

PHILIPS

Fortimo

LED

Fortimo LED Line 1ft HF
8xx 1R HV5



Datasheet

Upgraded with the latest LED technology, the Fortimo LED Line 1R provides high quality white light on a well-known footprint. From a single line (1R) of LEDs, the modules provide a high energy efficiency whilst enabling two lumen ranges: MF (1100lm/ft) and HF (2000lm/ft). Combined with the wide range of CCT's and CRI's available, the product range is suitable in many indoor luminaire applications like retail, industry and office lighting.

Key features and benefits

- Latest LED technology providing an improved module efficiency
- Long life time: >50,000 hours
- High quality white light: CRI80 or CRI90
- Excellent color consistency of 3 SDCM
- Available color temperatures: 3000K / 4000K / 5000K / 6500K
- Two module lengths: 1ft/280mm or 2ft/560mm
- Two lumen packages: MF (1100lm/ft) or HF (2000lm/ft)
- High voltage (HV) or Low voltage (LV) designs
- Five year system warranty

March 2022



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Line 1ft HF 830 1R HV5	8719514 411401 00	9290 029 31806	80
Fortimo LED Line 1ft HF 840 1R HV5	8719514 411449 00	9290 029 31906	80
Fortimo LED Line 1ft HF 850 1R HV5	8719514 411463 00	9290 029 32006	80
Fortimo LED Line 1ft HF 865 1R HV5	8719514 411487 00	9290 029 32106	80

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Line 1ft HF 8xx 1R HV5	292	480	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

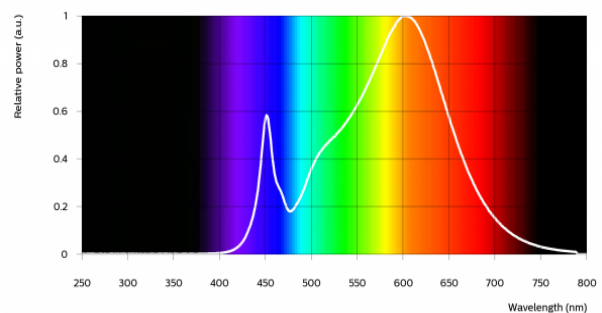
Optical characteristics - table per color (CCT)

Fortimo LED Line 1ft HF 830 1R HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1846	1860	2018	lm
Efficacy		158		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		830/369		
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 234mA	Tc 25 °C	1551	167
	Tc-nom 55 °C	1507	164
	Tc-max 95 °C	1421	156
I-nom 292mA	Tc 25 °C	1915	162
	Tc-nom 55 °C	1860	158
	Tc-max 95 °C	1754	152
I-max 480mA	Tc 25 °C	3039	148
	Tc-nom 55 °C	2950	145
	Tc-max 95 °C	2778	139

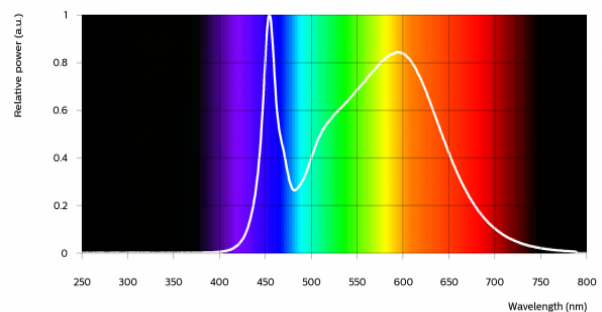


Fortimo LED Line 1ft HF 840 1R HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1986	2000	2029	lm
Efficacy		170		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.376, 0.373)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		840/369		
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 234mA	Tc 25 °C	1671	179
	Tc-nom 55 °C	1620	175
	Tc-max 95 °C	1524	167
I-nom 292mA	Tc 25 °C	2062	174
	Tc-nom 55 °C	2000	170
	Tc-max 95 °C	1880	162
I-max 480mA	Tc 25 °C	3272	159
	Tc-nom 55 °C	3171	155
	Tc-max 95 °C	2978	147

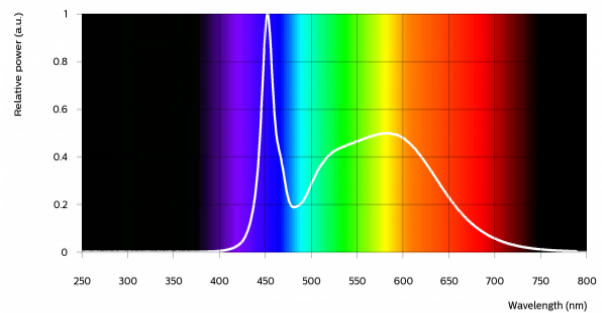


Fortimo LED Line 1ft HF 850 1R HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1986	2000	2029	lm
Efficacy		170		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.338, 0.348)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		850/369		
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	850	lm	lm/W
80% I-nom 234mA	Tc 25 °C	1671	179
	Tc-nom 55 °C	1620	175
	Tc-max 95 °C	1524	167
I-nom 292mA	Tc 25 °C	2062	174
	Tc-nom 55 °C	2000	170
	Tc-max 95 °C	1880	162
I-max 480mA	Tc 25 °C	3272	159
	Tc-nom 55 °C	3171	155
	Tc-max 95 °C	2978	147

