

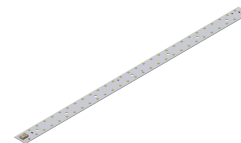
ADVANCE

by  Signify

LED Modules

Fortimo LED Strip VO LV3

19in 2400lm



Fortimo LED Strip VO

19in 2400lm 8xx LV3

Fortimo LED Strip VO LV3

Key features and benefits

- Energy efficacy up to 181 lm/W (Tc 45°C).
- Lumen per foot varies per module type.
- 3 SDCM color consistency
- CRI80 color rendering
- 50,000 hrs lifetime
- Push-in connectors
- Mechanical footprint compatible with LED strip product family and Zhaga

Ordering data

Commercial product name	12NC	Box quantity
Fortimo LED Strip VO 19in 2400lm 835 LV3	9290 027 26113	156
Fortimo LED Strip VO 19in 2400lm 840 LV3	9290 027 26213	156

October 2020

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip VO LV3 19in 2400lm	350	650	700	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	45	80	85	°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

PRELIMINARY

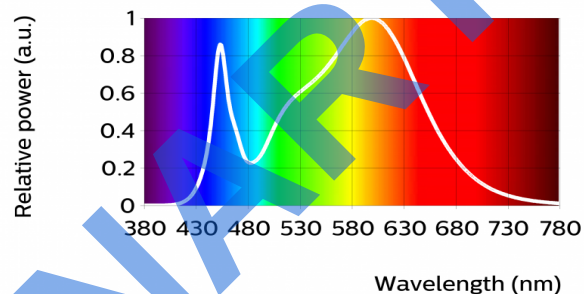
Optical characteristics – table per color (CCT)

Fortimo LED Strip VO 19in 2400lm 835 LV3

Parameter	Min	Typ	Max	Unit
Luminous flux	2175	2350	2530	lm
Module efficacy	159	177		lm/W
Correlated color temperature (CCT)		3500		K
Color consistency			3	SDCM
CRI	80			

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 and R9 ± 3

Operation point	835	lm	lm/W
80% I-nom 280mA	Tc 25 °C	1970	187
	Tc-nom 45 °C	1910	184
	Tc-life 80 °C	1810	178
I-nom 350mA	Tc 25 °C	2420	180
	Tc-nom 45 °C	2350	177
	Tc-life 80 °C	2220	171
I-life 650mA	Tc 25 °C	4190	156
	Tc-nom 45 °C	4060	153
	Tc-life 80 °C	3820	147

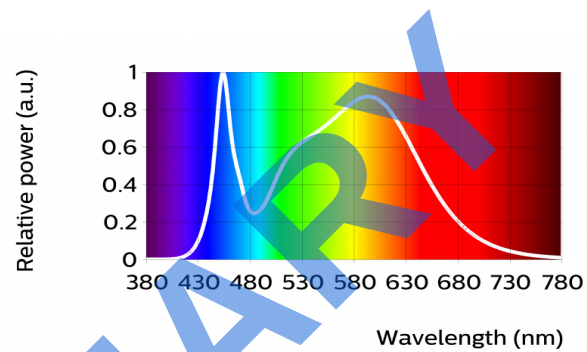


Fortimo LED Strip VO 19in 2400lm 840 LV3

Parameter	Min	Typ	Max	Unit
Luminous flux	2220	2400	2580	lm
Module efficacy	162	181		lm/W
Correlated color temperature (CCT)		4000		K
Color consistency			3	SDCM
CRI	80			

