

PHILIPS

Fortimo

LED

Fortimo LED Strip OC
1ft 1100lm 8xx LV5



Datasheet

Fortimo LED Strip OC 1ft 1100lm 8xx LV5

The Fortimo LED Strip OC generation 5 is specifically designed to match with a variety of different optics. Due to its efficient design there is a high efficiency possible of 182 Lm/W. The portfolio is available in 0.5ft, 1ft and 2ft, both in high voltage and low voltage. The optics are available in 30°/60°/90°/A-symmetrical/Double-A-symmetrical.

Key features and benefits

- Typical module efficacy of 182 lm/W (at 4000K CRI80)
- Long life-time: >50,000 hours
- Excellent color consistency of 3 SDCM
- Wide range of CCTs available: 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 +85°C
- Five year system warranty

January 2020



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip OC 1ft 1100lm 830 BC LV5	8718699 763954 00	9290 021 92706	84
Fortimo LED Strip OC 1ft 1100lm 840 BC LV5	8718699 763978 00	9290 021 92806	84
Fortimo LED Strip OC 1ft 1100lm 865 BC LV5	8718699 763992 00	9290 021 92906	84
Fortimo LED Strip OC 1ft 1100lm 830 FC LV5	8718699 761677 00	9290 021 93006	168
Fortimo LED Strip OC 1ft 1100lm 840 FC LV5	8718699 761691 00	9290 021 93106	168
Fortimo LED Strip OC 1ft 1100lm 865 FC LV5	8718699 761714 00	9290 02193206	168

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip OC 1ft 1100lm 8xx LV5	180	300	400	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 OC 1ft 1100lm 830 BC LV5

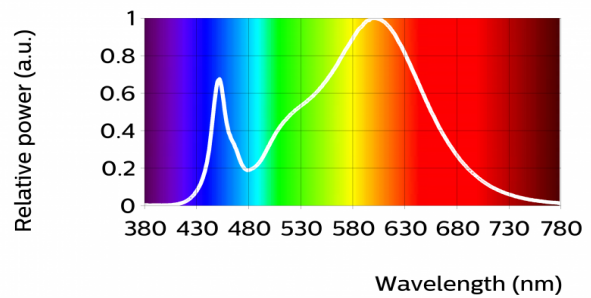
Fortimo LED Strip OC 1ft 1100lm 830 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	993	1045	1097	lm
Module efficacy	166	175		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.429, 0.400)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		830/359		
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	830	lm	lm/W
80% I-nom 144mA	Tc 25 °C	861	181
	Tc-nom 45 °C	845	179
	Tc-max 85 °C	816	174
I-nom 180mA	Tc 25 °C	1065	177
	Tc-nom 45 °C	1045	175
	Tc-max 85 °C	1009	170
I-max 400mA	Tc 25 °C	1724	166
	Tc-nom 45 °C	1690	163
	Tc-max 85 °C	1633	159



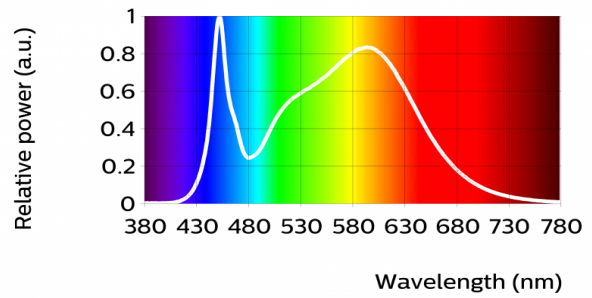
Fortimo LED Strip OC 1ft 1100lm 840 BC LV5
 Fortimo LED Strip OC 1ft 1100lm 840 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1045	1100	1155	lm
Module efficacy	175	184		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.378, 0.376)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		840/359		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



