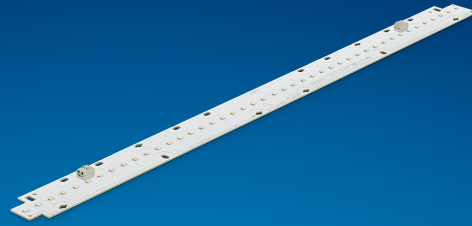


PHILIPS

Fortimo

LED

Fortimo LED Line 2ft MF
9xx 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 2ft MF 930 1R HV5	8719514 411326 00	9290 029 31406	80
Fortimo LED Line 2ft MF 940 1R HV5	8719514 411340 00	9290 029 31506	80

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Line 2ft MF 9xx 1R HV5	215	400	400	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	45	80	80	°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

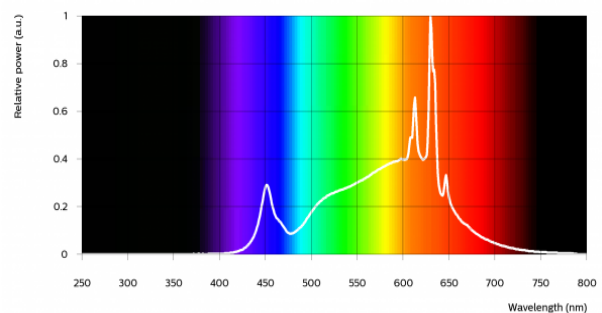
Optical characteristics - table per color (CCT)

Fortimo LED Line 2ft MF 930 1R HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	2025	2060	2197	lm
Efficacy		154		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		930/369		
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	930	lm	lm/W
80% I-nom 172mA	Tc 25 °C	1706	160
	Tc-nom 45 °C	1666	158
	Tc-max 80 °C	1581	152
I-nom 215mA	Tc 25 °C	2110	157
	Tc-nom 45 °C	2060	154
	Tc-max 80 °C	1953	148
I-max 400mA	Tc 25 °C	3764	143
	Tc-nom 45 °C	3674	141
	Tc-max 80 °C	3480	135

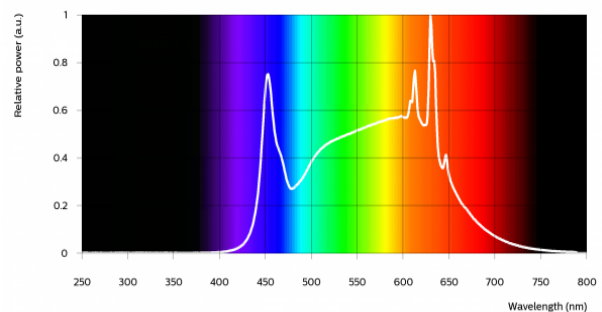


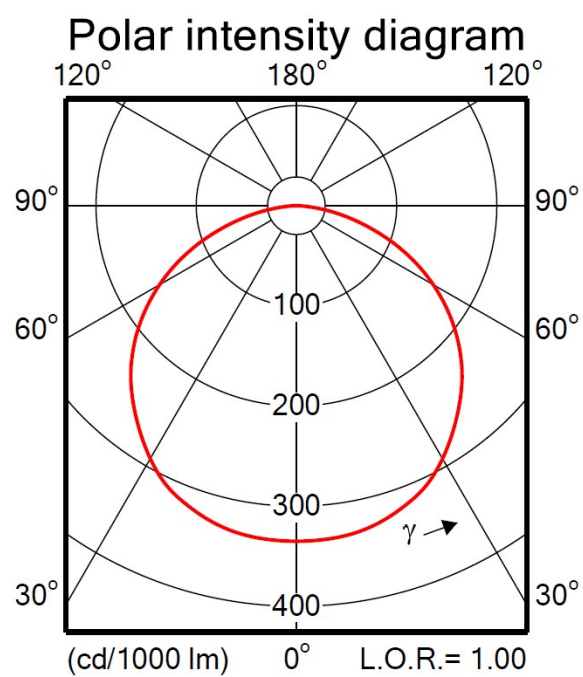
Fortimo LED Line 2ft MF 940 1R HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	2165	2200	2338	lm
Efficacy		165		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.380, 0.380)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		940/369		
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	940	lm	lm/W
80% I-nom 172mA	Tc 25 °C	1822	171
	Tc-nom 45 °C	1779	169
	Tc-max 80 °C	1688	162
I-nom 215mA	Tc 25 °C	2253	167
	Tc-nom 45 °C	2200	165
	Tc-max 80 °C	2086	158
I-max 400mA	Tc 25 °C	4021	153
	Tc-nom 45 °C	3924	151
	Tc-max 80 °C	3717	144





Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	60.0	62.2	63.4	V
Power consumption	12.9	13.4	13.6	W = kWh/1000h
Number of modules in series per chain			6	
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=172mA	Tc=25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc_nom=45°C	>60	>60	>60	>60	>60	>60	51	50	49
	Tc_life=80°C	>60	>60	>60	>60	>60	>60	36	35	34
Inom=215mA	Tc=25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc_nom=45°C	>60	>60	>60	>60	>60	>60	49	48	47
	Tc_life=80°C	>60	>60	>60	>60	>60	>60	34	33	33
Ilife=400mA	Tc=25°C	>60	>60	>60	>60	>60	>60	54	53	52
	Tc_nom=45°C	>60	>60	>60	>60	>60	>60	43	42	42
	Tc_life=80°C	>60	>60	>60	>60	>60	>60	30	29	29

Lifetime

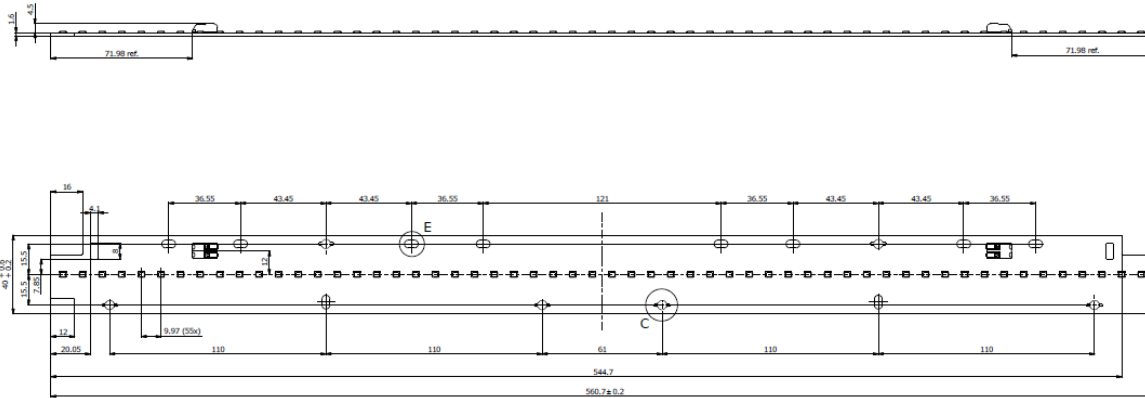
Parameter	Value	Unit
M70F50 nominal	>60000	hours
M70F50 life	>60000	hours

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	560.5	560.7	560.9	mm
Width	39.8	40	40.6	mm
Height PCB		1.6		mm
Height total		6.1		mm
Product mass		69		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		400	mA
Case temperature (Tc-max)		80	°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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