

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

January 2022



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

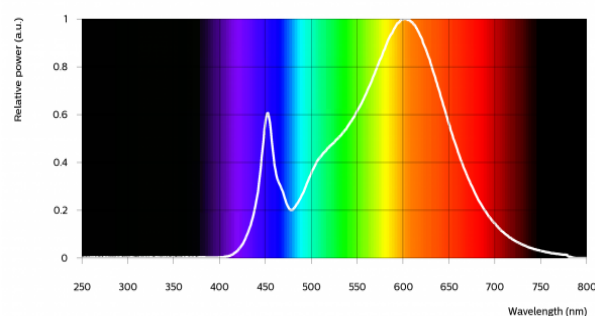
Optical characteristics - table per color (CCT)

Fortimo LED Strip 1ft 3000lm FC 830 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	2525	2730	2935	lm
Efficacy	157	161	177	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.430, 0.400)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
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	2278	168
	Tc-nom 55 °C	2216	165
	Tc-max 95 °C	2095	159
I-nom 428mA	Tc 25 °C	2812	164
	Tc-nom 55 °C	2730	161
	Tc-max 95 °C	2586	154
I-max 720mA	Tc 25 °C	4559	150
	Tc-nom 55 °C	4432	147
	Tc-max 95 °C	4186	141

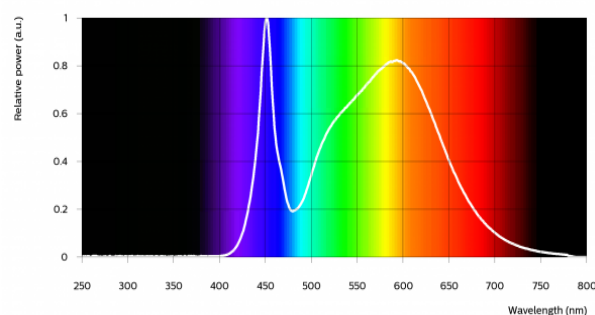


Fortimo LED Strip 1ft 3000lm FC 840 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	2636	2850	3064	lm
Efficacy	167	168	189	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.379, 0.375)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
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	2385	177
	Tc-nom 55 °C	2313	173
	Tc-max 95 °C	2176	165
I-nom 428mA	Tc 25 °C	2944	171
	Tc-nom 55 °C	2850	168
	Tc-max 95 °C	2686	160
I-max 720mA	Tc 25 °C	4776	156
	Tc-nom 55 °C	4629	153
	Tc-max 95 °C	4349	145

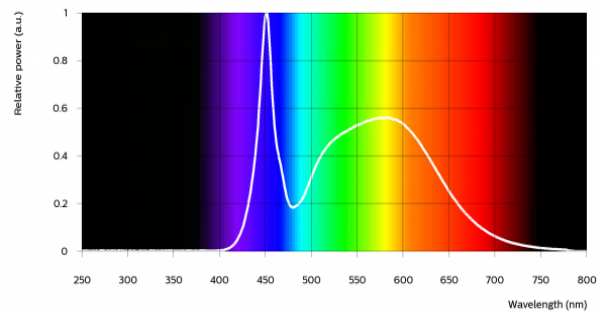


Fortimo LED Strip 1ft 3000lm FC 850 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	2636	2850	3064	lm
Efficacy	167	168	189	lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.341, 0.349)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
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	2385	177
	Tc-nom 55 °C	2313	173
	Tc-max 95 °C	2176	165
I-nom 428mA	Tc 25 °C	2944	171
	Tc-nom 55 °C	2850	168
	Tc-max 95 °C	2686	160
I-max 720mA	Tc 25 °C	4776	156
	Tc-nom 55 °C	4629	153
	Tc-max 95 °C	4349	145

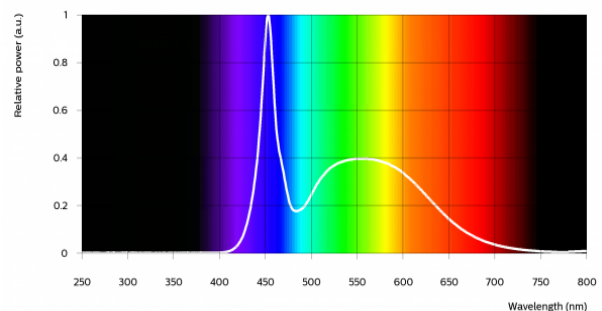


Fortimo LED Strip 1ft 3000lm FC 865 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	2604	2820	3026	lm
Efficacy	166	166	187	lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.309, 0.322)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
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	2366	175
	Tc-nom 55 °C	2289	171
	Tc-max 95 °C	2142	163
I-nom 428mA	Tc 25 °C	2922	170
	Tc-nom 55 °C	2820	166
	Tc-max 95 °C	2644	158
I-max 720mA	Tc 25 °C	4739	155
	Tc-nom 55 °C	4580	152
	Tc-max 95 °C	4280	144