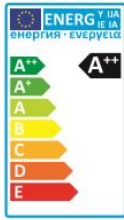
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	840	lm	lm/W
	Tc 25 °C	906	191
80% I-nom 144mA	Tc-nom 45 °C	889	188
	Tc-max 85 °C	859	183
	Tc 25 °C	1121	187
I-nom 180mA	Tc-nom 45 °C	1100	184
	Tc-max 85 °C	1063	179
	Tc 25 °C	1814	174
I-max 400mA	Tc-nom 45 °C	1780	172
	Tc-max 85 °C	1719	167



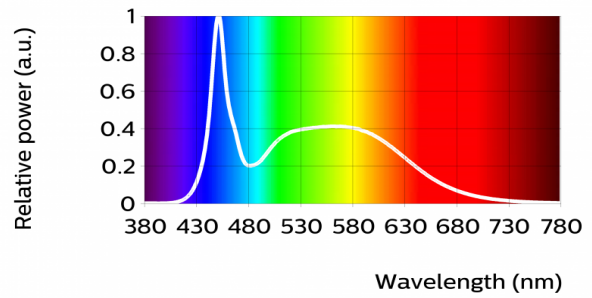
Fortimo LED Strip OC 1ft 1100lm 865 BC LV5
 Fortimo LED Strip OC 1ft 1100lm 865 FC LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1045	1100	1155	lm
Module efficacy	175	184		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.311, 0.326)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		865/359		
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	865	lm	lm/W
	Tc 25 °C	906	191
80% I-nom 144mA	Tc-nom 45 °C	889	188
	Tc-max 85 °C	859	183
	Tc 25 °C	1121	187
I-nom 180mA	Tc-nom 45 °C	1100	184
	Tc-max 85 °C	1063	179
	Tc 25 °C	1814	174
I-max 400mA	Tc-nom 45 °C	1780	172
	Tc-max 85 °C	1719	167



Electrical characteristics

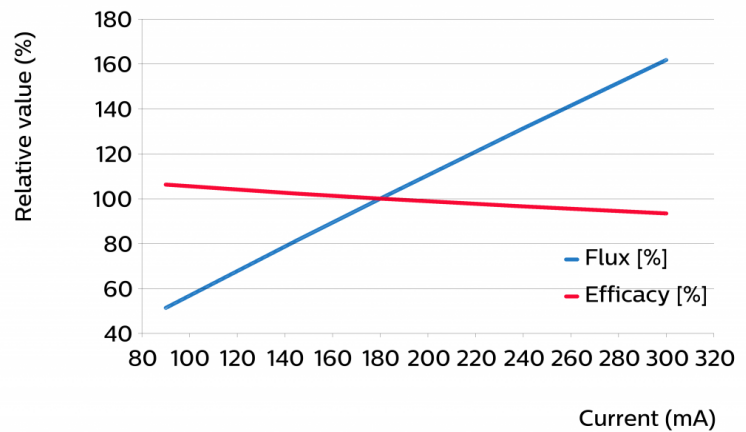
Parameter	Min	Typ	Max	Unit
Forward voltage	32.5	33.2	33.9	V
Power consumption	5.9	6.0	6.1	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel per chain			5	

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

Tuning information

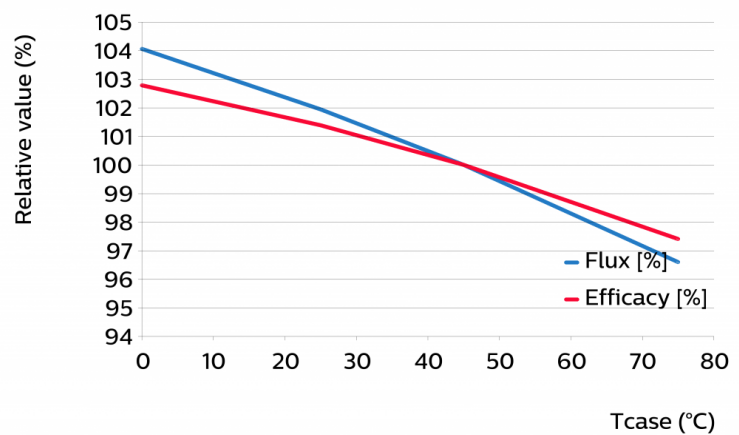
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
300	162	93
240	131	96
180	100	100
144	81	102
90	51	106



