PHILIPS

Fortimo

LED

Fortimo LED Strip 1ft MF 9xx HV6

Datasheet

The Fortimo LED Strip is a uniquely wide portfolio which can be used in all kind of linear indoor luminaire types. Its form factor makes it easy to design-in and handle in production as it complies to Zhaga standards. Due to the availability from 0.25ft up to 5ft lengths only one product family is needed to cover a wide range of needs.

Key features and benefits

- Typical module efficiency of 186 Lm/W (at 4000K CRI80)
- CRI90 High Efficiency typical performance of 174 Lm/W (at 4000K CRI90)
- Long life-time: >72,000 hours
- Excellent color consistency of 3 SDCM
- Two lumen packages per length available: LF (650 lm/ft) and MF (1100 lm/ft)
- Wide range of CCTs available: 2700K, 3000K, 3500K, 4000K, 5000K and 6500K
- Available in High Voltage (HV) and Low Voltage (LV)
- Options in front connector (FC) or back connector (BC)
- Small LED module width of only 20mm
- Available lengths: 0.25ft / 0.5ft / 1ft / 2ft / 4ft (1120mm) / 4ft extended (1150mm) / 5ft (1400mm) / 5ft extended 1450mm)
- Wide temperature (Tc) range -40°C to +80°C
- Five year system warranty

May 2023

Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
Fortimo LED Strip 1ft MF 927 FC HV6	8719514 488106 00	9290 029 41706	1413403	110
Fortimo LED Strip 1ft MF 930 FC HV6	8719514 488120 00	9290 029 41806	1413404	110
Fortimo LED Strip 1ft MF 935 FC HV6	8719514 488144 00	9290 029 41906	1413405	110
Fortimo LED Strip 1ft MF 940 FC HV6	8719514 488168 00	9290 029 42006	1413406	110
Fortimo LED Strip 1ft MF 950 FC HV6	8719514 488304 00	9290 029 42106	1413407	110
Fortimo LED Strip 1ft MF 965 FC HV6	8719514 488328 00	9290 029 42206	1413408	110
Fortimo LED Strip 1ft MF 930 BC HV6	8719514 488403 00	9290 029 42606	1413412	110
Fortimo LED Strip 1ft MF 935 BC HV6	8719514 488427 00	9290 029 42706	1413413	110
Fortimo LED Strip 1ft MF 940 BC HV6	8719514 488441 00	9290 029 42806	1413414	110

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 1ft MF 9xx HV6	284	450	720	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	45	75	85	°C

* Nominal value at which typical performance is specified

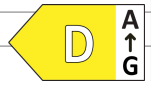
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

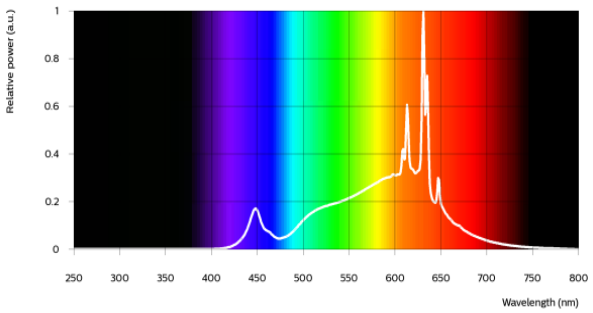
Fortimo LED Strip 1ft MF 927 FC HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	960	1003	1090	lm
Efficacy	149	158	182	lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.460, 0.408)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		927/339		
Photobiological safety			RG1 unlimited	



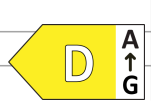
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

Operation point	927	lm	lm/W
80% I-nom 227mA	Tc 25 °C	831	168
	Tc-nom 45 °C	812	162
	Tc-max 85 °C	763	150
I-nom 284mA	Tc 25 °C	1027	163
	Tc-nom 45 °C	1003	158
	Tc-max 85 °C	943	147
I-max 720mA	Tc 25 °C	2430	139
	Tc-nom 45 °C	2372	135
	Tc-max 85 °C	2224	125