Electrical characteristics

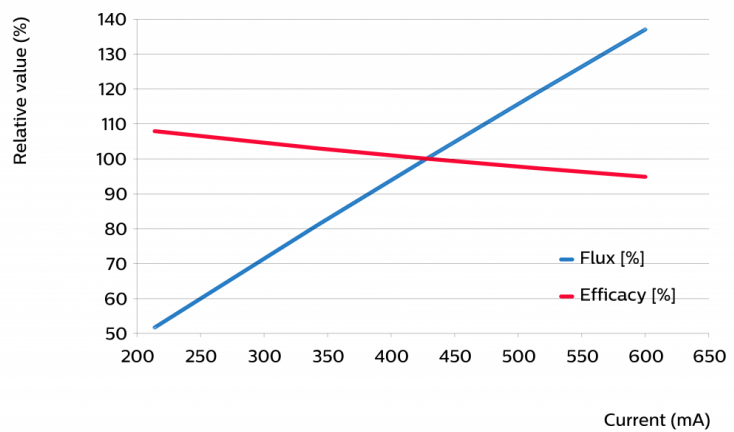
Parameter	Min	Typ	Max	Unit
Forward voltage	38.6	39.7	40.2	V
Power consumption	16.5	17.0	17.2	W = kWh/1000h
Number of modules in series per chain			8	

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

Tuning information

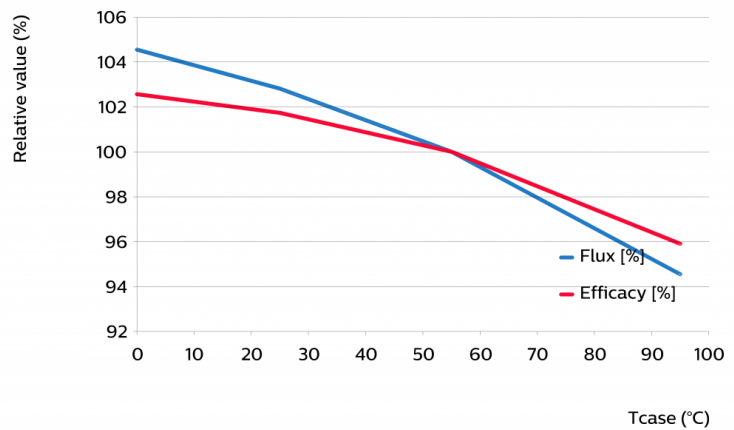
Flux and efficacy versus current (at Tc nominal)

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 [%]
95	95	96
55	100	100
25	103	102
0	105	103



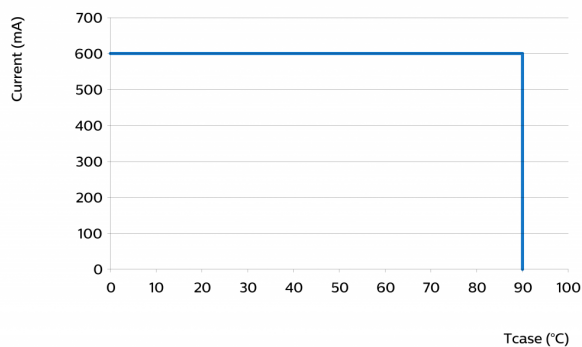
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I _{nom} 342mA	T _c 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	T _{c_nom} 55°C	>100	>100	>100	>100	>100	>100	82	80	80
	T _{c_life} 90°C	>100	73	57	>100	73	57	57	56	55
I _{nom} 428mA	T _c 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	T _{c_nom} 55°C	>100	>100	>100	>100	>100	>100	78	77	76
	T _{c_life} 90°C	>100	732	57	>100	73	57	55	54	53
I _{life} 600mA	T _c 25°C	>100	>100	>100	>100	>100	>100	>100	>100	>100
	T _{c_nom} 55°C	>100	>100	>100	>100	>100	>100	73	72	71
	T _{c_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

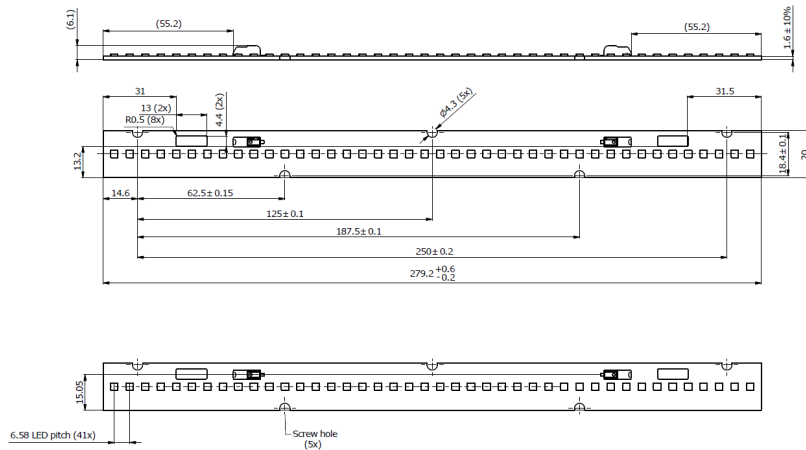


Wiring

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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