PHILIPS

Fortimo

LED

Fortimo LED Strip 2ft 4000lm HV6

Datasheet

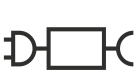
Fortimo LED Strip 2ft 4000lm HV6

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

November 2021



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip 2ft 4000lm BC 830 HV6	8719514 304406 00	9290 029 17806	63
Fortimo LED Strip 2ft 4000lm BC 835 HV6	8719514 304420 00	9290 029 17906	63
Fortimo LED Strip 2ft 4000lm BC 840 HV6	8719514 304444 00	9290 029 18006	63
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 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

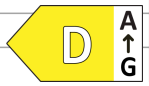
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

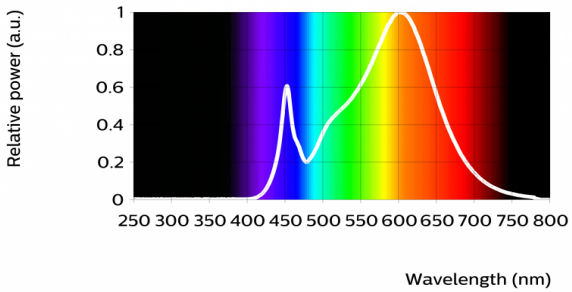
Fortimo LED Strip 2ft 4000lm BC 830 HV6
Fortimo LED Strip 2ft 4000lm FC 830 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3367	3640	3913	lm
Module 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			
Photometric code		830/359		
Photobiological safety			RG1 unlimited	



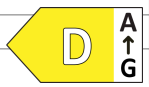
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	830	lm	lm/W
80% I-nom 228mA	Tc 25 °C	3031	170
	Tc-nom 55 °C	2949	167
	Tc-max 95 °C	2789	160
I-nom 285mA	Tc 25 °C	3742	165
	Tc-nom 55 °C	3640	162
	Tc-max 95 °C	3442	155
I-max 480mA	Tc 25 °C	6074	151
	Tc-nom 55 °C	5905	148
	Tc-max 95 °C	5577	142



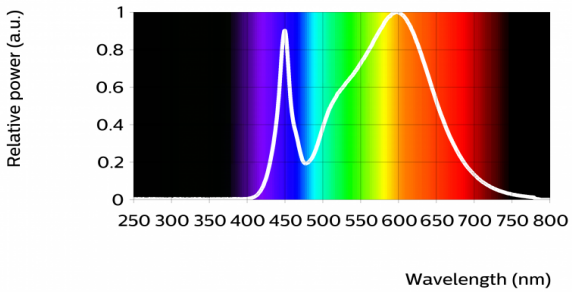
Fortimo LED Strip 2ft 4000lm BC 835 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3570	3760	3950	lm
Module efficacy	151	167	184	lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.403, 0.388)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		835/359		
Photobiological safety			RG1 unlimited	



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

Operation point	835	lm	lm/W
80% I-nom 228mA	Tc 25 °C	3149	176
	Tc-nom 45 °C	3046	173
	Tc-max 95 °C	2850	164
I-nom 285mA	Tc 25 °C	3888	171
	Tc-nom 45 °C	3760	167
	Tc-max 95 °C	3518	159
I-max 480mA	Tc 25 °C	6312	156
	Tc-nom 45 °C	6102	153
	Tc-max 95 °C	5702	145

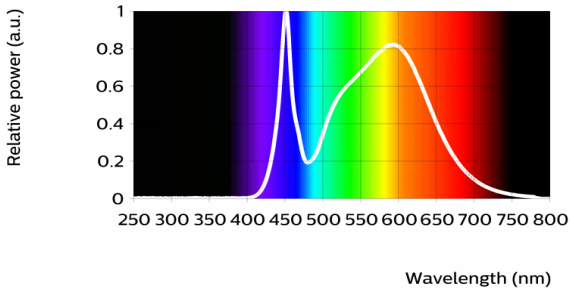


Fortimo LED Strip 2ft 4000lm BC 840 HV6
Fortimo LED Strip 2ft 4000lm FC 840 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3534	3820	4106	lm
Module efficacy	167	170	189	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	3190	179
	Tc-nom 55 °C	3094	176
	Tc-max 95 °C	2911	167
I-nom 285mA	Tc 25 °C	3939	174
	Tc-nom 55 °C	3820	170
	Tc-max 95 °C	3593	162
I-max 480mA	Tc 25 °C	6395	158
	Tc-nom 55 °C	6199	154
	Tc-max 95 °C	5824	147

