PHILIPS

Fortimo

LED

Fortimo LED Strip 1ft 3000lm HV6

Datasheet

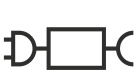
Fortimo LED Strip 1ft 3000lm HV6

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 3000lm FC 830 HV6	8718699 788025 00	9290 028 02106	168
Fortimo LED Strip 1ft 3000lm FC 840 HV6	8718699 788049 00	9290 028 02206	168
Fortimo LED Strip 1ft 3000lm FC 850 HV6	8718699 788063 00	9290 028 02306	168
Fortimo LED Strip 1ft 3000lm FC 865 HV6	8718699 788100 00	9290 028 02406	168

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 1ft 3000lm HV6	428	600	720	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

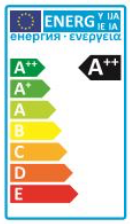
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

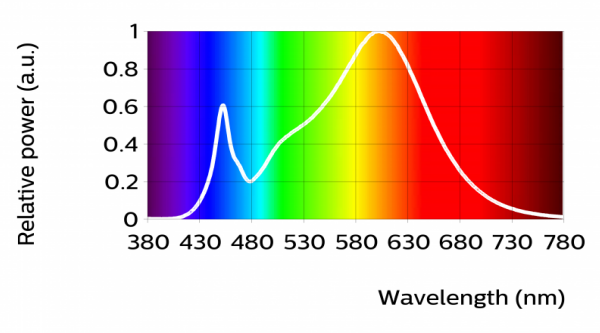
Fortimo LED Strip 1ft 3000lm FC 830 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	2679	2820	2961	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			
Photometric code		830/359		
Photobiological safety			RG1 unlimited	



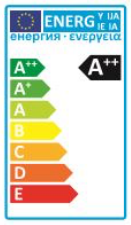
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	830	lm	lm/W
80% I-nom 342mA	Tc 25 °C	2348	175
	Tc-nom 55 °C	2285	172
	Tc-max 95 °C	2179	166
I-nom 428mA	Tc 25 °C	2899	170
	Tc-nom 55 °C	2820	167
	Tc-max 95 °C	2689	161
I-max 720mA	Tc 25 °C	3973	161
	Tc-nom 55 °C	3863	159
	Tc-max 95 °C	3682	153



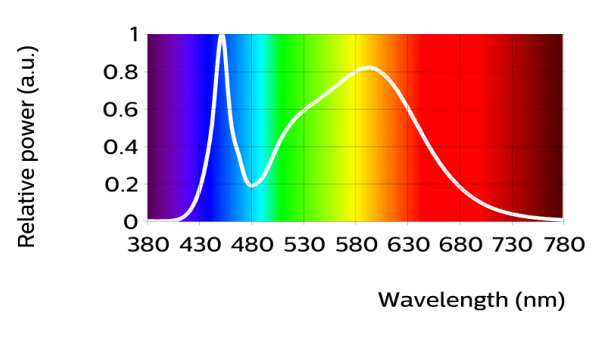
Fortimo LED Strip 1ft 3000lm FC 840 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	2850	3000	3150	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	



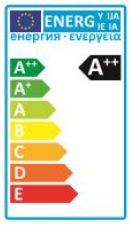
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	840	lm	lm/W
80% I-nom 342mA	Tc 25 °C	2505	187
	Tc-nom 55 °C	2430	184
	Tc-max 95 °C	2308	176
I-nom 428mA	Tc 25 °C	3093	182
	Tc-nom 55 °C	3000	178
	Tc-max 95 °C	2848	171
I-max 720mA	Tc 25 °C	4240	171
	Tc-nom 55 °C	4111	168
	Tc-max 95 °C	3901	161



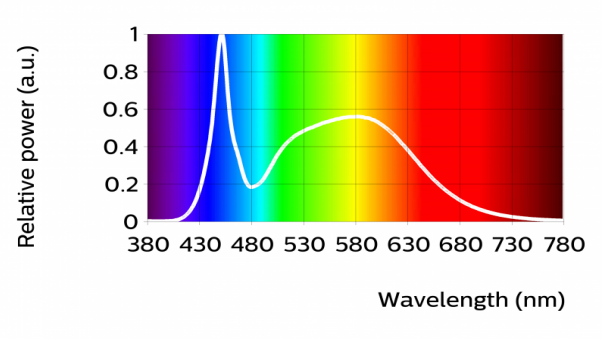
Fortimo LED Strip 1ft 3000lm FC 850 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	2850	3000	3150	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	



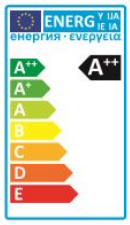
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	850	lm	lm/W
80% I-nom 342mA	Tc 25 °C	2505	187
	Tc-nom 55 °C	2430	184
	Tc-max 95 °C	2308	176
I-nom 428mA	Tc 25 °C	3093	182
	Tc-nom 55 °C	3000	178
	Tc-max 95 °C	2848	171
I-max 720mA	Tc 25 °C	4240	171
	Tc-nom 55 °C	4111	168
	Tc-max 95 °C	3901	161



