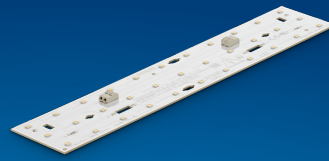


PHILIPS

Fortimo

LED

Fortimo LED Line 1ft LF
8xx 3R HV/LV5



Datasheet

Upgraded with the latest LED technology, the Fortimo LED Line 3R provides high quality white light on a well-known footprint. From three rows (3R) of LEDs, the modules provide a high energy efficiency whilst enabling three lumen ranges: LF (650lm/ft), 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 / 3500K / 4000K / 5000K / 6500K
- Two module lengths: 1ft/280mm or 2ft/560mm
- Three lumen packages: LF (650lm/ft), MF (1100lm/ft) or HF (2000lm/ft)
- High overdrive possibilities
- High voltage (HV) or Low voltage (LV) designs: LF and MF versions are hybrid and can be used in both HV or LV
- Five year system warranty

March 2022



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Line 1ft LF 830 3R HV/LV5	8719514 390430 00	9290 029 24606	60
Fortimo LED Line 1ft LF 840 3R HV/LV5	8719514 390454 00	9290 029 24706	60
Fortimo LED Line 1ft LF 850 3R HV/LV5	8719514 390478 00	9290 029 24806	60

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Line 1ft LF 8xx 3R HV/LV5	115	600	600	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	35	75	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)

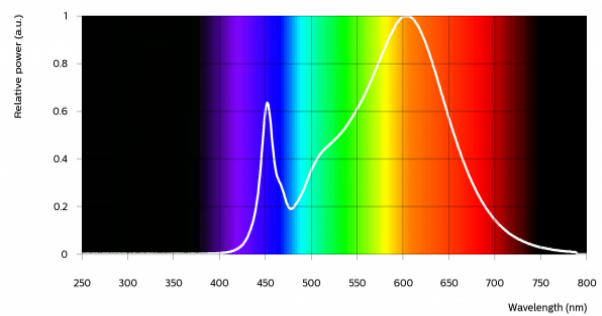
Fortimo LED Line 1ft LF 830 3R HV/LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	614	620	658	lm
Efficacy		174		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.433, 0.403)		-
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 92mA	Tc 25 °C	504	178
	Tc-nom 35 °C	499	177
	Tc-max 80 °C	469	169
I-nom 115mA	Tc 25 °C	626	175
	Tc-nom 35 °C	620	174
	Tc-max 80 °C	583	167
I-max 600mA	Tc 25 °C	2885	135
	Tc-nom 35 °C	2855	134
	Tc-max 80 °C	2678	128



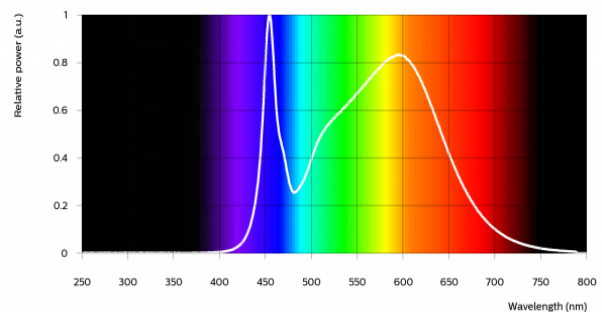
Fortimo LED Line 1ft LF 840 3R HV/LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	645	650	688	lm
Efficacy		183		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.380, 0.380)		-
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 92mA	Tc 25 °C	528	187
	Tc-nom 35 °C	523	186
	Tc-max 80 °C	491	178
I-nom 115mA	Tc 25 °C	657	185
	Tc-nom 35 °C	650	183
	Tc-max 80 °C	610	176
I-max 600mA	Tc 25 °C	3067	143
	Tc-nom 35 °C	3032	142
	Tc-max 80 °C	2835	135