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

Tc [°C]	Flux [%]	Efficacy [%]
75	97	97
45	100	100
25	102	101
0	104	103



Lumen maintenance

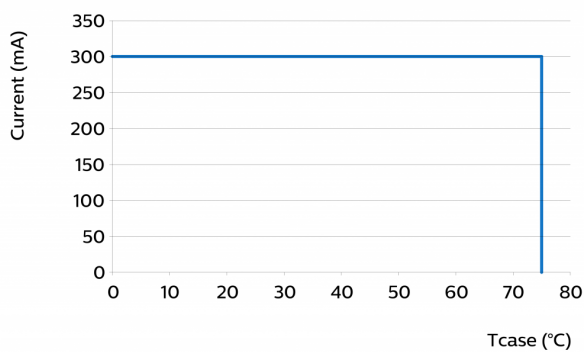
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I _{nom} 144mA	Tc 25°C	>70	>70	>70	>70	>70	>70	64	60	57
	Tc _{nom} 45°C	>70	>70	>70	>70	>70	>70	51	47	45
	Tc _{life} 75°C	>70	>70	>70	>70	>70	>70	37	35	33
I _{nom} 180 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	61	57	55
	Tc _{nom} 45°C	>70	>70	>70	>70	>70	>70	49	45	43
	Tc _{life} 75°C	>70	>70	>70	>70	70	67	36	33	32
I _{life} 300 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	55	51	49
	Tc _{nom} 45°C	>70	>70	>70	>70	>70	>70	44	41	39
	Tc _{life} 75°C	>70	>70	>70	68	63	61	32	30	29

Lifetime

Parameter	Value	Unit
M70F50 nominal	>70000	hours
M70F50 life	>70000	hours

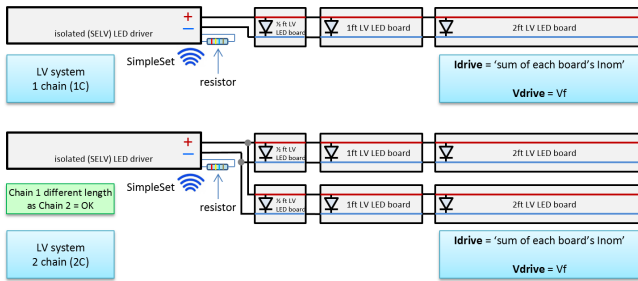
Switching cycles in accordance to EU 1194/2012: >15000

