

PHILIPS

Fortimo

LED

Fortimo LED Strip 2ft
4000lm FC HV6



Datasheet

Fortimo LED Strip 2ft 4000lm 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



instant

Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip 2ft 4000lm FC 830 HV6	8718699 789183 00	9290 028 01706	84
Fortimo LED Strip 2ft 4000lm FC 840 HV6	8718699 789206 00	9290 028 01806	84
Fortimo LED Strip 2ft 4000lm FC 850 HV6	8718699 789404 00	9290 028 01906	84
Fortimo LED Strip 2ft 4000lm FC 865 HV6	8718699 788124 00	9290 028 02006	84

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 2ft 4000lm 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

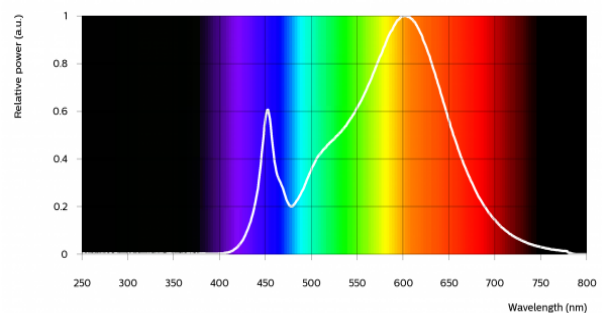
Optical characteristics - table per color (CCT)

Fortimo LED Strip 2ft 4000lm FC 830 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3367	3640	3913	lm
Efficacy	157	162	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 $\pm 5\%$ for the flux data and $\pm 6\%$ 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	3037	170
	Tc-nom 55 °C	2954	167
	Tc-max 95 °C	2794	160
I-nom 285mA	Tc 25 °C	3749	165
	Tc-nom 55 °C	3640	162
	Tc-max 95 °C	3448	155
I-max 480mA	Tc 25 °C	6085	151
	Tc-nom 55 °C	5916	148
	Tc-max 95 °C	5587	142

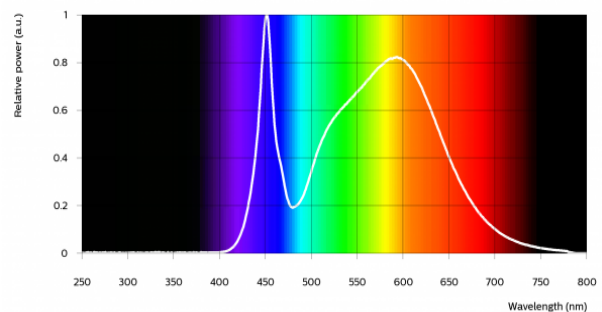


Fortimo LED Strip 2ft 4000lm FC 840 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3515	3800	4085	lm
Efficacy	167	169	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 $\pm 5\%$ for the flux data and $\pm 6\%$ 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	3179	178
	Tc-nom 55 °C	3084	175
	Tc-max 95 °C	2902	166
I-nom 285mA	Tc 25 °C	3926	173
	Tc-nom 55 °C	3800	169
	Tc-max 95 °C	3581	161
I-max 480mA	Tc 25 °C	6374	157
	Tc-nom 55 °C	6179	154
	Tc-max 95 °C	5805	146

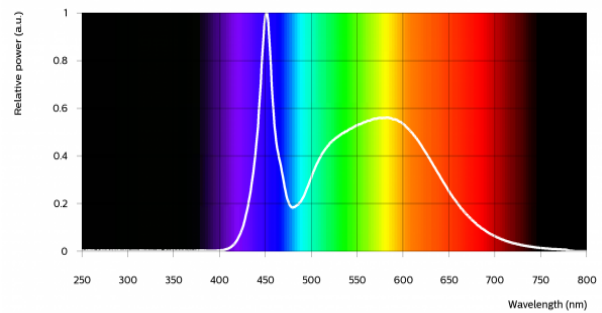


Fortimo LED Strip 2ft 4000lm FC 850 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3515	3800	4085	lm
Efficacy	167	169	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	3179	178
	Tc-nom 55 °C	3084	175
	Tc-max 95 °C	2902	166
I-nom 285mA	Tc 25 °C	3926	173
	Tc-nom 55 °C	3800	169
	Tc-max 95 °C	3581	161
I-max 480mA	Tc 25 °C	6374	157
	Tc-nom 55 °C	6179	154
	Tc-max 95 °C	5805	146

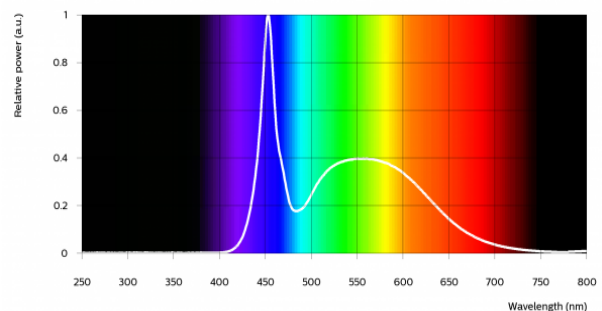


Fortimo LED Strip 2ft 4000lm FC 865 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3478	3760	4042	lm
Efficacy	166	167	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	3155	176
	Tc-nom 55 °C	3051	172
	Tc-max 95 °C	2856	164
I-nom 285mA	Tc 25 °C	3895	171
	Tc-nom 55 °C	3760	167
	Tc-max 95 °C	3525	159
I-max 480mA	Tc 25 °C	6324	156
	Tc-nom 55 °C	6113	153
	Tc-max 95 °C	5713	145



