

# PHILIPS

## Fortimo

### LED

Fortimo LED Strip  
1120mm 4400lm 8xx LV5



## Datasheet

### Fortimo LED Strip 1120mm 4400lm 8xx LV5

The Fortimo LED Strip is a uniquely wide portfolio which can be used in all kind of linear indoor luminaire types. It's form factor makes it easy to design-in and handle in production as it complies to Zhaga standards. Due to the availability from 0.5ft up to 5ft lengths only one product family is needed to cover a wide range of needs.

#### Key features and benefits

- Typical module efficacy of 185 lm/W (at 4000K CRI80)
- High performance for CRI90 of 175 lm/W (at 4000K CRI90)
- Long life-time: >50,000 hours
- Excellent color consistency of 3 SDCM
- Two lumen packages per length available
- Wide range of CCTs available: 2700K, 3000K, 4000K, 5000K and 6500K
- Available in High Voltage (HV) and Low Voltage (LV)
- Small LED module width of only 20mm
- Wide temperature (Tc) range -40°C to +80°C
- Five year system warranty

December 2020



## Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip 1120mm 4400lm 830 LV5F	8718699 758684 00	9290 021 74806	96
Fortimo LED Strip 1120mm 4400lm 840 LV5F	8718699 758707 00	9290 021 74906	96
Fortimo LED Strip 1120mm 4400lm 850 LV5F	8718699 758721 00	9290 021 75006	96
Fortimo LED Strip 1120mm 4400lm 865 LV5F	8718699 758745 00	9290 021 75106	96
Fortimo LED Strip 1120mm 4400lm 830 LV5B	8718699 759414 00	9290 021 75406	96
Fortimo LED Strip 1120mm 4400lm 840 LV5B	8718699 759438 00	9290 021 75506	96

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 1120mm 4400lm 8xx LV5	720	1440	1800	mA

## Module temperatures

---

Parameter	Nominal*	Life**	Max***	Unit
$T_c$ (case temperature at $T_c$ point)	45	70	80	°C

\* Nominal value at which typical performance is specified

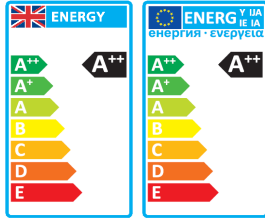
\*\* Value at which life time is specified

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

## Optical characteristics - table per color (CCT)

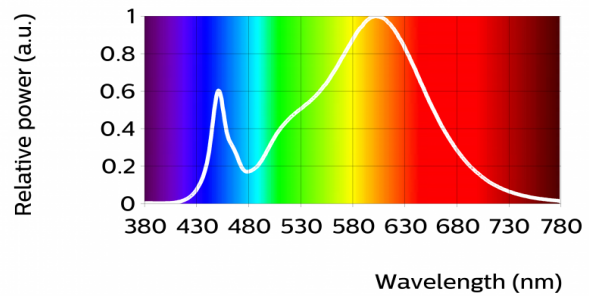
Fortimo LED Strip 1120mm 4400lm 830 LV5F  
 Fortimo LED Strip 1120mm 4400lm 830 LV5B

Parameter	Min	Typ	Max	Unit
Luminous flux	3866	4180	4494	lm
Module efficacy	157	173		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.436, 0.401)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		830/369		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



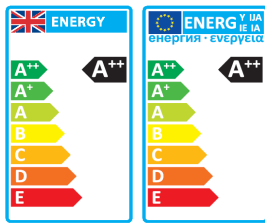
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	830	lm	lm/W
50% I-nom 360mA	Tc 25 °C	2188	188
	Tc-nom 45 °C	2138	185
	Tc-max 80 °C	2035	179
I-nom 720mA	Tc 25 °C	4279	177
	Tc-nom 45 °C	4180	173
	Tc-max 80 °C	3979	168
I-max 1800mA	Tc 25 °C	10030	152
	Tc-nom 45 °C	9794	149
	Tc-max 80 °C	9315	144