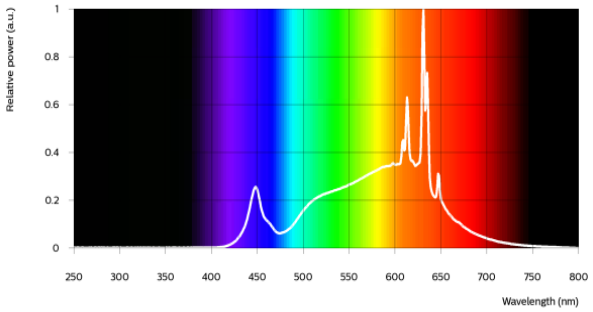
Fortimo LED Strip 1ft MF 930 FC HV6
Fortimo LED Strip 1ft MF 930 BC HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1010	1027	1130	lm
Efficacy	157	163	190	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.436, 0.402)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		930/339		
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	930	lm	lm/W
80% I-nom 227mA	Tc 25 °C	851	172
	Tc-nom 45 °C	831	167
	Tc-max 85 °C	781	155
I-nom 284mA	Tc 25 °C	1051	168
	Tc-nom 45 °C	1027	163
	Tc-max 85 °C	965	151
I-max 720mA	Tc 25 °C	2488	143
	Tc-nom 45 °C	2429	139
	Tc-max 85 °C	2278	128

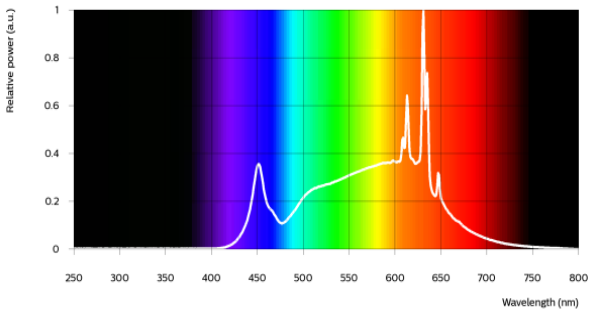


Fortimo LED Strip 1ft MF 935 FC HV6
Fortimo LED Strip 1ft MF 935 BC HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1050	1081	1160	lm
Efficacy	164	171	195	lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.408, 0.388)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		935/339		
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	935	lm	lm/W
80% I-nom 227mA	Tc 25 °C	898	182
	Tc-nom 45 °C	875	176
	Tc-max 85 °C	819	162
I-nom 284mA	Tc 25 °C	1109	177
	Tc-nom 45 °C	1081	171
	Tc-max 85 °C	1012	158
I-max 720mA	Tc 25 °C	2626	151
	Tc-nom 45 °C	2557	146
	Tc-max 85 °C	2389	135

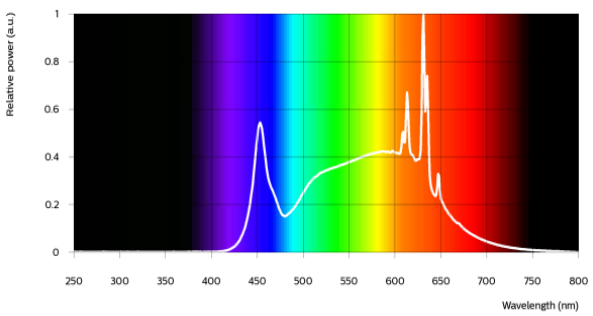


Fortimo LED Strip 1ft MF 940 FC HV6
Fortimo LED Strip 1ft MF 940 BC HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1060	1100	1200	lm
Efficacy	164	174	201	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.378)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		940/339		
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	940	lm	lm/W
80% I-nom 227mA	Tc 25 °C	913	184
	Tc-nom 45 °C	890	178
	Tc-max 85 °C	834	164
I-nom 284mA	Tc 25 °C	1129	180
	Tc-nom 45 °C	1100	174
	Tc-max 85 °C	1030	160
I-max 720mA	Tc 25 °C	2672	153
	Tc-nom 45 °C	2602	148
	Tc-max 85 °C	2431	136

