

PHILIPS

Fortimo

LED

Fortimo LED Strip 1ft
2000lm HV6



Datasheet

Fortimo LED Strip 1ft 2000lm HV6

The Fortimo LED Strip High Flux HV6 is the ideal solution for applications where the lighting fixtures are mounted at higher heights. Key applications include industry and retail where often trunking luminaires, highbay luminaires, battens or waterproof luminaires are being used. The LED modules are designed to have a high light output combined with an extremely long lifetime.

Key features and benefits

- Two lumen output versions: 2000 lm/ft and 3000 lm/ft
- LED module efficiency of 178 Lm/W (4000K, CRI80)
- Long life time of >100,000 hours
- High color rendering: CRI >80
- Excellent color consistency of 3 SDCM
- Variation of color temperatures: 3000 K, 4000 K, 5000 K, and 6500 K
- Two lengths: 1ft and 2ft
- Wide case temperature (Tc) range from -40 °C to +95 °C
- Five years system warranty

August 2020



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip 1ft 2000lm FC 830 HV6	8718699 787943 00	9290 028 01306	168
Fortimo LED Strip 1ft 2000lm FC 840 HV6	8718699 787967 00	9290 028 01406	168
Fortimo LED Strip 1ft 2000lm FC 850 HV6	8718699 787929 00	9290 028 01506	168
Fortimo LED Strip 1ft 2000lm FC 865 HV6	8718699 788087 00	9290 028 01606	168

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 1ft 2000lm HV6	285	400	480	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	55	90	95	°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)

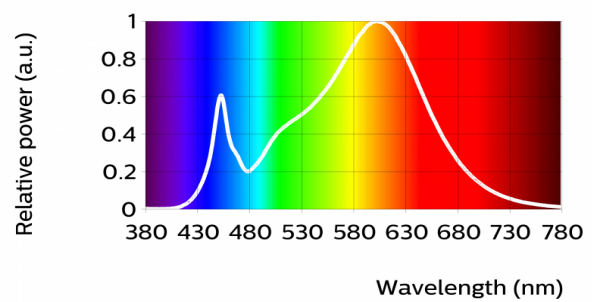
Fortimo LED Strip 1ft 2000lm FC 830 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1786	1880	1974	lm
Module efficacy	157	167		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.430, 0.400)		-
Color consistency			3	SDCM
CRI	80			
R9	50			
Photometric code		830/359		
Photobiological safety			RG1 unlimited	



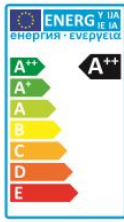
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	830	lm	
		lm	lm/W
80% I-nom 228mA	Tc 25 °C	1565	175
	Tc-nom 55 °C	1523	172
	Tc-max 95 °C	1453	166
I-nom 285mA	Tc 25 °C	1933	170
	Tc-nom 55 °C	1880	167
	Tc-max 95 °C	1793	162
I-max 480mA	Tc 25 °C	2651	161
	Tc-nom 55 °C	2578	159
	Tc-max 95 °C	2457	153



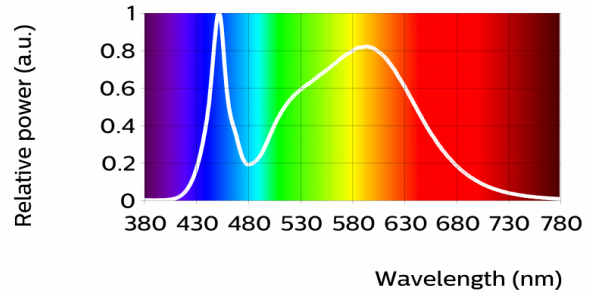
Fortimo LED Strip 1ft 2000lm FC 840 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1900	2000	2100	lm
Module efficacy	167	178		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.379, 0.375)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		840/359		
Photobiological safety			RG1 unlimited	



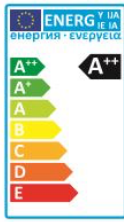
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	840	lm	lm/W
80% I-nom 228mA	Tc 25 °C	1670	188
	Tc-nom 55 °C	1620	184
	Tc-max 95 °C	1539	177
I-nom 285mA	Tc 25 °C	2062	182
	Tc-nom 55 °C	2000	178
	Tc-max 95 °C	1899	171
I-max 480mA	Tc 25 °C	2830	172
	Tc-nom 55 °C	2744	168
	Tc-max 95 °C	2604	161



