tc 25 °C	10575	147
	Tc-nom 45 °C	10328	144
	Tc-max 80 °C	9760	138

## Fortimo LED Strip 1400mm 5500lm 940 LV5F

Parameter	Min	Typ	Max	Unit
Luminous flux	5088	5500	5912	lm
Module efficacy	156	168		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.384, 0.377)		-
CRI	90			
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 477mA	Tc 25 °C	2884	188
	Tc-nom 45 °C	2810	184
	Tc-max 80 °C	2648	176
I-nom 954mA	Tc 25 °C	5645	176
	Tc-nom 45 °C	5500	168
	Tc-max 80 °C	5181	165
I-max 2000mA	Tc 25 °C	11237	156
	Tc-nom 45 °C	10942	153
	Tc-max 80 °C	10296	146

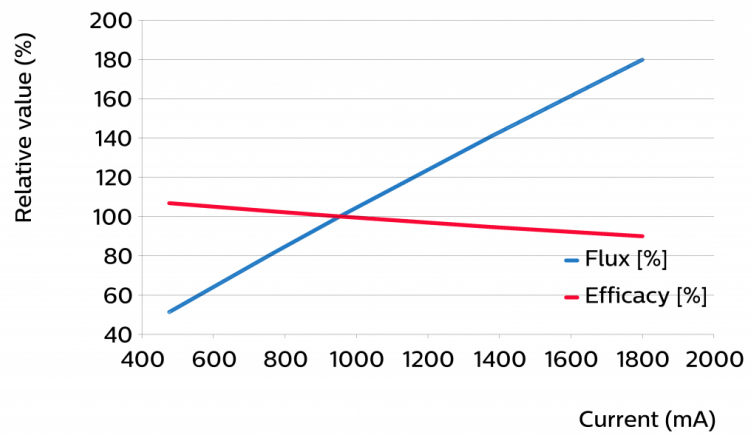
## Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	33.6	34.3	35.0	V
Power consumption	32.1	32.7	33.4	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel per chain			1	

## Tuning information

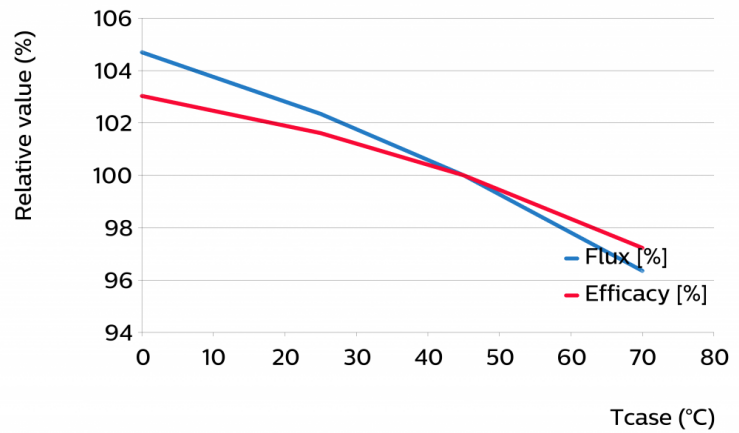
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1800	180	90
1377	141	95
954	100	100
763	81	103
477	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

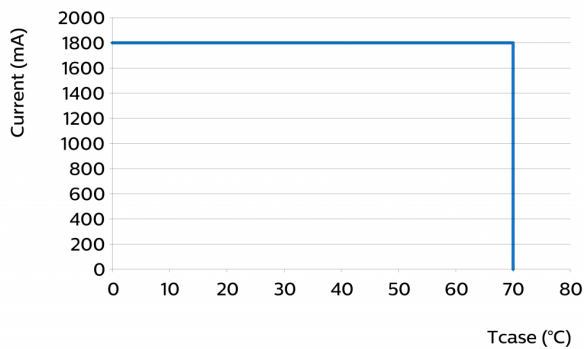
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 202 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	52	50	49
	Tc life 70°C	>60	>60	>60	>60	>60	>60	40	38	37
I nom 954 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>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 1800 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. 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 <sup>2</sup>	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	7.5...8.5	mm	



## 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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