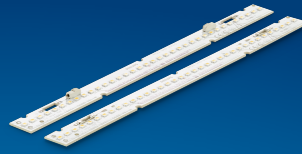


PHILIPS

Fortimo

LED

Fortimo LED Strip 1ft
1100lm 8xx HV5



Datasheet

Fortimo LED Strip 1ft 1100lm 8xx HV5

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 1ft 1100lm 830 FC HV5	8718699 719371 00	9290 021 21106	168
Fortimo LED Strip 1ft 1100lm 840 FC HV5	8718699 717421 00	9290 021 21206	168
Fortimo LED Strip 1ft 1100lm 850 FC HV5	8718699 719449 00	9290 021 21306	168
Fortimo LED Strip 1ft 1100lm 865 FC HV5	8718699 719609 00	9290 021 21406	168
Fortimo LED Strip 1ft 1100lm 830 BC HV5	8718699 721824 00	9290 021 21906	168
Fortimo LED Strip 1ft 1100lm 840 BC HV5	8718699 721848 00	9290 021 22006	168

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 1ft 1100lm 8xx HV5	240	480	600	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

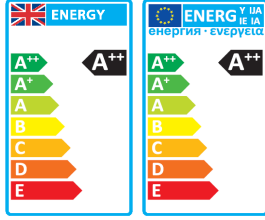
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

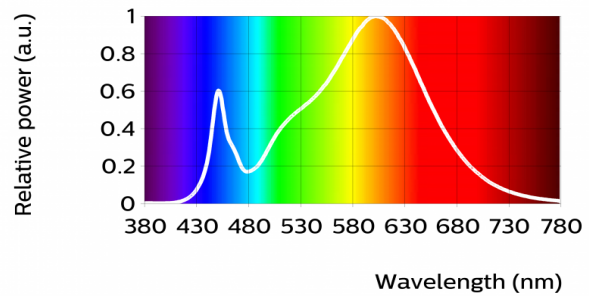
Fortimo LED Strip 1ft 1100lm 830 FC HV5
Fortimo LED Strip 1ft 1100lm 830 BC HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	956	1045	1112	lm
Module efficacy	159	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	



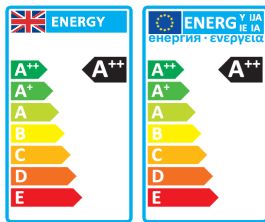
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	830	lm	lm/W
50% I-nom 120mA	Tc 25 °C	547	189
	Tc-nom 45 °C	534	187
	Tc-max 80 °C	509	180
I-nom 240mA	Tc 25 °C	1070	178
	Tc-nom 45 °C	1045	173
	Tc-max 80 °C	995	169
I-max 600mA	Tc 25 °C	2508	152
	Tc-nom 45 °C	2449	150
	Tc-max 80 °C	2329	144



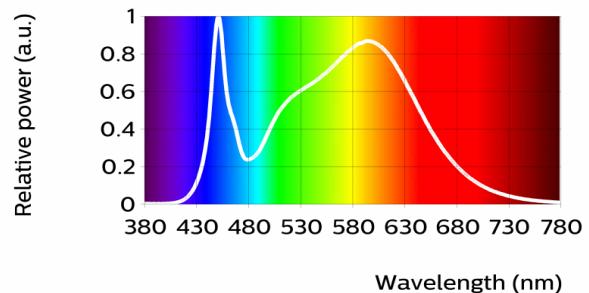
Fortimo LED Strip 1ft 1100lm 840 FC HV5
Fortimo LED Strip 1ft 1100lm 840 BC HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1018	1100	1182	lm
Module efficacy	169	183		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	