Electrical characteristics

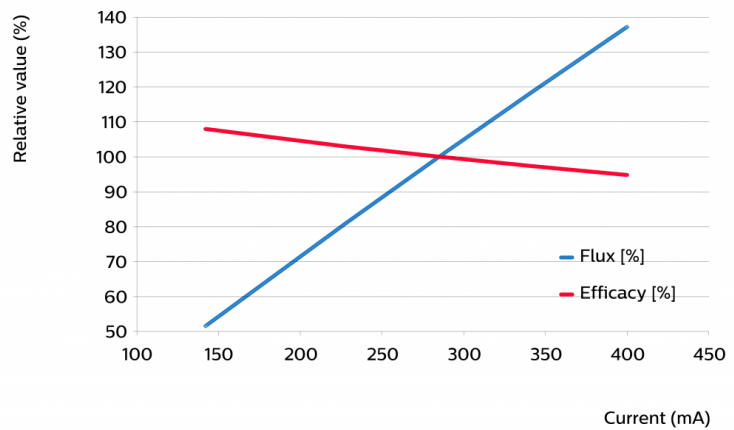
Parameter	Min	Typ	Max	Unit
Forward voltage	77.2	78.9	80.4	V
Power consumption	22.0	22.5	22.9	W = kWh/1000h
Number of modules in series per chain			4	

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

Tuning information

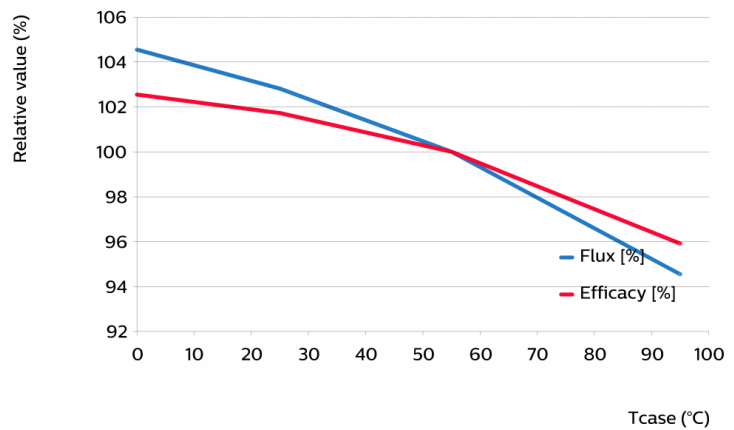
Flux and efficacy versus current (at Tc nominal)

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



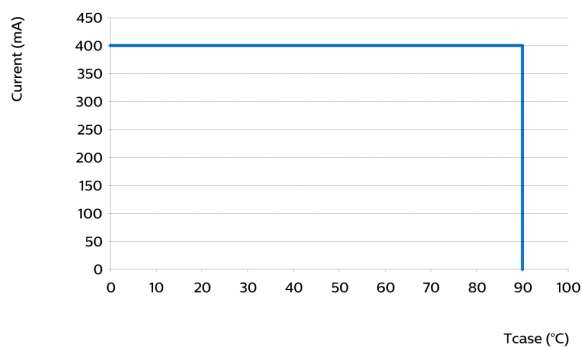
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I _{nom} 228mA	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	82	64	>100	82	64	57	56	55
I _{nom} 285mA	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	82	64	>100	82	64	55	54	53
I _{life} 400mA	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	82	64	>100	82	64	51	50	49

Lifetime

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

Performance Window

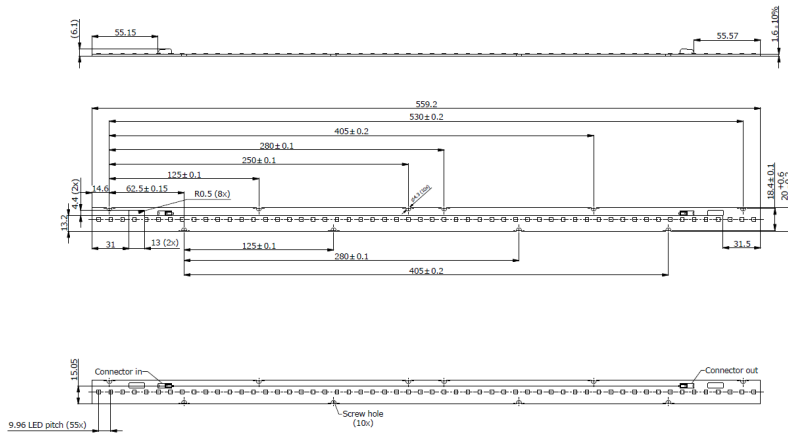


Wiring

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	558.9	559.2	559.5	mm
Width	19.8	20	20.6	mm
Height PCB	1.4	1.6	1.8	mm
Height total		6.1		mm
Product mass		37		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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