

PHILIPS

Fortimo

LED

Fortimo LED Strip 5ft MF
9xx LV6



Datasheet

The Fortimo LED Strip is a uniquely wide portfolio which can be used in all kind of linear indoor luminaire types. Its form factor makes it easy to design-in and handle in production as it complies to Zhaga standards. Due to the availability from 0.25ft up to 5ft lengths only one product family is needed to cover a wide range of needs.

Key features and benefits

- Typical module efficiency of 186 lm/W (at 4000K CRI80)
- CRI90 High Efficiency typical performance of 174 lm/W (at 4000K CRI90)
- Long life-time: >72,000 hours
- Excellent color consistency of 3 SDCM
- Two lumen packages per length available: LF (650 lm/ft) and MF (1100 lm/ft)
- Wide range of CCTs available: 2700K, 3000K, 3500K, 4000K, 5000K and 6500K
- Available in High Voltage (HV) and Low Voltage (LV)
- Options in front connector (FC) or back connector (BC)
- Small LED module width of only 20mm
- Available lengths: 0.25ft / 0.5ft / 1ft / 2ft / 4ft (1120mm) / 4ft extended (1150mm) / 5ft (1400mm) / 5ft extended 1450mm)
- Wide temperature (Tc) range -40°C to +80°C
- Five year system warranty

March 2023



Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
Fortimo LED Strip 5ft MF 930 FC LV6	8719514 490147 00	9290 029 49806	1413365	110
Fortimo LED Strip 5ft MF 940 FC LV6	8719514 490161 00	9290 029 49906	1413366	110

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 5ft MF 9xx LV6	946	1500	2400	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c 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)

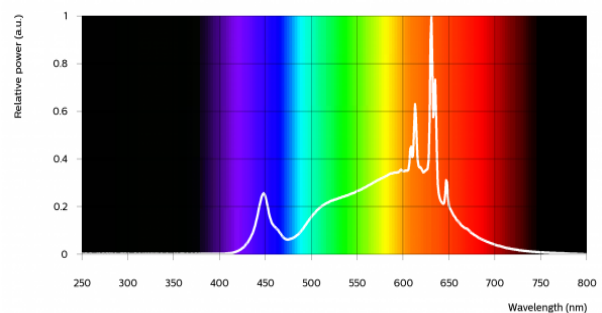
Fortimo LED Strip 5ft MF 930 FC LV6

Parameter	Min	Typ	Max	Unit
Luminous flux	5050	5132	5620	lm
Efficacy	157	163	189	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.436, 0.402)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		930/339		
Photobiological safety			RG1 unlimited	



Measurement precision $\pm 5\%$ for the flux data and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement precision for CRI ± 1.5 .

Operation point	930	lm	lm/W
80% I-nom 757mA	Tc 25 °C	4251	172
	Tc-nom 45 °C	4153	167
	Tc-max 85 °C	3904	155
I-nom 946mA	Tc 25 °C	5254	168
	Tc-nom 45 °C	5132	163
	Tc-max 85 °C	4824	151
I-max 2400mA	Tc 25 °C	12443	143
	Tc-nom 45 °C	12145	139
	Tc-max 85 °C	11390	128



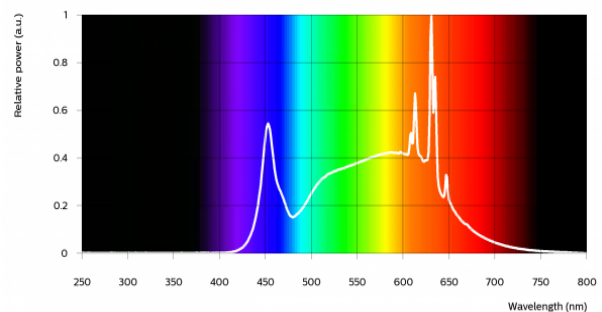
Fortimo LED Strip 5ft MF 940 FC LV6

Parameter	Min	Typ	Max	Unit
Luminous flux	5320	5500	6020	lm
Efficacy	165	174	202	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.378)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		940/339		
Photobiological safety			RG1 unlimited	



Measurement precision $\pm 5\%$ for the flux data and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement precision for CRI ± 1.5 .

Operation point	940	lm	lm/W
80% I-nom 757mA	Tc 25 °C	4567	185
	Tc-nom 45 °C	4451	179
	Tc-max 85 °C	4168	165
I-nom 946mA	Tc 25 °C	5645	180
	Tc-nom 45 °C	5500	174
	Tc-max 85 °C	5150	161
I-max 2400mA	Tc 25 °C	13371	153
	Tc-nom 45 °C	13019	148
	Tc-max 85 °C	12165	137