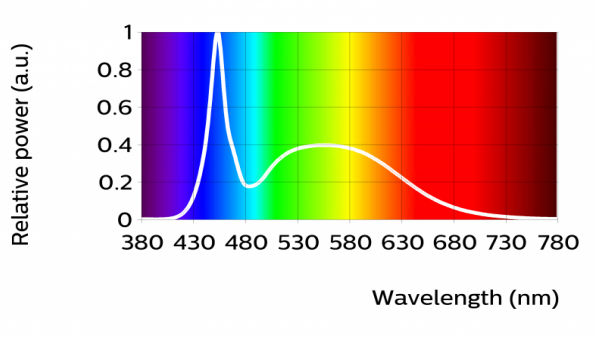
Fortimo LED Strip 1ft 3000lm FC 865 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	2822	2970	3118	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 342mA	Tc 25 °C	2487	186
	Tc-nom 55 °C	2406	181
	Tc-max 95 °C	2274	174
I-nom 428mA	Tc 25 °C	3071	180
	Tc-nom 55 °C	2970	176
	Tc-max 95 °C	2807	169
I-max 720mA	Tc 25 °C	4209	171
	Tc-nom 55 °C	4070	167
	Tc-max 95 °C	3845	159



Electrical characteristics

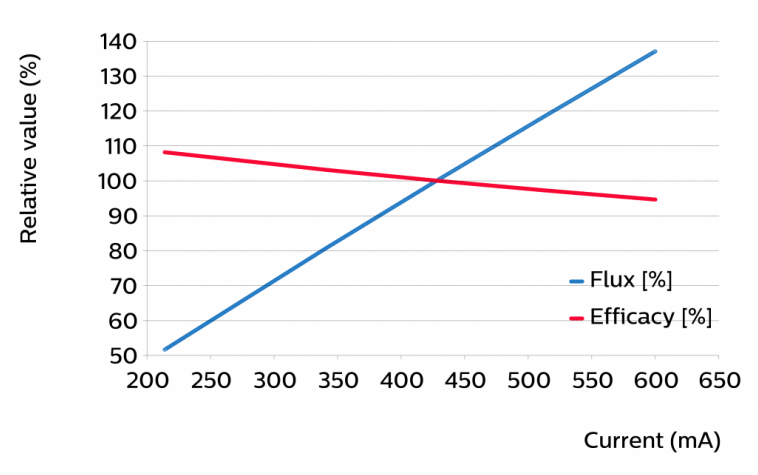
Parameter	Min	Typ	Max	Unit
Forward voltage	38.6	39.4	40.2	V
Power consumption	16.5	16.9	17.2	W = kWh/1000h
Number of modules in series per chain			8	

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

Tuning information

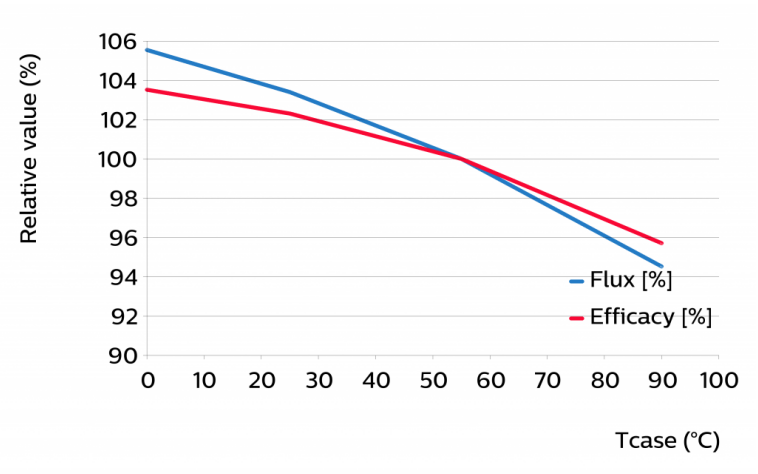
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
600	137	95
514	119	97
428	100	100
342	81	103
214	52	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



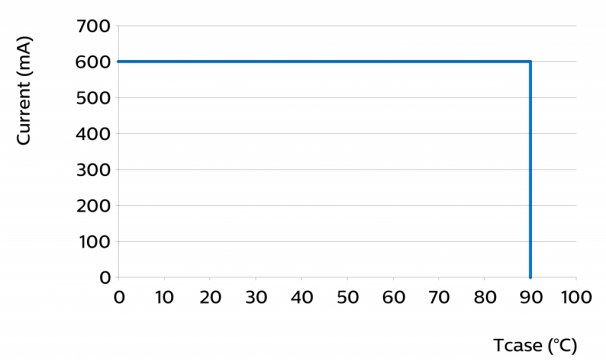
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I_nom 342mA	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	73	57	>100	73	57	57	56	55
I_nom 428mA	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	732	57	>100	73	57	55	54	53
I_life 600mA	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	73	57	>100	73	57	51	50	49

Lifetime

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

Performance Window

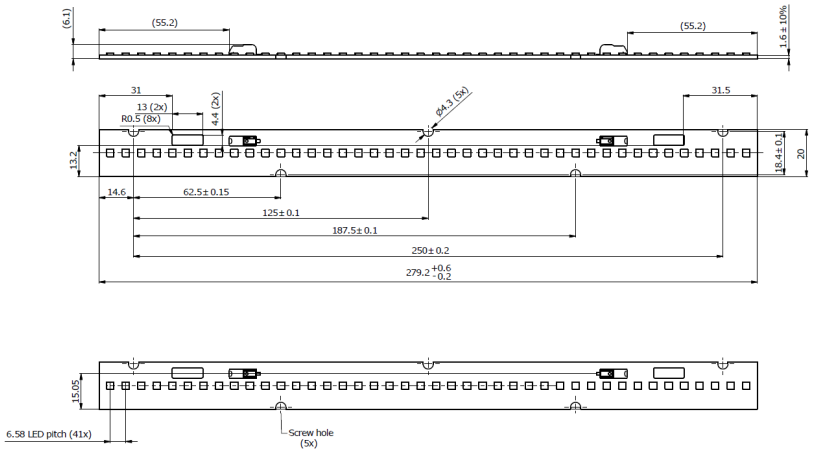


Wiring

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)		720	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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24/08/2020