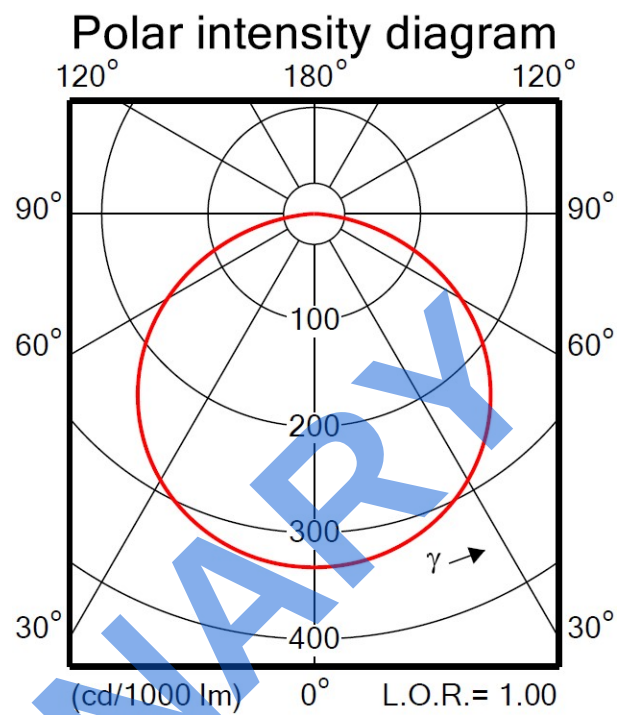
Measurement precision $\pm 5\%$ for the flux data and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement precision for CRI ± 1.5 and R9 ± 3

Operation point	840	lm	lm/W
80% I-nom 280mA	Tc 25 °C	2010	191
	Tc-nom 45 °C	1960	188
	Tc-life 80 °C	1850	182
I-nom 350mA	Tc 25 °C	2470	184
	Tc-nom 45 °C	2400	181
	Tc-life 80 °C	2270	174
I-life 650mA	Tc 25 °C	4280	159
	Tc-nom 45 °C	4150	156
	Tc-life 80 °C	3900	150



Beam shape

The LED-module has a Lambertian light distribution.



Electrical characteristics

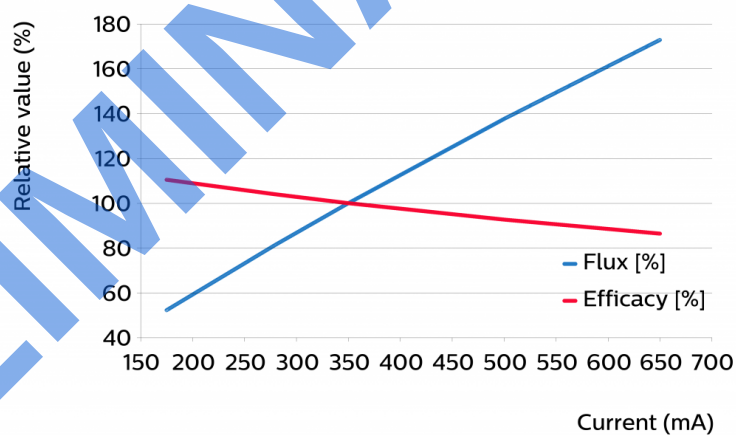
Parameter	Min	Typ	Max	Unit
Forward voltage	37.8	38.0	42.0	V
Power consumption	13.2	13.3	14.7	W = kWh/1000h
Number of modules in series per chain			1	

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

Tuning information

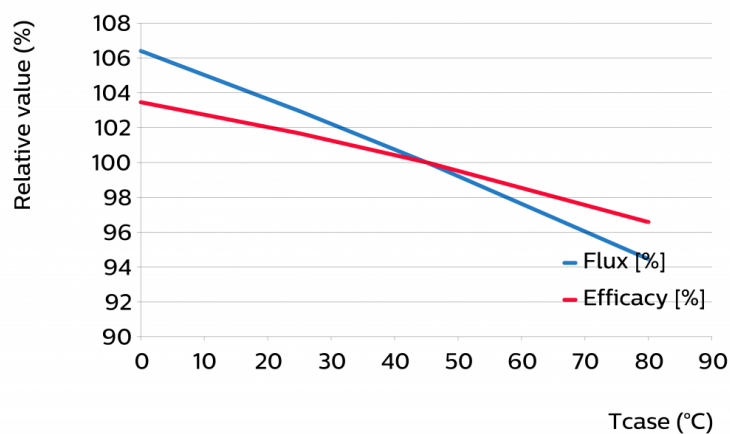
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
650	173	86
500	138	93
350	100	100
280	81	104
175	52	110