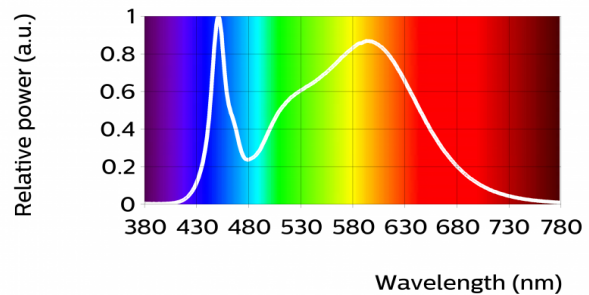
Fortimo LED Strip 1120mm 4400lm 840 LV5F  
 Fortimo LED Strip 1120mm 4400lm 840 LV5B

Parameter	Min	Typ	Max	Unit
Luminous flux	4070	4400	4730	lm
Module efficacy	166	182		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.383, 0.378)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		840/369		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



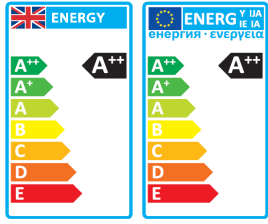
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	840	lm	lm/W
50% I-nom 360mA	Tc 25 °C	2303	198
	Tc-nom 45 °C	2250	195
	Tc-max 80 °C	2143	189
I-nom 720mA	Tc 25 °C	4505	186
	Tc-nom 45 °C	4400	182
	Tc-max 80 °C	4189	177
I-max 1800mA	Tc 25 °C	10560	160
	Tc-nom 45 °C	10311	157
	Tc-max 80 °C	9808	151



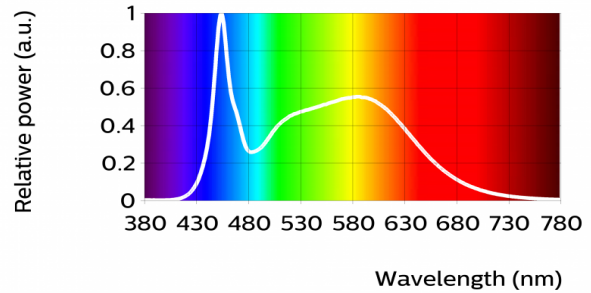
Fortimo LED Strip 1120mm 4400lm 850 LV5F

Parameter	Min	Typ	Max	Unit
Luminous flux	4070	4400	4730	lm
Module efficacy	166	182		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.341, 0.350)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		850/369		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



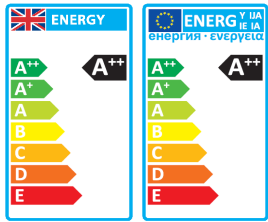
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	850	Im	
		Im	Im/W
50% I-nom 360mA	Tc 25 °C	2303	198
	Tc-nom 45 °C	2250	195
	Tc-max 80 °C	2143	189
I-nom 720mA	Tc 25 °C	4505	186
	Tc-nom 45 °C	4400	182
	Tc-max 80 °C	4189	177
I-max 1800mA	Tc 25 °C	10560	160
	Tc-nom 45 °C	10311	157
	Tc-max 80 °C	9808	151



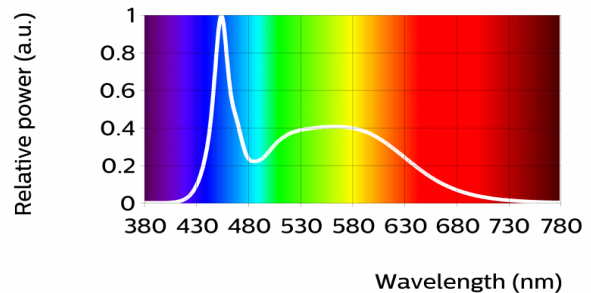
Fortimo LED Strip 1120mm 4400lm 865 LV5F

Parameter	Min	Typ	Max	Unit
Luminous flux	4070	4400	4730	lm
Module efficacy	166	182		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.309, 0.322)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		865/369		
Radiation angle		120		deg
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	Im	
		Im	Im/W
50% I-nom 360mA	Tc 25 °C	2303	198
	Tc-nom 45 °C	2250	195
	Tc-max 80 °C	2143	189
I-nom 720mA	Tc 25 °C	4505	186
	Tc-nom 45 °C	4400	182
	Tc-max 80 °C	4189	177
I-max 1800mA	Tc 25 °C	10560	160
	Tc-nom 45 °C	10311	157
	Tc-max 80 °C	9808	151



