

PHILIPS

Fortimo

LED

Fortimo LED Strip 2ft
2200lm 9xx LV5



Datasheet

Fortimo LED Strip 2ft 2200lm 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

December 2020



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip 2ft 2200lm 930 FC LV5	8718699 717384 00	9290 021 25606	84
Fortimo LED Strip 2ft 2200lm 940 FC LV5	8718699 717407 00	9290 021 25706	84

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 2ft 2200lm 9xx LV5	378	720	900	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	45	70	80	°C

* Nominal value at which typical performance is specified

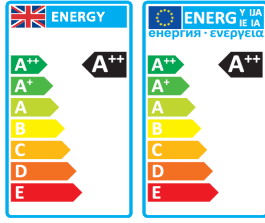
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

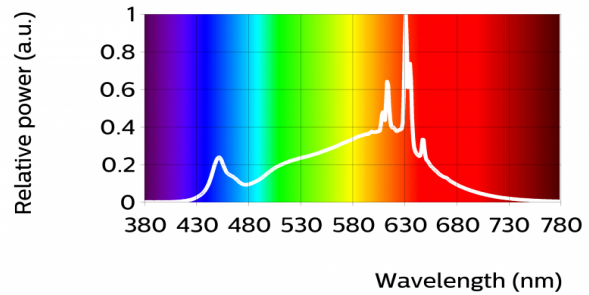
Fortimo LED Strip 2ft 2200lm 930 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1913	2090	2223	lm
Module efficacy	151	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	



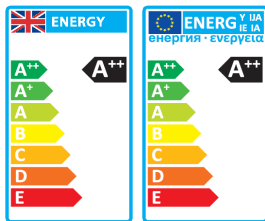
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	930	lm	lm/W
80% I-nom 302mA	Tc 25 °C	1730	173
	Tc-nom 45 °C	1691	170
	Tc-max 80 °C	1629	166
I-nom 378mA	Tc 25 °C	2139	169
	Tc-nom 45 °C	2090	165
	Tc-max 80 °C	2014	161
I-max 900mA	Tc 25 °C	3881	152
	Tc-nom 45 °C	3791	149
	Tc-max 80 °C	3650	145



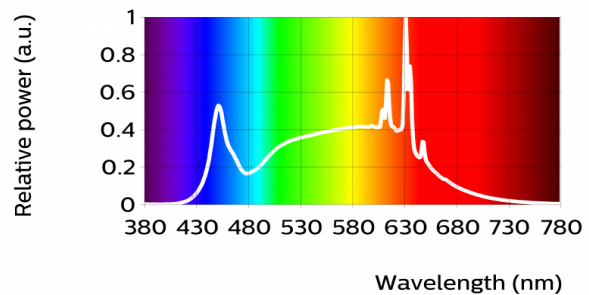
Fortimo LED Strip 2ft 2200lm 940 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	2035	2200	2365	lm
Module efficacy	161	174		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
80% I-nom 302mA	Tc 25 °C	1824	183
	Tc-nom 45 °C	1777	180
	Tc-max 80 °C	1707	174
I-nom 378mA	Tc 25 °C	2258	178
	Tc-nom 45 °C	2200	174
	Tc-max 80 °C	2113	170
I-max 900mA	Tc 25 °C	4120	161
	Tc-nom 45 °C	4012	158
	Tc-max 80 °C	3851	153



Electrical characteristics

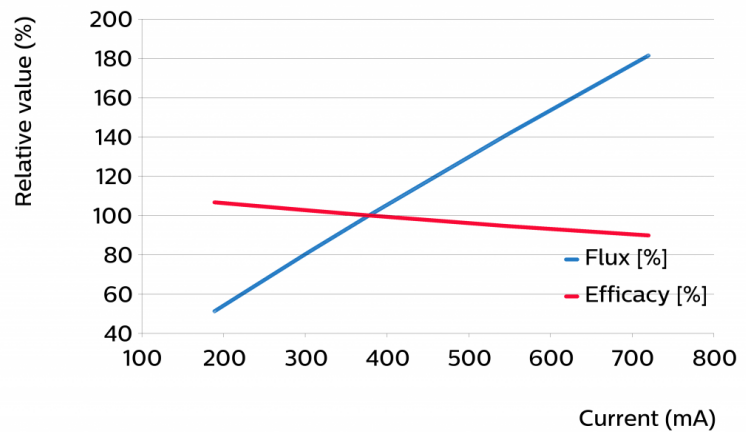
Parameter	Min	Typ	Max	Unit
Forward voltage	32.3	33.5	34.7	V
Power consumption	12.2	12.7	13.1	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			3	