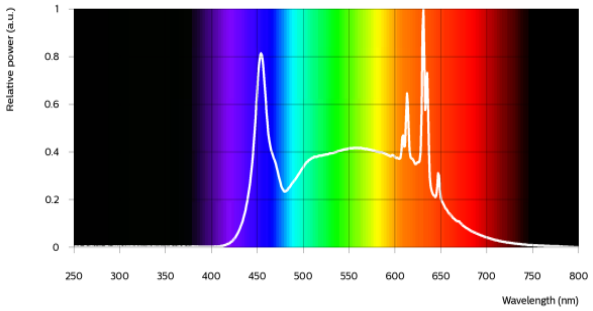


Fortimo LED Strip 1ft MF 950 FC HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1070	1098	1180	lm
Efficacy	167	174	198	lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.349)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		950/339		
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	950	lm	lm/W
80% I-nom 227mA	Tc 25 °C	912	185
	Tc-nom 45 °C	889	179
	Tc-max 85 °C	832	165
I-nom 284mA	Tc 25 °C	1127	180
	Tc-nom 45 °C	1098	174
	Tc-max 85 °C	1028	161
I-max 720mA	Tc 25 °C	2668	153
	Tc-nom 45 °C	2597	148
	Tc-max 85 °C	2427	137

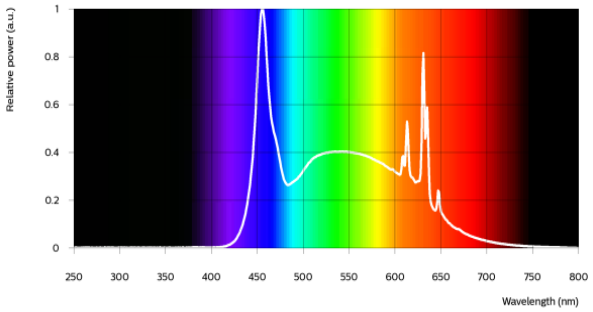


Fortimo LED Strip 1ft MF 965 FC HV6

Parameter	Min	Typ	Max	Unit
Luminous flux	1050	1082	1170	lm
Efficacy	163	171	195	lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.315, 0.328)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		965/339		
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	965	lm	lm/W
80% I-nom 227mA	Tc 25 °C	900	181
	Tc-nom 45 °C	875	175
	Tc-max 85 °C	818	161
I-nom 284mA	Tc 25 °C	1112	177
	Tc-nom 45 °C	1082	171
	Tc-max 85 °C	1010	157
I-max 720mA	Tc 25 °C	2632	151
	Tc-nom 45 °C	2559	146
	Tc-max 85 °C	2384	134



Electrical characteristics

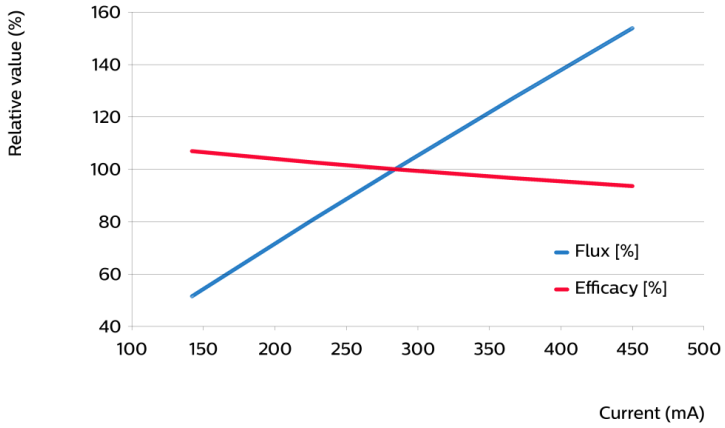
Parameter	Min	Typ	Max	Unit
Forward voltage	21.0	22.2	22.6	V
Power consumption	6.0	6.3	6.4	W = kWh/1000h
Number of modules in series per chain			14	
Number of modules in parallel			4	