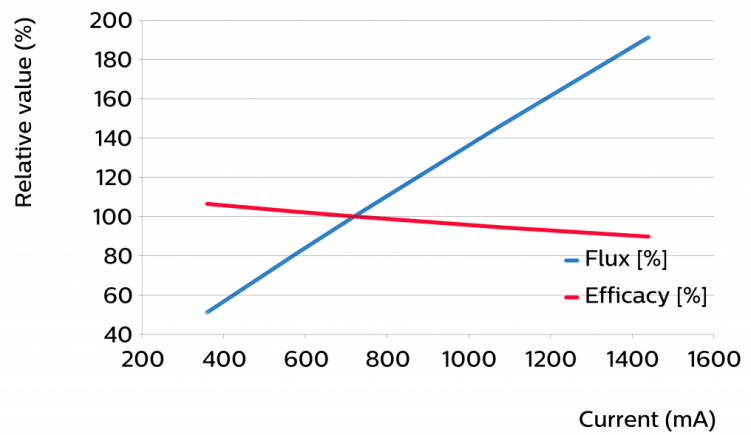
## Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	32.8	33.5	34.2	V
Power consumption	23.6	24.1	24.6	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules per chain			1	

## Tuning information

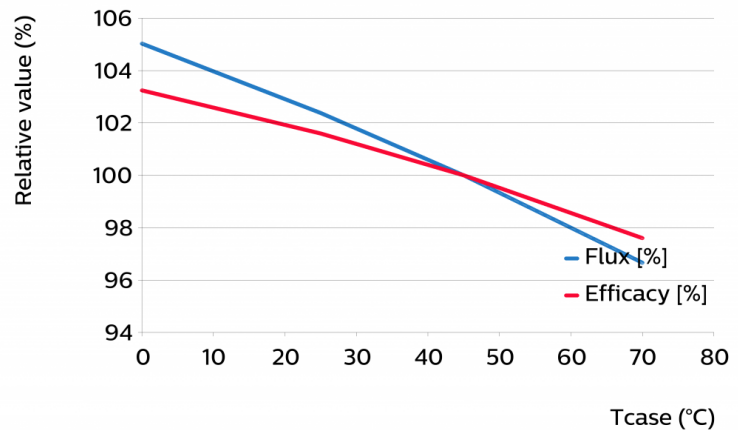
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1440	191	90
1080	147	94
720	100	100
576	81	102
360	51	106



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

Tc [°C]	Flux [%]	Efficacy [%]
70	97	98
45	100	100
25	102	102
0	105	103



## Lumen maintenance

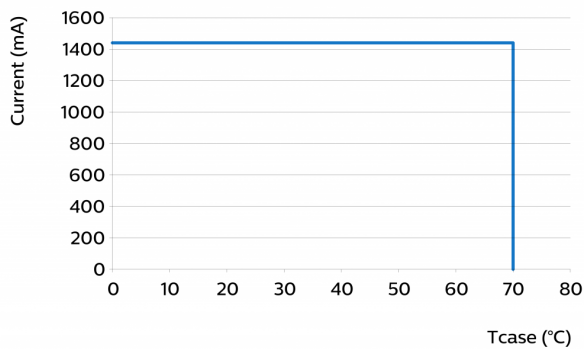
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 579 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	67	64	62
	Tc nom 45°C	>70	>70	>70	>70	>70	>70	52	50	49
	Tc life 70°C	>70	>70	>70	>70	>70	>70	40	38	37
I nom 720 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	67	64	62
	Tc nom 45°C	>70	>70	>70	>70	>70	>70	52	50	49
	Tc life 70°C	>70	>70	>70	>70	>70	>70	40	38	37
I life 1440 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	58	55	54
	Tc nom 45°C	>70	>70	>70	>70	>70	>70	45	43	42
	Tc life 70°C	>70	>70	>70	>70	>70	>70	35	33	32

## Lifetime

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

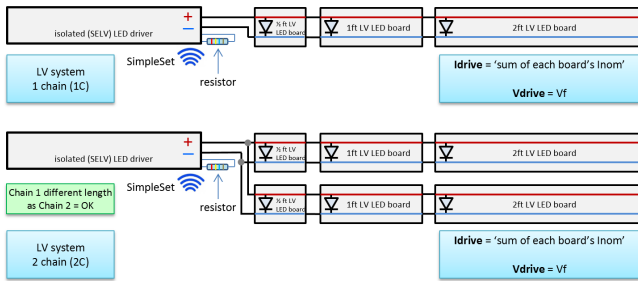
Switching cycles in accordance to EU 1194/2012: >15000