Electrical characteristics

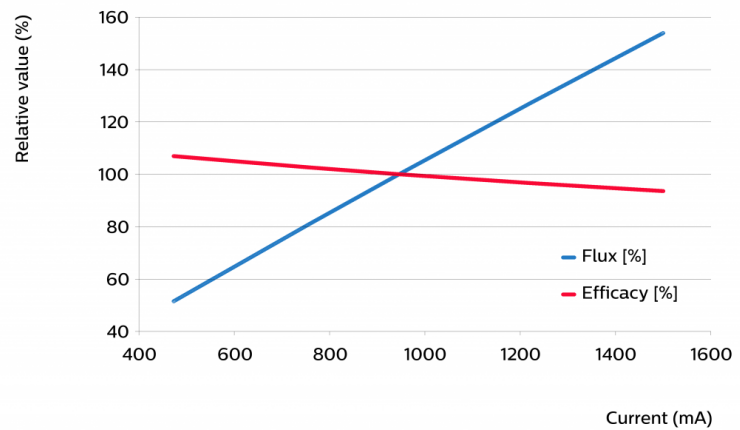
Parameter	Min	Typ	Max	Unit
Forward voltage	31.5	33.3	33.9	V
Power consumption	29.8	31.5	32.1	W = kWh/1000h
Number of modules per chain			1	

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

Tuning information

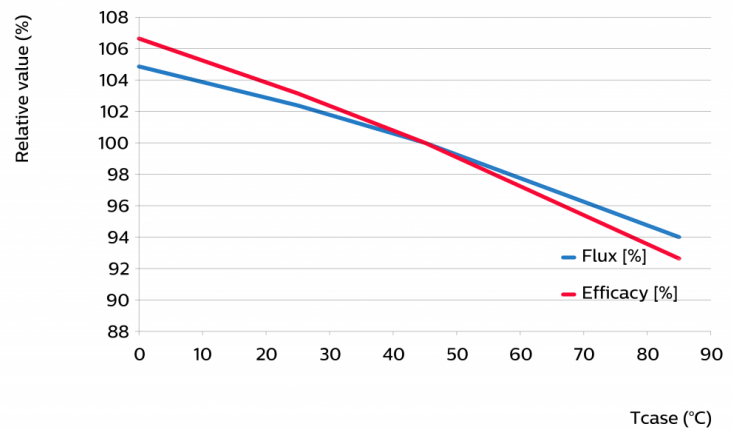
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1500	154	94
1223	127	97
946	100	100
757	81	103
473	51	107



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

Tc [°C]	Flux [%]	Efficacy [%]
85	94	93
45	100	100
25	102	103
0	105	107



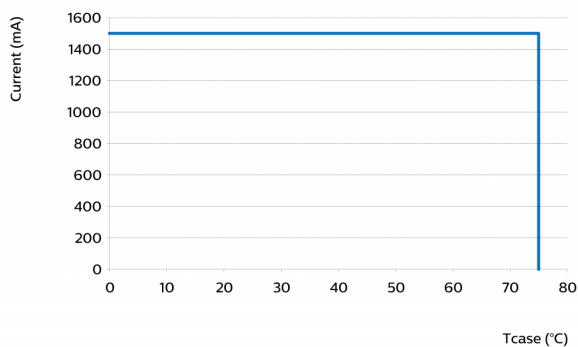
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=757mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>50	>50	>50
	Tc_nom=45°C	>100	>100	>100	>100	>100	97	>50	50	50
	Tc_life=75°C	>100	>100	>100	79	78	77	37	37	36
Inom=946mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>50	>50	>50
	Tc_nom=45°C	>100	>100	>100	>100	>100	>100	50	48	48
	Tc_life=75°C	>100	>100	>100	75	74	73	36	35	35
Ilife=1500mA	Tc=25°C	>69	>69	>69	>69	>69	>69	>32	>32	>32
	Tc_nom=45°C	>69	>69	>69	>69	>69	>69	>32	>32	>32
	Tc_life=75°C	>69	>69	>69	69	68	67	32	32	32

Lifetime

Parameter	Value	Unit
M70F50 nominal	>100000	hours
M70F50 life	>69000	hours

Performance Window

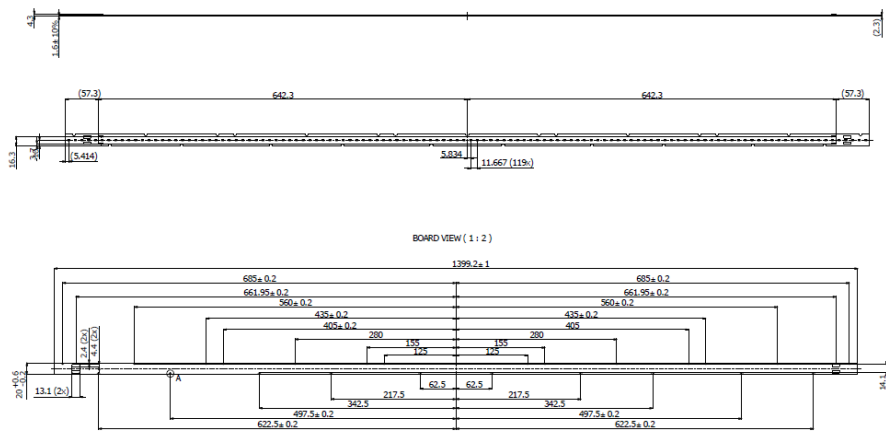


Wiring

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

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	1398.2	1399.2	1400.2	mm
Width	19.8	20	20.6	mm
Height PCB	1.45	1.6	1.75	mm
Height Total		4.3		mm
Product mass		91.4		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		2400	mA
Case temperature (Tc-max)		85	°C
ESD (direct contact)	8		kV
Working voltage		350	V _{dc}

Application information

Certificates and Standards

CE
ENEC
ENEC+
cULus

Environmental

RoHS/REACH

Application

Dimming	Yes
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