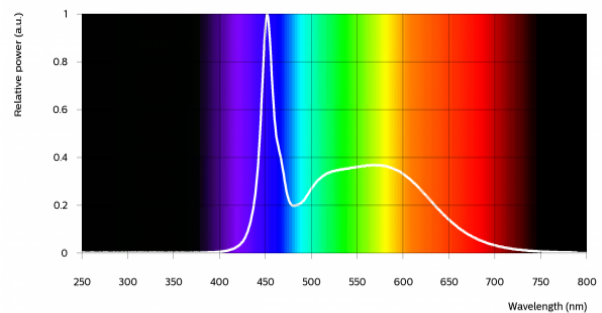


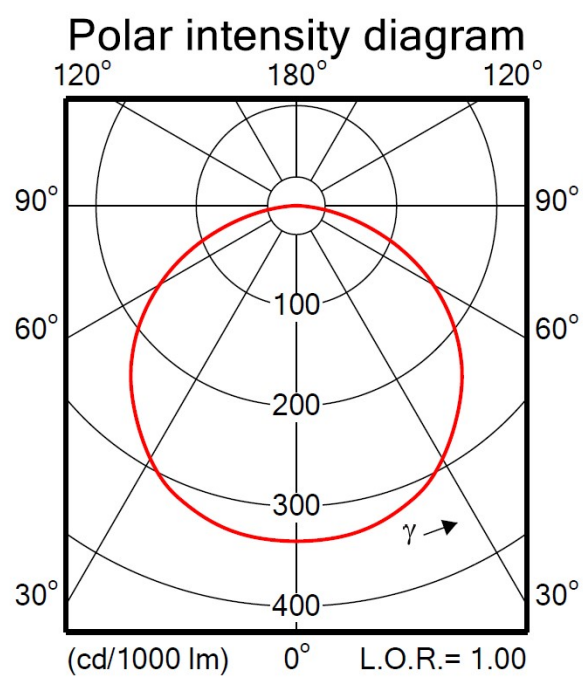
Fortimo LED Line 1ft HF 865 1R HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1956	1970	2029	lm
Efficacy		168		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.308, 0.322)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		865/369		
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	865	lm	lm/W
80% I-nom 234mA	Tc 25 °C	1650	177
	Tc-nom 55 °C	1596	173
	Tc-max 95 °C	1494	165
I-nom 292mA	Tc 25 °C	2037	172
	Tc-nom 55 °C	1970	168
	Tc-max 95 °C	1843	160
I-max 480mA	Tc 25 °C	3233	158
	Tc-nom 55 °C	3124	154
	Tc-max 95 °C	2920	146





Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	38.8	40.2	41.0	V
Power consumption	11.3	11.7	12.0	W = kWh/1000h
Number of modules in series per chain			9	
Number of modules in parallel			1	

Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=233.6mA	Tc=25°C	>100	>100	>100	>100	>100	>100	95	92	90
	Tc_nom=55°C	>100	>100	>100	>100	>100	>100	67	65	64
	Tc_life=90°C	>100	85	65	100	85	65	48	46	45
Inom=292mA	Tc=25°C	>100	>100	>100	>100	>100	>100	91	88	87
	Tc_nom=55°C	>100	>100	>100	>100	>100	>100	65	63	63
	Tc_life=90°C	>100	85	65	96	85	65	46	44	43
Ilife=480mA	Tc=25°C	>100	>100	>100	>100	>100	>100	83	80	79
	Tc_nom=55°C	>100	>100	>100	>100	>100	>100	59	57	56
	Tc_life=90°C	>100	85	65	>83	82	65	42	40	39

Lifetime

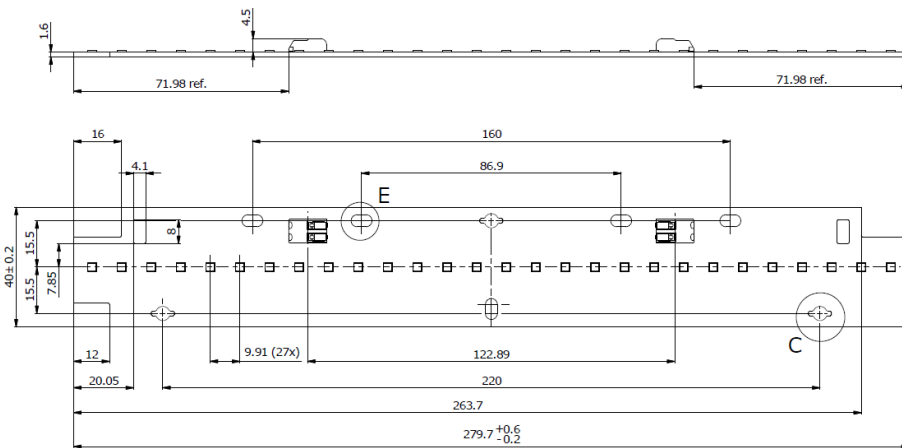
Parameter	Value	Unit
M70F50 nominal	>100000	hours
M70F50 life	>100000	hours

Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.2...0.75	mm ²	solid wire, stranded wire
	18...24	AWG	solid wire, stranded wire
Input wire strip length	7...9	mm	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	279.5	279.7	280.3	mm
Width	39.8	40	40.2	mm
Height PCB		1.6		mm
Height total		6.1		mm
Product mass		53		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		420	V _{dc}

Application information

Certificates and Standards

CE
ENEC
ENEC+

Environmental

RoHS/REACH

Application

Dimming

Yes



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