PHILIPS

Fortimo

LED

Fortimo LED Strip 1ft 2000lm FC 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

January 2022

indirect

100%
instant

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 FC 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

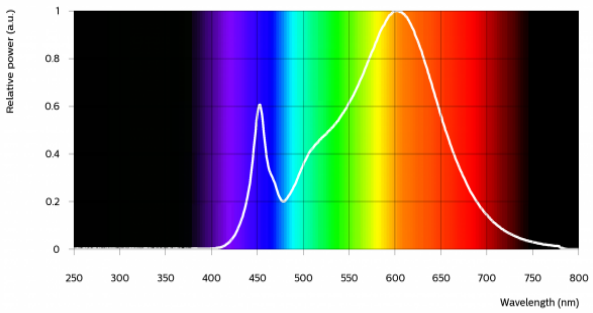
Optical characteristics - table per color (CCT)

Fortimo LED Strip 1ft 2000lm FC 830 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1684	1820	1956	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 ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	830	lm	lm/W
80% I-nom 228mA	Tc 25 °C	1518	169
	Tc-nom 55 °C	1477	166
	Tc-max 95 °C	1397	159
I-nom 285mA	Tc 25 °C	1874	164
	Tc-nom 55 °C	1820	161
	Tc-max 95 °C	1724	155
I-max 480mA	Tc 25 °C	3042	150
	Tc-nom 55 °C	2958	148
	Tc-max 95 °C	2793	141

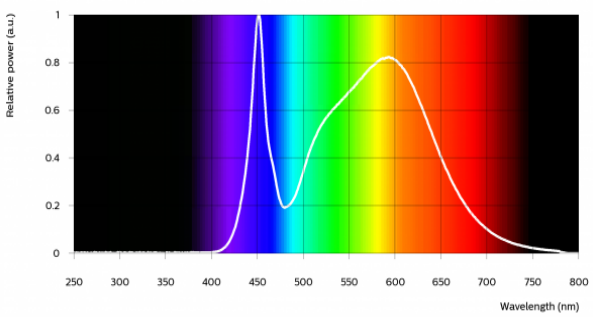


Fortimo LED Strip 1ft 2000lm FC 840 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1758	1900	2042	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 ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	840	lm	lm/W
80% I-nom 228mA	Tc 25 °C	1590	177
	Tc-nom 55 °C	1542	174
	Tc-max 95 °C	1451	166
I-nom 285mA	Tc 25 °C	1963	172
	Tc-nom 55 °C	1900	168
	Tc-max 95 °C	1791	160
I-max 480mA	Tc 25 °C	3187	156
	Tc-nom 55 °C	3089	153
	Tc-max 95 °C	2902	145

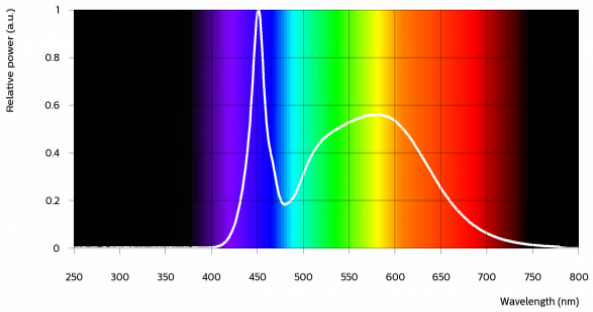


Fortimo LED Strip 1ft 2000lm FC 850 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1758	1900	2042	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 228mA	Tc 25 °C	1590	177
	Tc-nom 55 °C	1542	174
	Tc-max 95 °C	1451	166
I-nom 285mA	Tc 25 °C	1963	172
	Tc-nom 55 °C	1900	168
	Tc-max 95 °C	1791	160
I-max 480mA	Tc 25 °C	3187	156
	Tc-nom 55 °C	3089	153
	Tc-max 95 °C	2902	145

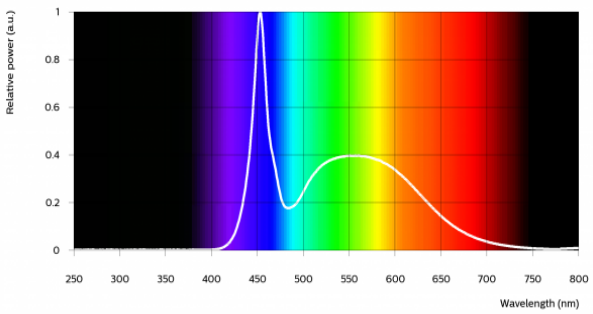


Fortimo LED Strip 1ft 2000lm FC 865 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1739	1880	2021	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 228mA	Tc 25 °C	1577	176
	Tc-nom 55 °C	1526	172
	Tc-max 95 °C	1428	163
I-nom 285mA	Tc 25 °C	1948	170
	Tc-nom 55 °C	1880	166
	Tc-max 95 °C	1762	158
I-max 480mA	Tc 25 °C	3162	156
	Tc-nom 55 °C	3057	152
	Tc-max 95 °C	2857	144