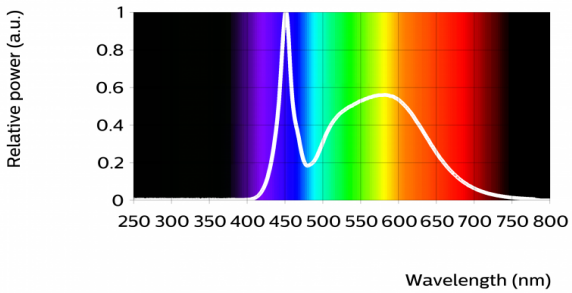


Fortimo LED Strip 2ft 4000lm FC 850 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3515	3800	4085	lm
Module 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			
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	3173	178
	Tc-nom 55 °C	3078	175
	Tc-max 95 °C	2896	166
I-nom 285mA	Tc 25 °C	3918	173
	Tc-nom 55 °C	3800	169
	Tc-max 95 °C	3574	161
I-max 480mA	Tc 25 °C	6362	157
	Tc-nom 55 °C	6167	154
	Tc-max 95 °C	5794	146

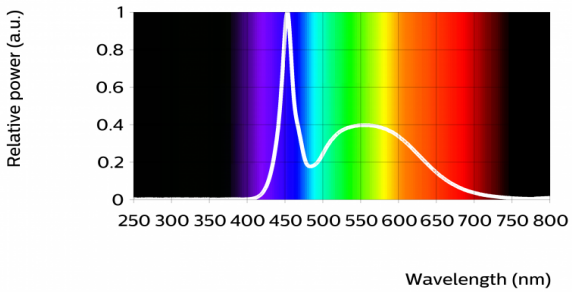


Fortimo LED Strip 2ft 4000lm FC 865 HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3478	3760	4042	lm
Module 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			
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	3149	176
	Tc-nom 55 °C	3046	173
	Tc-max 95 °C	2850	164
I-nom 285mA	Tc 25 °C	3888	171
	Tc-nom 55 °C	3760	167
	Tc-max 95 °C	3518	159
I-max 480mA	Tc 25 °C	6312	156
	Tc-nom 55 °C	6102	153
	Tc-max 95 °C	5702	145



Electrical characteristics

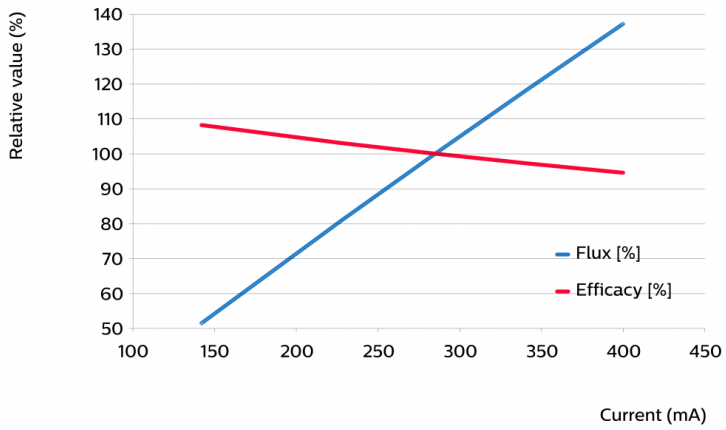
Parameter	Min	Typ	Max	Unit
Forward voltage	77.2	78.8	80.4	V
Power consumption	22.0	22.5	22.9	W = kWh/1000h
Number of modules in series per chain			4	

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

Tuning information

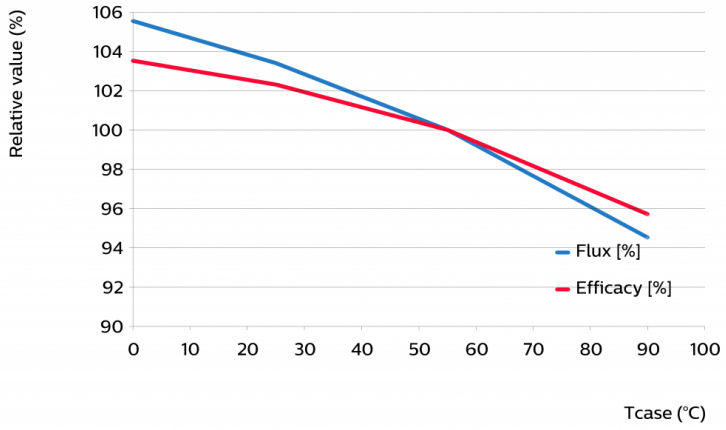
Flux and efficacy versus current (at Tc nominal)