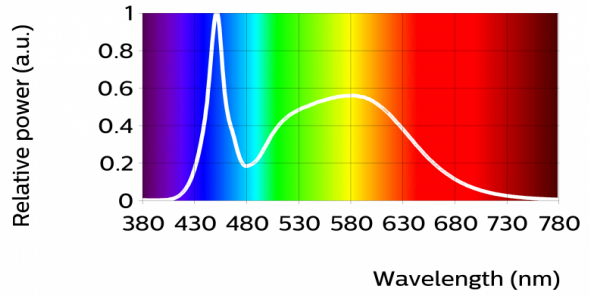
Fortimo LED Strip 1ft 2000lm FC 850 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1900	2000	2100	lm
Module efficacy	167	178		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.341, 0.349)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		850/359		
Photobiological safety			RG1 unlimited	



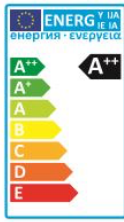
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	850	lm	lm/W
80% I-nom 228mA	Tc 25 °C	1670	188
	Tc-nom 55 °C	1620	184
	Tc-max 95 °C	1539	177
I-nom 285mA	Tc 25 °C	2062	182
	Tc-nom 55 °C	2000	178
	Tc-max 95 °C	1899	171
I-max 480mA	Tc 25 °C	2830	172
	Tc-nom 55 °C	2744	168
	Tc-max 95 °C	2604	161



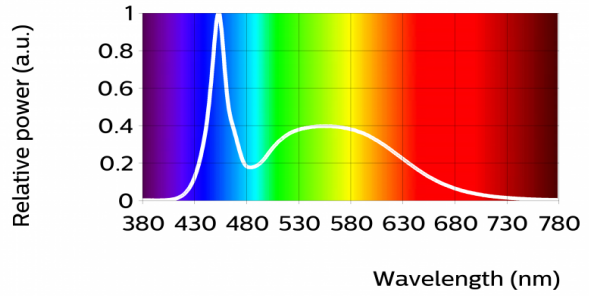
Fortimo LED Strip 1ft 2000lm FC 865 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1881	1980	2079	lm
Module efficacy	166	176		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.309, 0.322)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		865/359		
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
80% I-nom 228mA	Tc 25 °C	1658	186
	Tc-nom 55 °C	1604	182
	Tc-max 95 °C	1516	174
I-nom 285mA	Tc 25 °C	2047	180
	Tc-nom 55 °C	1980	176
	Tc-max 95 °C	1871	169
I-max 480mA	Tc 25 °C	2809	171
	Tc-nom 55 °C	2716	167
	Tc-max 95 °C	2566	159



Electrical characteristics

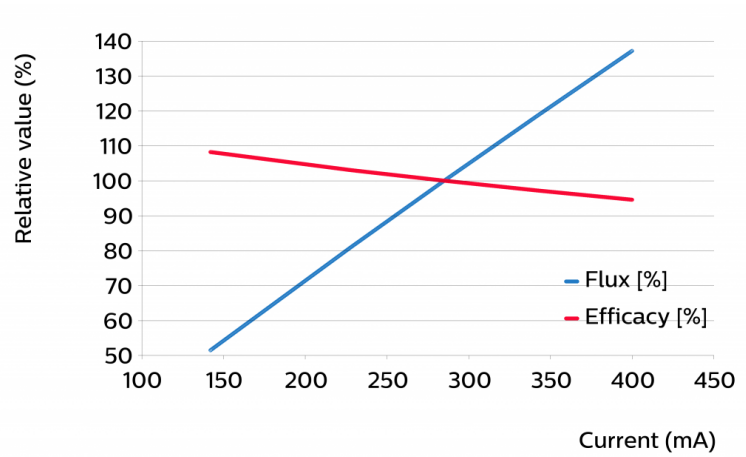
Parameter	Min	Typ	Max	Unit
Forward voltage	38.6	39.4	40.2	V
Power consumption	11.0	11.2	11.5	W = kWh/1000h
Number of modules in series per chain			8	