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

Tuning information

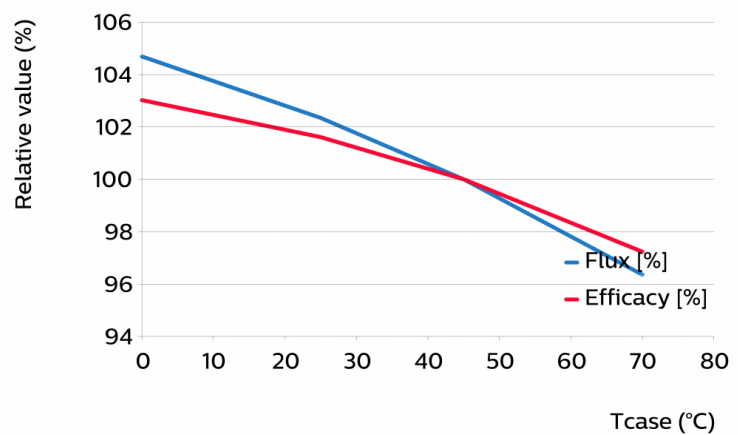
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
720	181	90
549	142	95
378	100	100
302	81	103
189	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

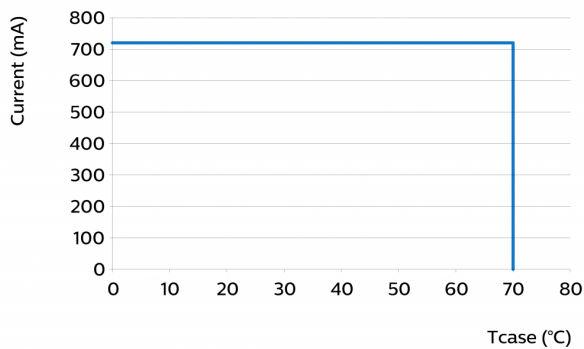
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 302 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	52	50	49
	Tc life 70°C	>60	>60	>60	>60	>60	>60	40	38	37
I nom 378 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>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 720 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

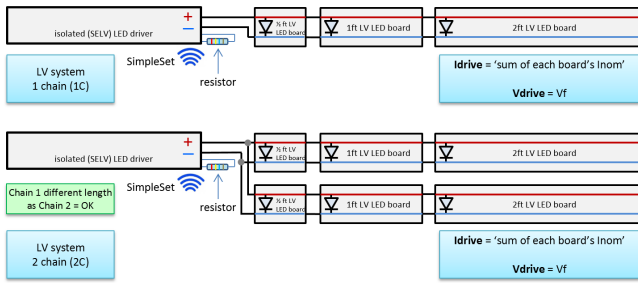
Switching cycles in accordance to EU 1194/2012: >15000

Performance Window



Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25...0.75	mm 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	

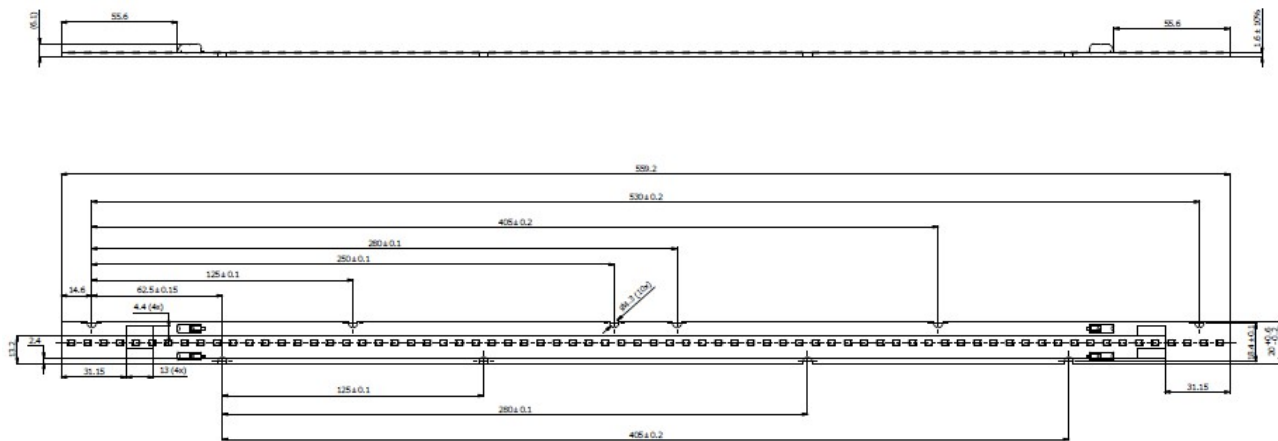


More information in the design-in guide of LED Linear modules.



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)		900	mA
Case temperature (T _c -max)		80	°C
ESD (direct contact)	8		kV
Working voltage		120	V _{dc}

Application information

Certificates and Standards

CE
ENEC
ENEC+
UL

Environmental

RoHS/REACH

Application

Dimming	Yes
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