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

Tuning information

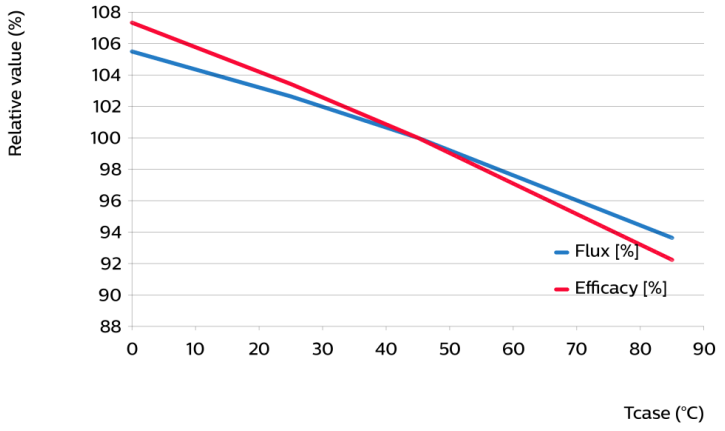
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
450	154	94
367	127	97
284	100	100
227	81	103
142	51	107



Flux and efficacy versus temperature at Tc (at I nominal)

Tc [°C]	Flux [%]	Efficacy [%]
85	94	92
45	100	100
25	103	103
0	105	107



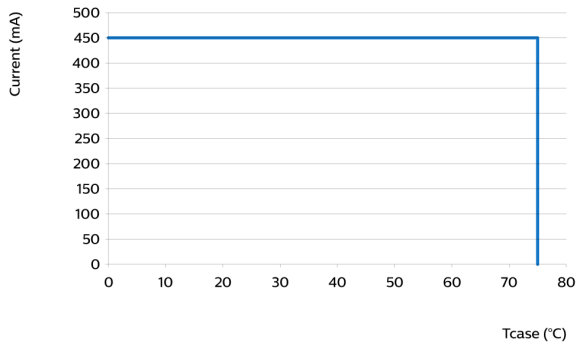
Lumen maintenance

Operation point	Lumen maintenance	L70			L80			L90		
	x 1000 hours	B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=227mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>50	>50	>50
	Tc_nom=45°C	>100	>100	>100	>100	>100	97	>50	49	48
	Tc_life=75°C	>100	>100	>100	79	76	75	37	36	35
Inom=284mA	Tc=25°C	>100	>100	>100	>100	>100	>100	>50	>50	>50
	Tc_nom=45°C	>100	>100	>100	>100	100	98	50	47	46
	Tc_life=75°C	>100	>100	>100	76	73	72	36	34	34
Ilife=450mA	Tc=25°C	>69	>69	>69	>69	>69	>69	>32	>32	>32
	Tc_nom=45°C	>69	>69	>69	>69	>69	>69	>32	>32	>32
	Tc_life=75°C	>69	>69	>69	69	67	65	32	31	30