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

Tuning information

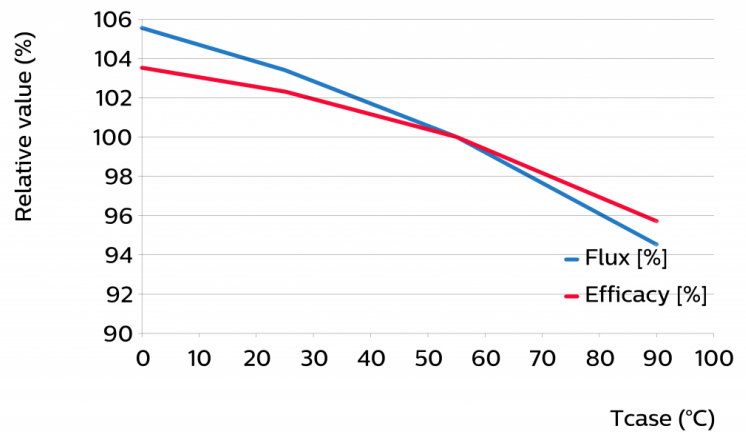
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
400	137	95
342	119	97
285	100	100
228	81	103
142	51	108



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

Tc [°C]	Flux [%]	Efficacy [%]
90	95	96
55	100	100
25	103	102
0	106	104



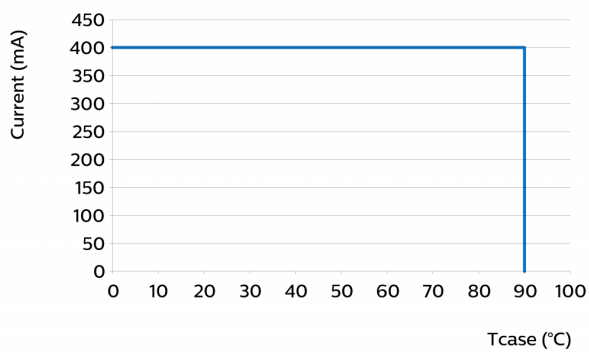
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I _{nom} 228mA	Tc 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc _{nom} 55°C	>100	>100	>100	>100	>100	>100	82	80	80
	Tc _{life} 90°C	>100	82	64	>100	82	64	57	56	55
I _{nom} 285mA	Tc 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc _{nom} 55°C	>100	>100	>100	>100	>100	>100	78	77	76
	Tc _{life} 90°C	>100	82	64	>100	82	64	55	54	53
I _{life} 400mA	Tc 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	Tc _{nom} 55°C	>100	>100	>100	>100	>100	>100	73	72	71
	Tc _{life} 90°C	>100	82	64	>100	82	64	51	50	49

Lifetime

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

Performance Window

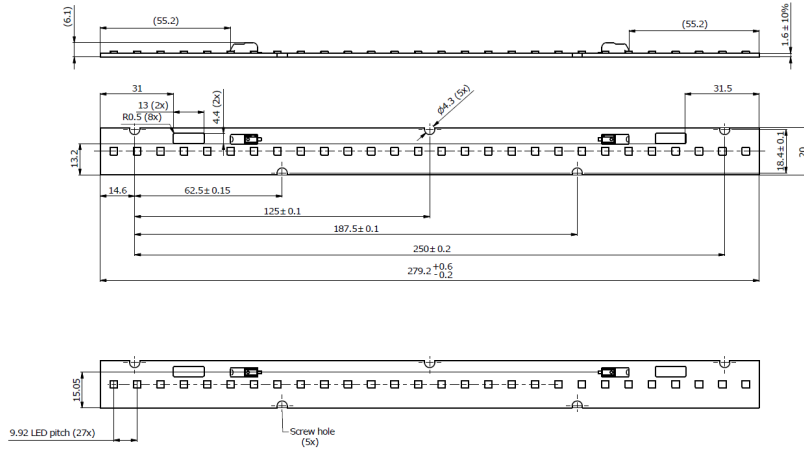


Wiring

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	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height PCB	1.4	1.6	1.8	mm
Height total		6.1		mm
Product mass		18		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		480	mA
Case temperature (Tc-max)		95	°C
ESD (direct contact)		8	kV
Working voltage		350	V _{dc}

Application information

Certificates and Standards

CE
 ENEC
 ENEC+

Environmental

RoHS/REACH

Application

Dimming	Yes
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