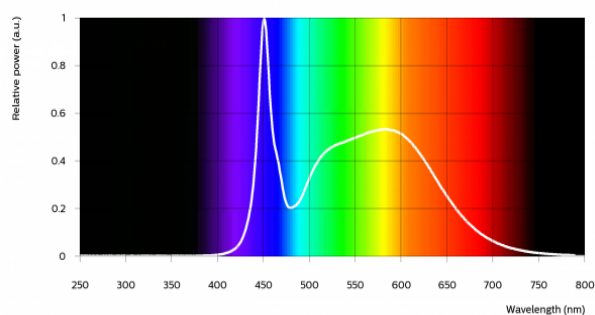


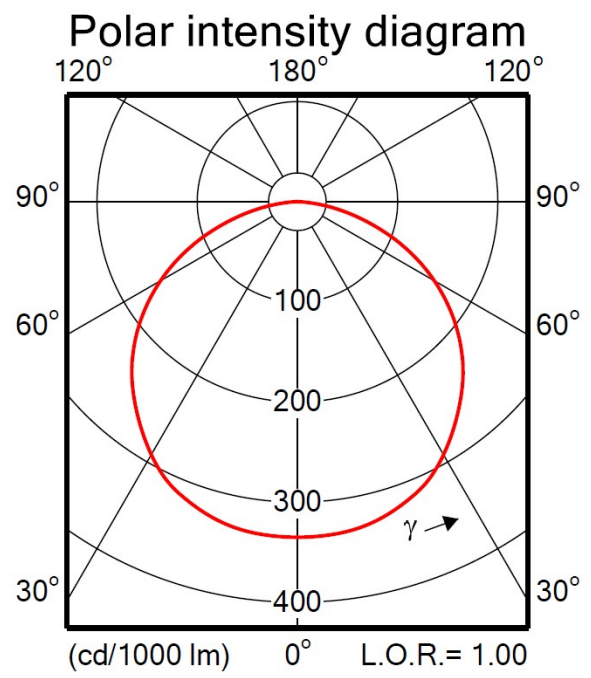
Fortimo LED Line 1ft LF 850 3R HV/LV5

Parameter	Min	Typ	Max	Unit
Luminous flux	645	650	688	lm
Efficacy		183		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.341, 0.350)		-
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 92mA	Tc 25 °C	528	187
	Tc-nom 35 °C	523	186
	Tc-max 80 °C	491	178
I-nom 115mA	Tc 25 °C	657	185
	Tc-nom 35 °C	650	183
	Tc-max 80 °C	610	176
I-max 600mA	Tc 25 °C	3067	143
	Tc-nom 35 °C	3032	142
	Tc-max 80 °C	2835	135





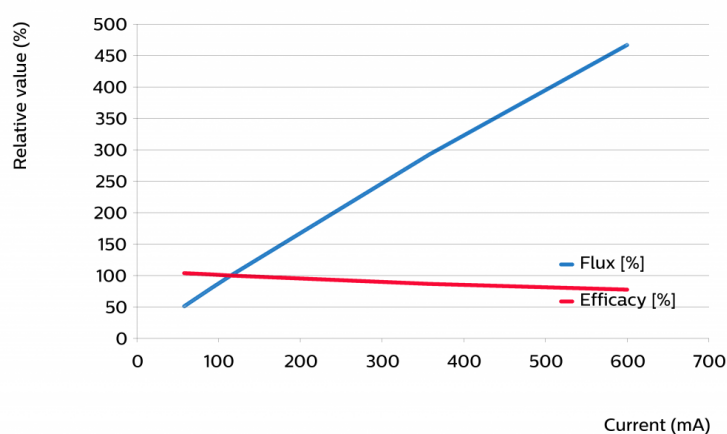
Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	29.8	30.9	31.5	V
Power consumption	3.43	3.55	3.62	W = kWh/1000h
Number of modules in series per chain			12	
Number of modules per chain			4	

Tuning information

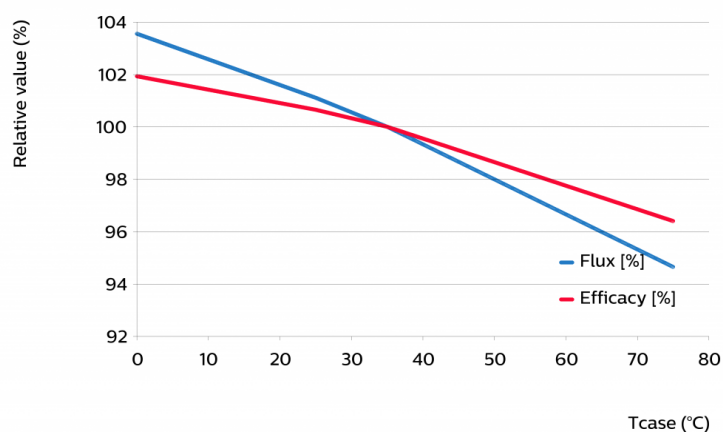
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
600	467	77
358	293	87
115	100	100
92	80	102
58	51	104