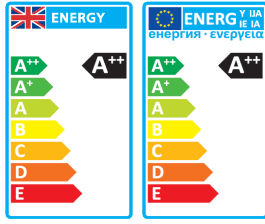
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	840	lm	lm/W
50% I-nom 120mA	Tc 25 °C	576	199
	Tc-nom 45 °C	563	196
	Tc-max 80 °C	536	190
I-nom 240mA	Tc 25 °C	1126	188
	Tc-nom 45 °C	1100	183
	Tc-max 80 °C	1047	178
I-max 600mA	Tc 25 °C	2640	160
	Tc-nom 45 °C	2578	158
	Tc-max 80 °C	2452	152



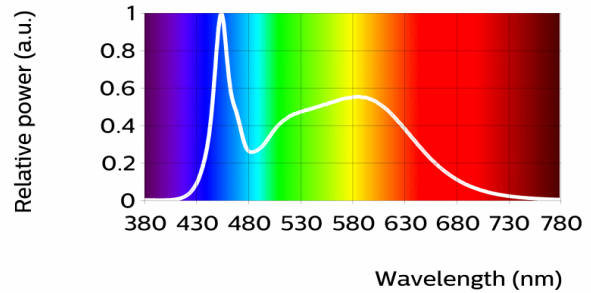
Fortimo LED Strip 1ft 1100lm 850 FC HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1018	1100	1182	lm
Module efficacy	169	183		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	



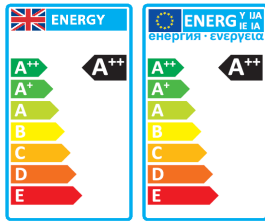
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	850	lm	lm/W
	50% I-nom 120mA	Tc 25 °C	576
Tc-nom 45 °C		563	196
Tc-max 80 °C		536	190
I-nom 240mA	Tc 25 °C	1126	188
	Tc-nom 45 °C	1100	183
	Tc-max 80 °C	1047	178
I-max 600mA	Tc 25 °C	2640	160
	Tc-nom 45 °C	2578	158
	Tc-max 80 °C	2452	152



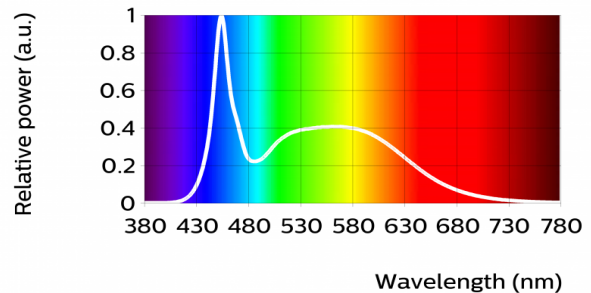
Fortimo LED Strip 1ft 1100lm 865 FC HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1018	1100	1182	lm
Module efficacy	169	183		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	lm	lm/W
	50% I-nom 120mA	Tc 25 °C	576
Tc-nom 45 °C		563	196
Tc-max 80 °C		536	190
I-nom 240mA	Tc 25 °C	1126	188
	Tc-nom 45 °C	1100	183
	Tc-max 80 °C	1047	178
I-max 600mA	Tc 25 °C	2640	160
	Tc-nom 45 °C	2578	158
	Tc-max 80 °C	2452	152



Electrical characteristics

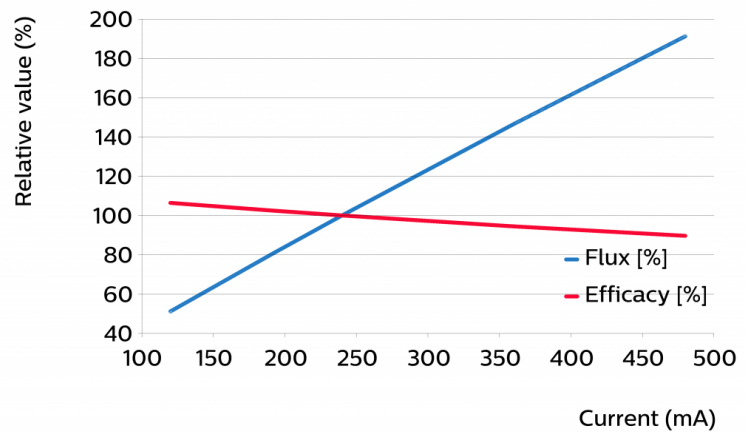
Parameter	Min	Typ	Max	Unit
Forward voltage	24.2	25.1	26.0	V
Power consumption	5.81	6.03	6.24	W = kWh/1000h
Number of modules in series per chain			11	
Number of modules in parallel			1	

