PHILIPS

Fortimo

LED

Fortimo LED Strip 1ft 1100lm 9xx HV5

Datasheet

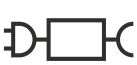
Fortimo LED Strip 1ft 1100lm 9xx HV5

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
- CCTs available: 3000K and 4000K
- 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

August 2020



Ordering data

Commercial product name	EOC	12NC	Box quantity
Fortimo LED Strip 1ft 1100lm 927 FC HV5	8718699 719623 00	9290 021 21506	168
Fortimo LED Strip 1ft 1100lm 930 FC HV5	8718699 719685 00	9290 021 21606	168
Fortimo LED Strip 1ft 1100lm 940 FC HV5	8718699 719708 00	9290 021 21706	168
Fortimo LED Strip 1ft 1100lm 965 FC HV5	8718699 719722 00	9290 021 21806	168

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip 1ft 1100lm 9xx HV5	252	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

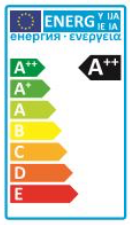
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

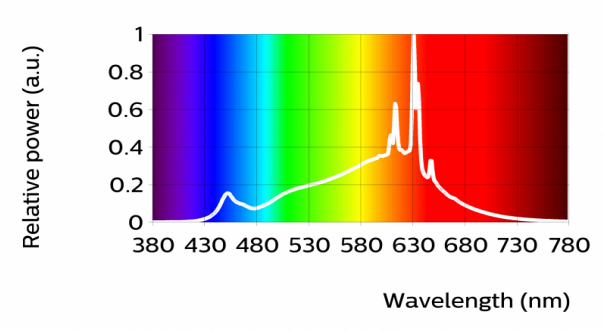
Fortimo LED Strip 1ft 1100lm 927 FC HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	916	990	1064	lm
Module efficacy	145	156		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.462, 0.408)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		927/369		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



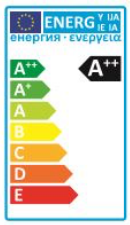
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	927	lm	lm/W
50% I-nom 126mA	Tc 25 °C	520	170
	Tc-nom 45 °C	508	168
	Tc-max 80 °C	481	161
I-nom 252mA	Tc 25 °C	1013	160
	Tc-nom 45 °C	990	156
	Tc-max 80 °C	937	151
I-max 600mA	Tc 25 °C	2246	137
	Tc-nom 45 °C	2193	134
	Tc-max 80 °C	2072	128



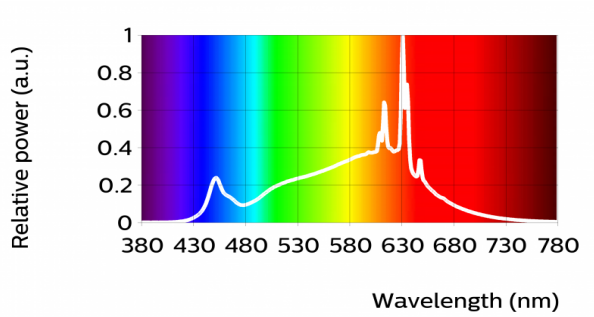
Fortimo LED Strip 1ft 1100lm 930 FC HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	956	1045	1112	lm
Module efficacy	151	165		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.437, 0.399)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		930/369		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



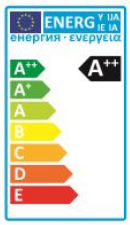
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	930	lm	lm/W
50% I-nom 126mA	Tc 25 °C	548	180
	Tc-nom 45 °C	536	177
	Tc-max 80 °C	507	170
I-nom 252mA	Tc 25 °C	1069	169
	Tc-nom 45 °C	1045	165
	Tc-max 80 °C	989	159
I-max 600mA	Tc 25 °C	2371	144
	Tc-nom 45 °C	2316	142
	Tc-max 80 °C	2188	135



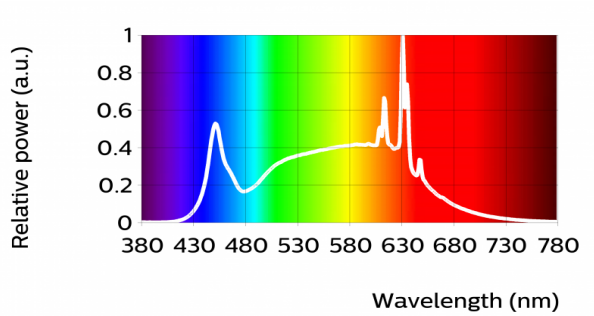
Fortimo LED Strip 1ft 1100lm 940 FC HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1018	1100	1182	lm
Module efficacy	161	174		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.384, 0.377)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		940/369		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