## Performance Window



## Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25...0.75	mm <sup>2</sup>	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 <sup>2</sup>	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	7.5...8.5	mm	

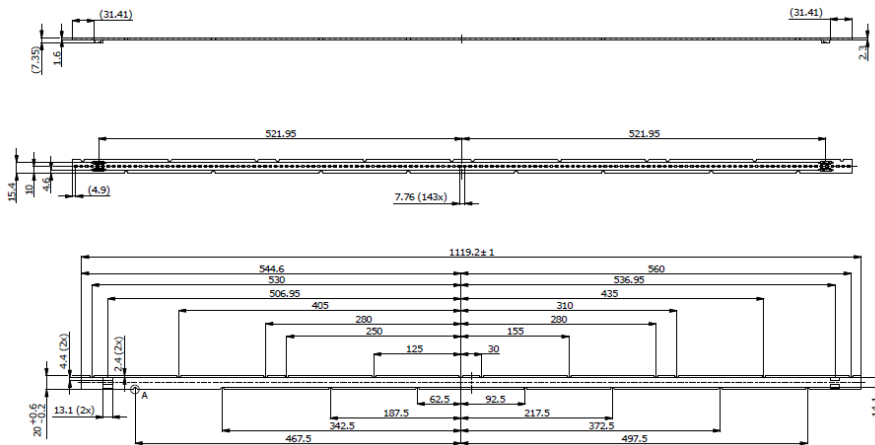


More information in the design-in guide of LED Linear modules.

## Mechanical characteristics

Fortimo LED Strip 1120mm 4400lm 830 LV5B  
 Fortimo LED Strip 1120mm 4400lm 840 LV5B

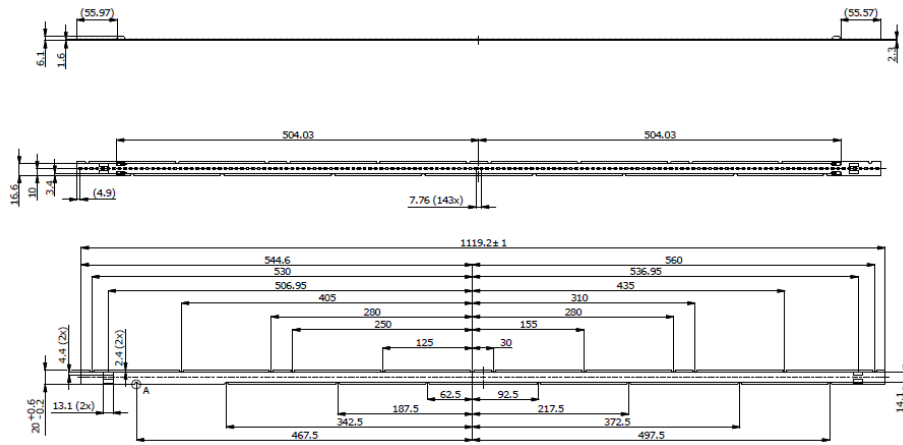
Parameter	Min	Typ	Max	Unit
Length	1118.2	1119.2	1120.2	mm
Width	19.8	20	20.6	mm
Height PCB	1.4	1.6	1.8	mm
Height incl. connector	7.15	7.35	7.55	mm
Product mass		74		gram



Fortimo LED Strip 1120mm 4400lm 850 LV5F  
 Fortimo LED Strip 1120mm 4400lm 830 LV5F  
 Fortimo LED Strip 1120mm 4400lm 865 LV5F  
 Fortimo LED Strip 1120mm 4400lm 840 LV5F

Parameter	Min	Typ	Max	Unit
Length	1118.2	1119.2	1120.2	mm
Width	19.8	20	20.6	mm
Height PCB	1.4	1.6	1.8	mm
Height incl. connector	5.9	6.1	6.3	mm
Product mass		74		gram





## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1800	mA
Case temperature (Tc-max)		80	°C
ESD (direct contact)	8		kV
Working voltage		120	V <sub>dc</sub>

## Application information

### Certificates and Standards

CE  
 ENEC  
 ENEC+  
 UL

### Environmental

RoHS/REACH

### Application

Dimming	Yes
---------	-----



© 2020 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](http://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

10/12/2020