Performance Window

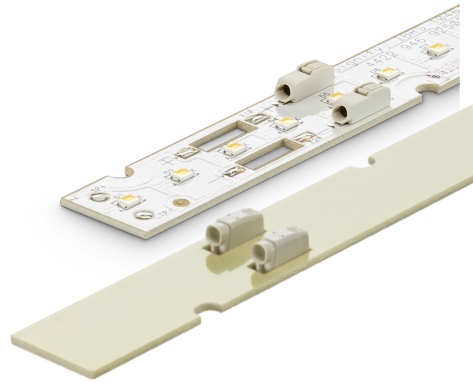


Wiring

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	



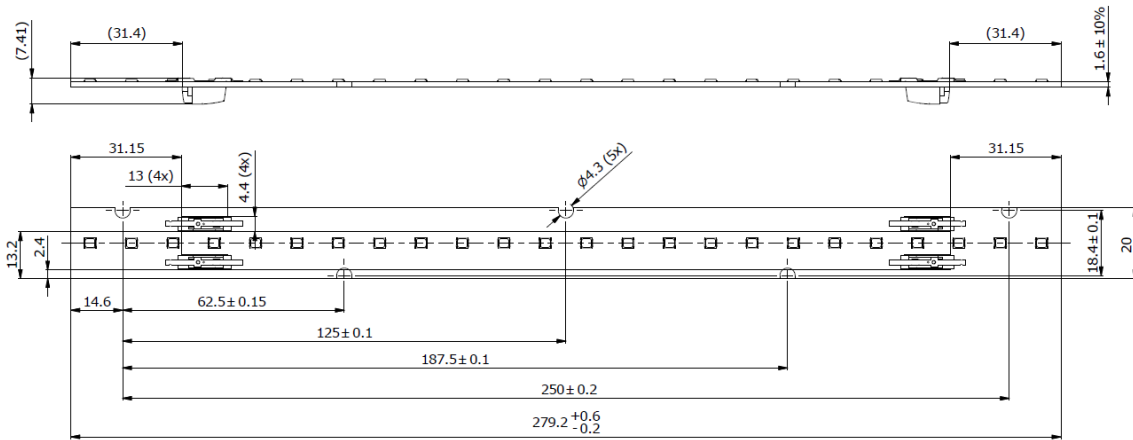
More information in the design-in guide of LED Linear modules.



Mechanical characteristics

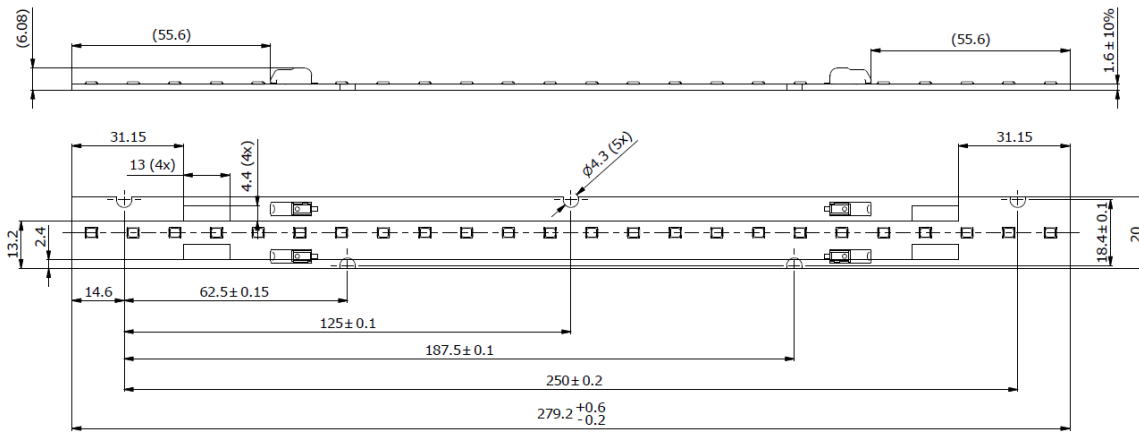
Fortimo LED Strip OC 1ft 1100lm 830 BC LV5
 Fortimo LED Strip OC 1ft 1100lm 840 BC LV5
 Fortimo LED Strip OC 1ft 1100lm 865 BC LV5

Parameter	Min	Typ	Max	Unit
Length	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height PCB	1.44	1.6	1.76	mm
Height incl. connector	7.15	7.35	7.55	mm
Product mass		20		gram



Fortimo LED Strip OC 1ft 1100lm 830 FC LV5
 Fortimo LED Strip OC 1ft 1100lm 840 FC LV5
 Fortimo LED Strip OC 1ft 1100lm 865 FC LV5

Parameter	Min	Typ	Max	Unit
Length	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height PCB	1.44	1.6	1.76	mm
Height incl. connector	5.9	6.1	6.3	mm
Product mass		20		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		400	mA
Case temperature (Tc-max)		85	°C
ESD (direct contact)		8	kV
Working voltage		120	V _{dc}

Application information

Certificates and Standards

CE

Environmental

RoHS/REACH

Application

Dimming	Yes
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