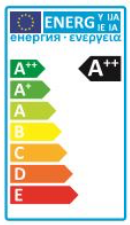
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	940	lm	lm/W
50% I-nom 126mA	Tc 25 °C	577	190
	Tc-nom 45 °C	562	187
	Tc-max 80 °C	529	178
I-nom 252mA	Tc 25 °C	1129	178
	Tc-nom 45 °C	1100	174
	Tc-max 80 °C	1036	167
I-max 600mA	Tc 25 °C	2523	153
	Tc-nom 45 °C	2456	150
	Tc-max 80 °C	2311	143



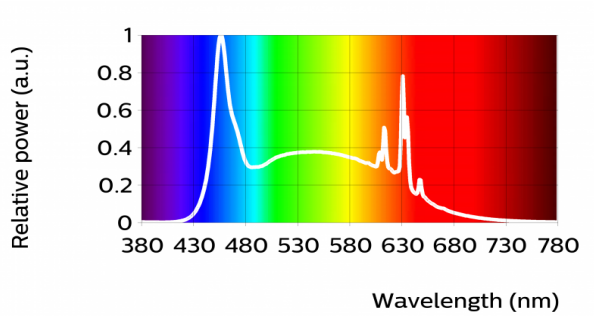
Fortimo LED Strip 1ft 1100lm 965 FC HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1018	1100	1182	lm
Module efficacy	161	174		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.311, 0.323)		-
Color consistency			3	SDCM
CRI	90			
R9	50			
Photometric code		965/369		
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	965	lm	lm/W
50% I-nom 126mA	Tc 25 °C	577	190
	Tc-nom 45 °C	562	187
	Tc-max 80 °C	529	178
I-nom 252mA	Tc 25 °C	1129	178
	Tc-nom 45 °C	1100	174
	Tc-max 80 °C	1036	167
I-max 600mA	Tc 25 °C	2523	153
	Tc-nom 45 °C	2456	150
	Tc-max 80 °C	2311	143



Electrical characteristics

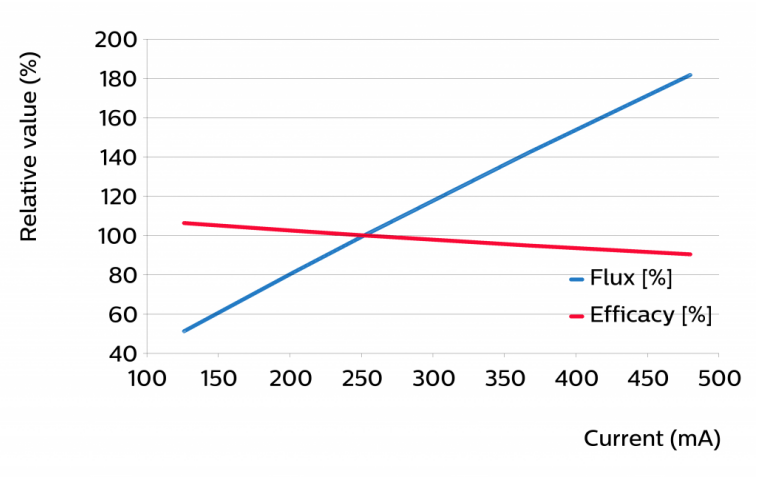
Parameter	Min	Typ	Max	Unit
Forward voltage	24.2	25.1	26.0	V
Power consumption	6.1	6.3	6.6	W = kWh/1000h
Number of modules in series per chain			11	
Number of modules in parallel			1	

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

Tuning information

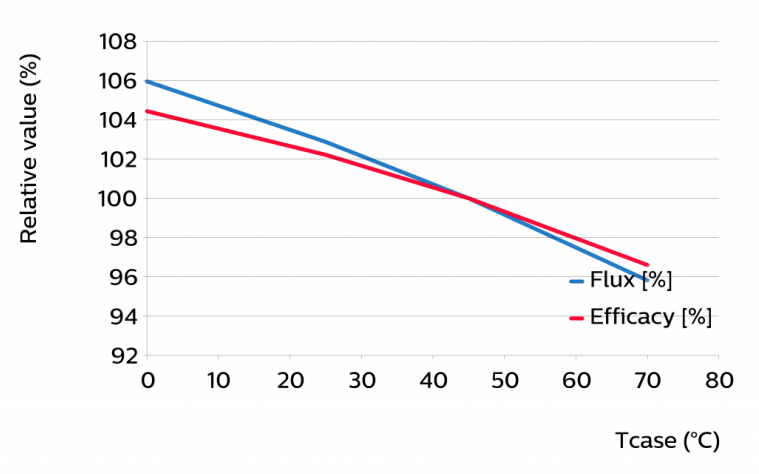
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
480	182	90
366	142	95
252	100	100
202	81	102
126	51	106