Lifetime

Parameter	Value	Unit
M70F50 nominal	>100000	hours
M70F50 life	>69000	hours

Performance Window



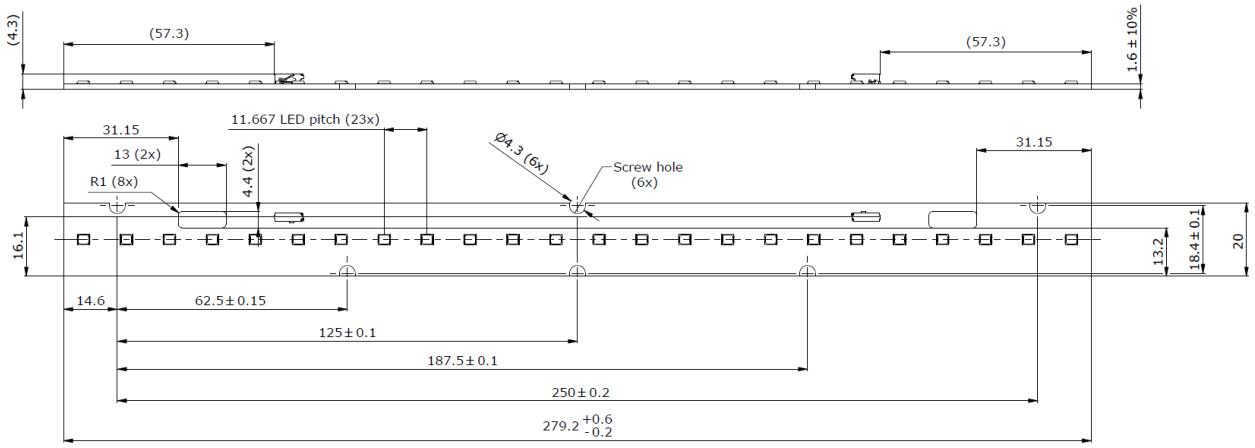
Wiring

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

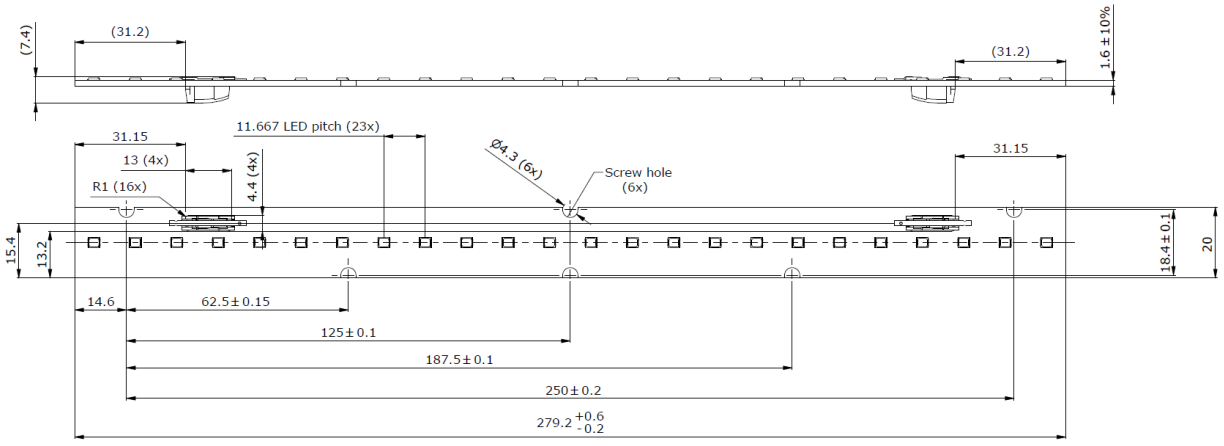
Fortimo LED Strip 1ft MF 927 FC HV6
Fortimo LED Strip 1ft MF 930 FC HV6
Fortimo LED Strip 1ft MF 935 FC HV6
Fortimo LED Strip 1ft MF 940 FC HV6
Fortimo LED Strip 1ft MF 950 FC HV6
Fortimo LED Strip 1ft MF 965 FC HV6

Parameter	Min	Typ	Max	Unit
Length	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height PCB	1.45	1.6	1.75	mm
Height Total		4.3		mm
Product mass		17.8		gram



Fortimo LED Strip 1ft MF 930 BC HV6
Fortimo LED Strip 1ft MF 935 BC HV6
Fortimo LED Strip 1ft MF 940 BC HV6

Parameter	Min	Typ	Max	Unit
Length	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height PCB	1.45	1.6	1.75	mm
Height Total		7.4		mm
Product mass		17.9		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		720	mA
Case temperature (Tc-max)		85	°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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