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

Tc [°C]	Flux [%]	Efficacy [%]
75	95	96
35	100	100
25	101	101
0	104	102



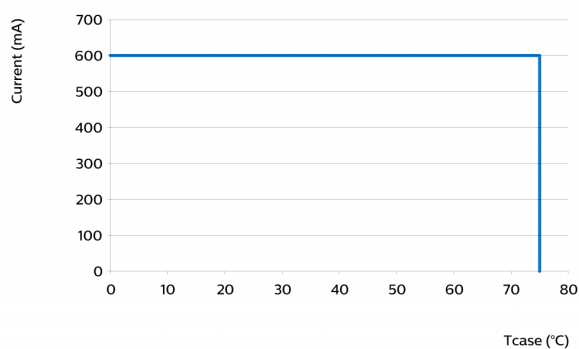
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=92mA	Tc=25°C	>70	>70	>70	>70	>70	>70	>70	>70	>70
	Tc_nom=35°C	>70	>70	>70	>70	>70	>70	>70	>70	>70
	Tc_life=80°C	>70	>70	>70	>70	>70	>70	52	51	50
Inom=115mA	Tc=25°C	>70	>70	>70	>70	>70	>70	>70	>70	>70
	Tc_nom=35°C	>70	>70	>70	>70	>70	>70	>70	>70	>70
	Tc_life=80°C	>70	>70	>70	>70	>70	>70	52	51	50
Ilife=600mA	Tc=25°C	>70	>70	>70	>70	>70	>70	>70	>70	>70
	Tc_nom=35°C	>70	>70	>70	>70	>70	>70	67	65	64
	Tc_life=80°C	>70	>70	>70	>70	>70	>70	41	40	39

Lifetime

Parameter	Value	Unit
M70F50 nominal	>70000	hours
M70F50 life	>70000	hours

Performance Window

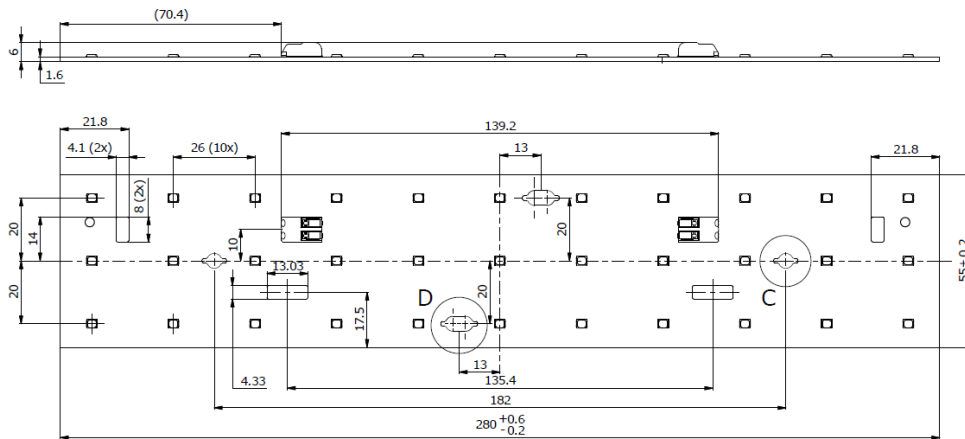


Wiring

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	279.8	280	280.6	mm
Width	54.8	55	55.2	mm
Height PCB		1.6		mm
Height total		6		mm
Product mass		48		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		600	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
---------	-----



© 2022 Signify Holding, IBRS 10461, 5600VB, NL. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

www.philips.com/oem

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.
UK importer address: 3 Guildford Business Park, GU2 8XG

10/03/2022