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

Tc [°C]	Flux [%]	Efficacy [%]
70	96	97
45	100	100
25	103	102
0	106	104



Lumen maintenance

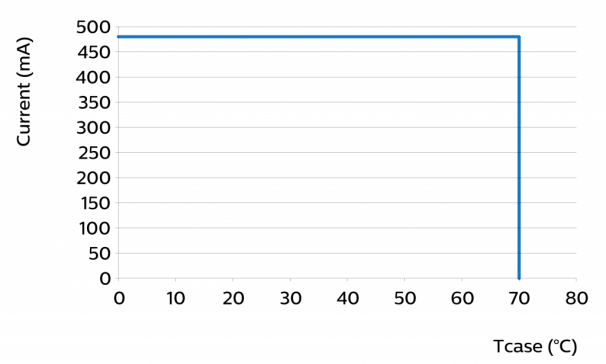
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I nom 202 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	52	50	49
	Tc life 70°C	>60	>60	>60	>60	>60	>60	40	38	37
I nom 252 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	>60	>60	>60
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	52	50	49
	Tc life 70°C	>60	>60	>60	>60	>60	>60	40	38	37
I life 480 mA	Tc 25°C	>60	>60	>60	>60	>60	>60	58	55	54
	Tc nom 45°C	>60	>60	>60	>60	>60	>60	45	43	42
	Tc life 70°C	>60	>60	>60	>60	>60	>60	35	33	32

Lifetime

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

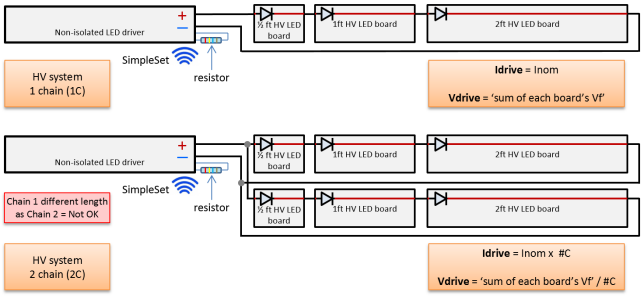
Switching cycles in accordance to EU 1194/2012: >15000

Performance Window



Wiring

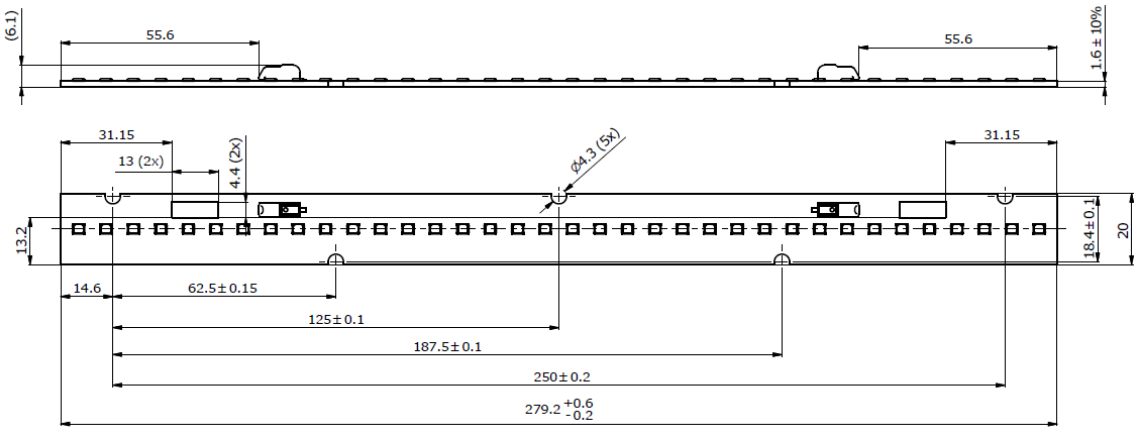
Specification item	Value	Unit	Condition
Input wire cross-section	0.25…0.75	mm²	solid wire
	18…24	AWG	solid wire
Input wire strip length	7.5…8.5	mm	
Input wire cross-section	0.25…0.75	mm²	solid wire
	18…24	AWG	solid wire
Input wire strip length	7.5…8.5	mm	



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

Mechanical characteristics

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



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

www.philips.com/oem

19/08/2020