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 [%]
90	95	96
55	100	100
25	103	102
0	106	104



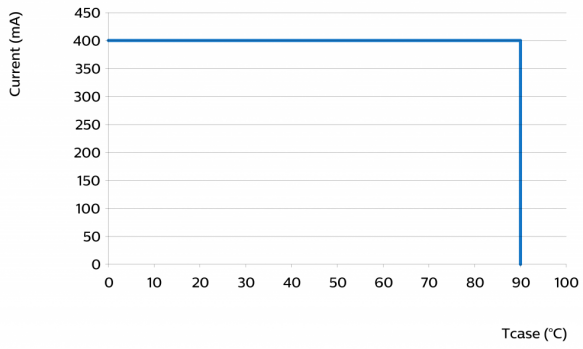
Lumen maintenance

Operation point	Lumen maintenance	L70			L80			L90		
	x 1000 hours	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



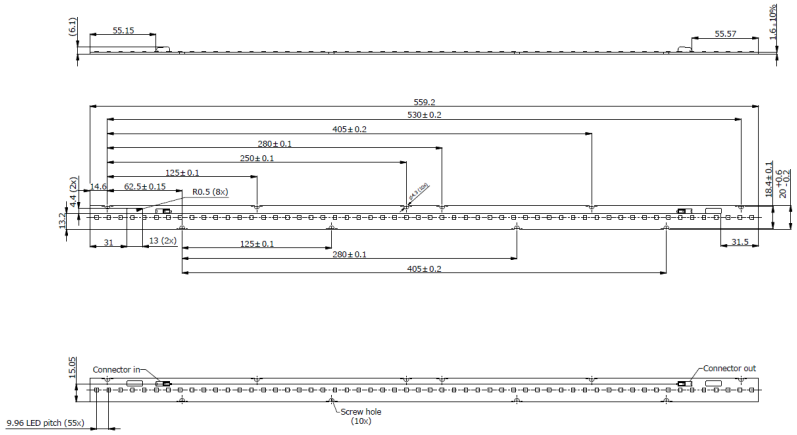
Wiring

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

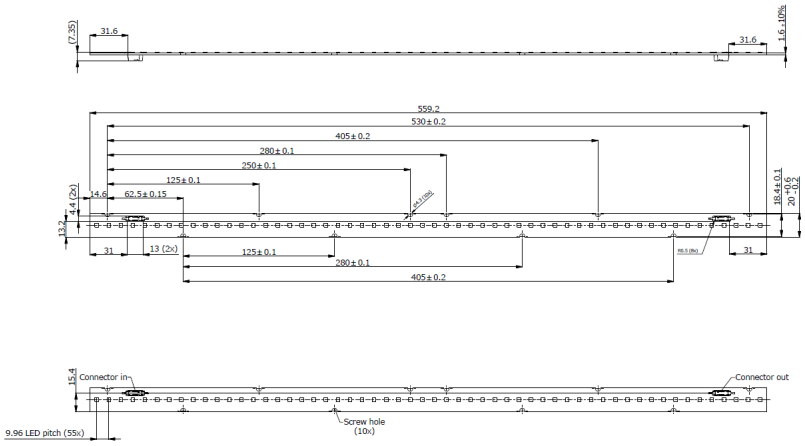
Fortimo LED Strip 2ft 4000lm FC 830 HV6
Fortimo LED Strip 2ft 4000lm FC 840 HV6
Fortimo LED Strip 2ft 4000lm FC 850 HV6
Fortimo LED Strip 2ft 4000lm FC 865 HV6

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



Fortimo LED Strip 2ft 4000lm BC 830 HV6
Fortimo LED Strip 2ft 4000lm BC 835 HV6
Fortimo LED Strip 2ft 4000lm BC 840 HV6

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		7.35		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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