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

Tuning information

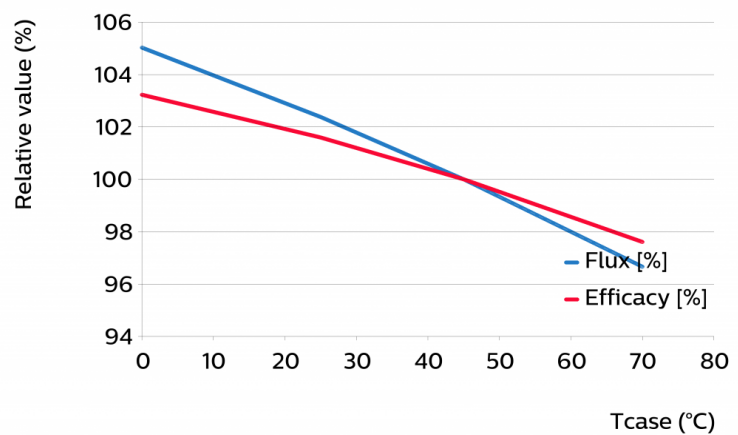
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
480	191	90
360	147	94
240	100	100
192	81	102
120	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

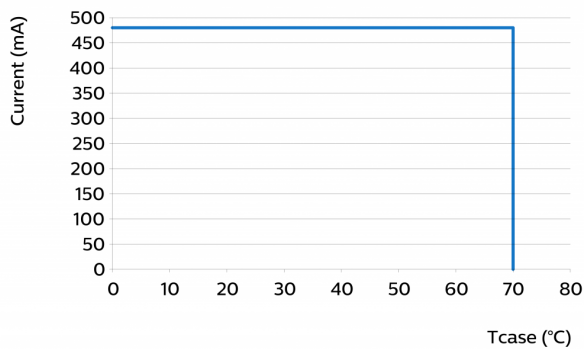
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 192 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	67	64	62
	Tc nom 45°C	>70	>70	>70	>70	>70	>70	52	50	49
	Tc life 70°C	>70	>70	>70	>70	>70	>70	40	38	37
I nom 240 mA	Tc 25°C	>70	>70	>70	>70	>70	>70	67	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 480 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

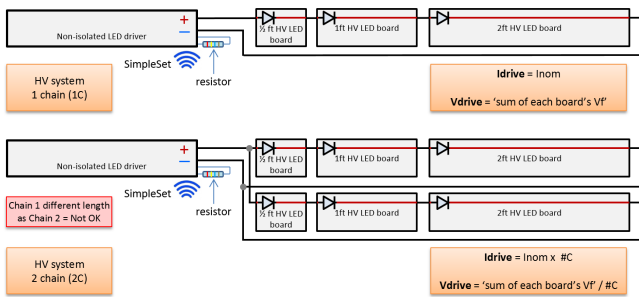
Switching cycles in accordance to EU 1194/2012: >15000

Performance Window



Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25...0.75	mm 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	