Electrical characteristics

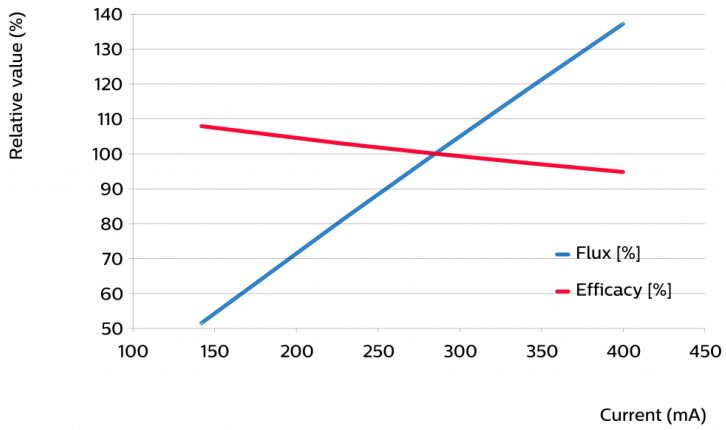
Parameter	Min	Typ	Max	Unit
Forward voltage	38.6	39.6	40.2	V
Power consumption	11.0	11.3	11.5	W = kWh/1000h
Number of modules in series per chain			8	

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

Tuning information

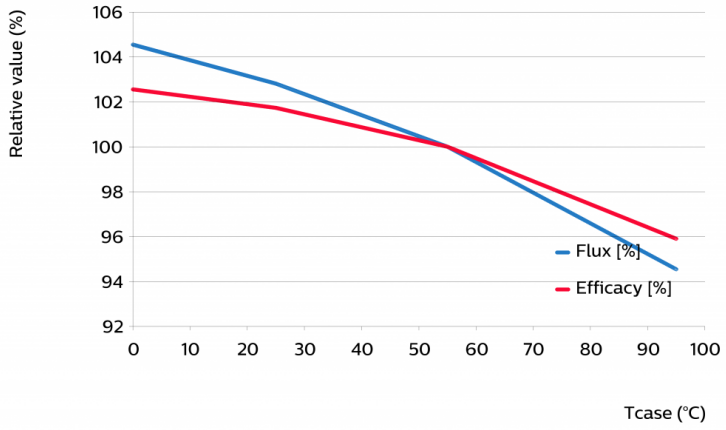
Flux and efficacy versus current (at Tc nominal)

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



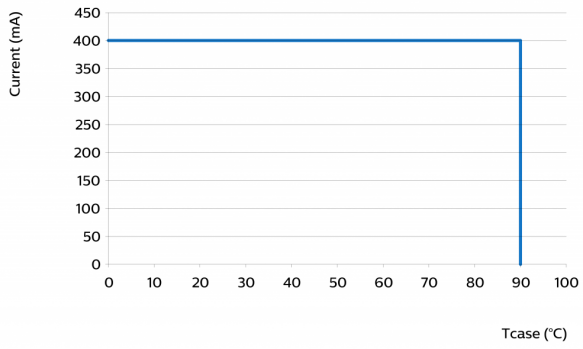
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I_nom 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

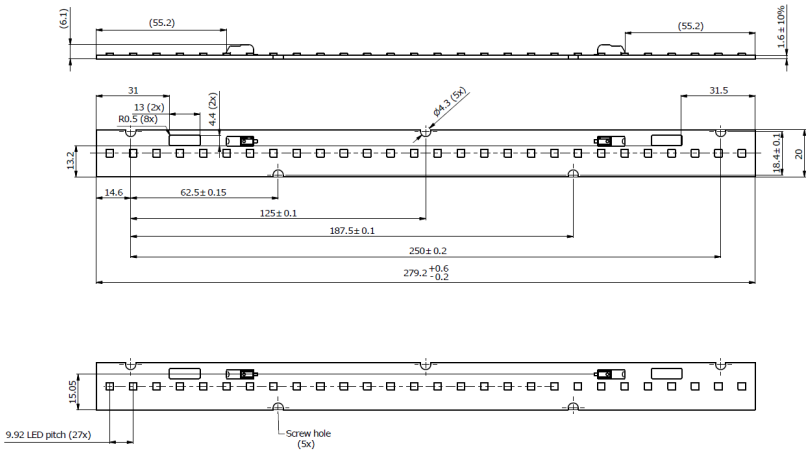


Wiring

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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