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

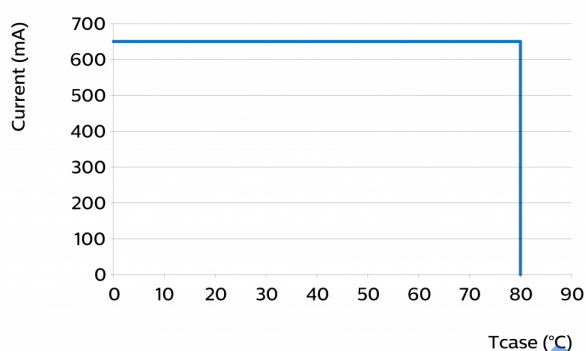
Tc [°C]	Flux [%]	Efficacy [%]
80	94	97
45	100	100
25	103	102
0	106	103



Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70	L80	L90
		B50	B50	B50
80% I-nom 280 mA	Tc nom 45°C	>50	>50	40
	Tc 75°C	>50	>50	35
	Tc-life 80°C	>50	>50	34
I-nom 350 mA	Tc nom 45°C	>50	>50	40
	Tc 75°C	>50	>50	35
	Tc-life 80°C	>50	>50	34
I-life 650 mA	Tc nom 45°C	>50	>50	40
	Tc 75°C	>50	>50	35
	Tc-life 80°C	>50	>50	34

Performance Window



Thermal switching table

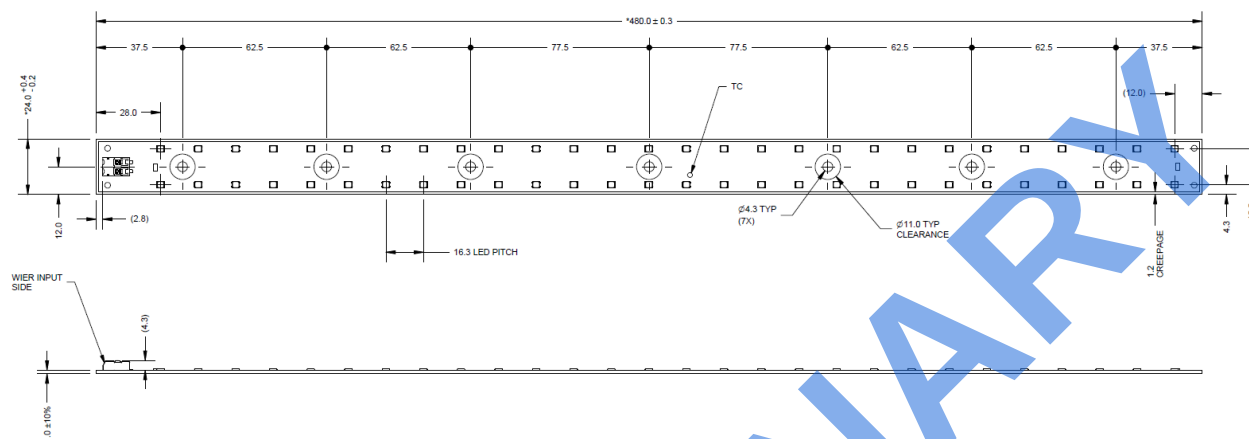
Case Temperature - Tc [°C]	Amount of Cycles
45 (or less)	>100000
55	>100000
65	98000
75	44000
85	22000

Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.45...0.7	mm ²	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	4.5...5.5	mm	
Input wire cross-section	0.25...0.75	mm ²	solid wire
	18...24	AWG	solid wire
Input wire strip length	4.5...5.5	mm	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	479.7	480	480.3	mm
Width	23.8	24	24.4	mm
Height PCB	0.9	1	1.1	mm
Height total		5		mm
Warpage (IPC-TM-650)			5	%



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		700	mA
Case temperature (Tc-max)		85	°C
ESD (direct contact)	1		kV
Working voltage		60	V _{dc}

Application information

Certificates and Standards

UL 8750

Environmental

RoHS/REACH

Application

IP rating	No IP rating
Overheating protection	No protection
Luminaire class ANSI	Class 2
Dimming	Yes

PRELIMINARY



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