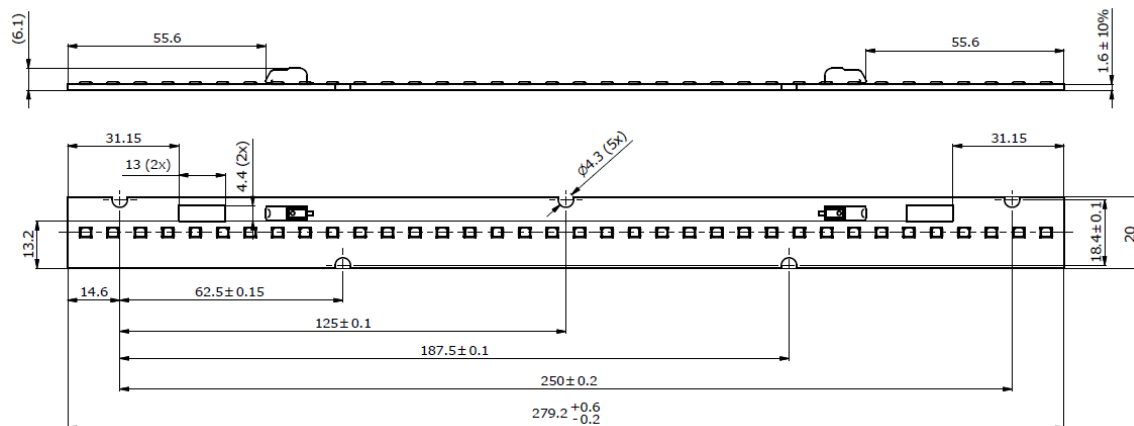


More information in the design-in guide of LED Linear modules.

Mechanical characteristics

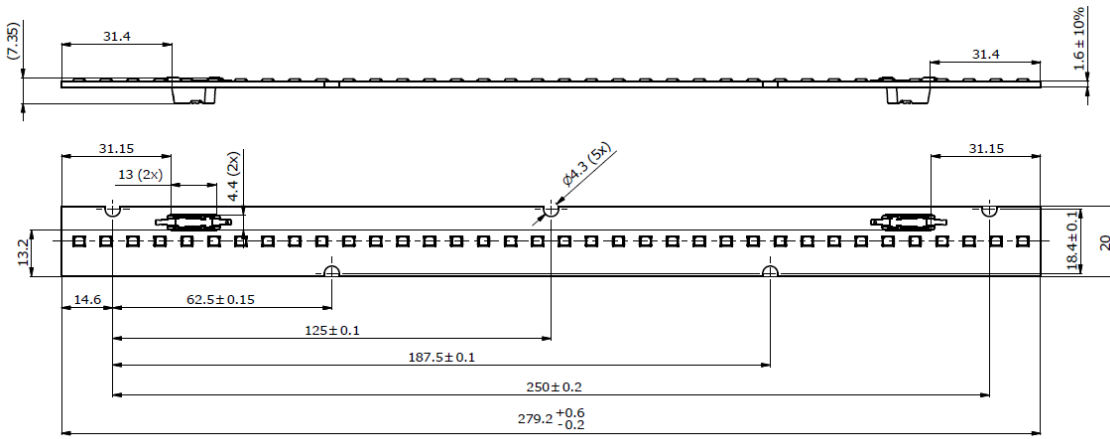
Fortimo LED Strip 1ft 1100lm 865 FC HV5
 Fortimo LED Strip 1ft 1100lm 840 FC HV5
 Fortimo LED Strip 1ft 1100lm 850 FC HV5
 Fortimo LED Strip 1ft 1100lm 830 FC HV5

Parameter	Min	Typ	Max	Unit
Length	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height excl. connector		1.6		mm
Height incl. connector		6.1		mm
Product mass		20		gram



Fortimo LED Strip 1ft 1100lm 840 BC HV5
 Fortimo LED Strip 1ft 1100lm 830 BC HV5

Parameter	Min	Typ	Max	Unit
Length	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height excl. connector		1.6		mm
Height incl. connector		7.35		mm
Product mass		20		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		350	V _{dc}

Application information

Certificates and Standards

CE
 ENEC
 ENEC+
 UL

Environmental

RoHS/REACH

Application

Dimming	Yes
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10/12/2020