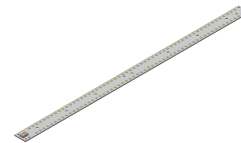


ADVANCEby  **Signify**

LED Modules

Fortimo LED Strip VO LV3

19in 3600lm



Fortimo LED Strip VO

19in 3600lm 8xx LV3

Fortimo LED Strip VO LV3

Key features and benefits

- Energy efficacy up to 182 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 3600lm 830 LV3	9290 027 26313	156
Fortimo LED Strip VO 19in 3600lm 835 LV3	9290 027 26413	156
Fortimo LED Strip VO 19in 3600lm 840 LV3	9290 027 26513	156
Fortimo LED Strip VO 19in 3600lm 850 LV3	9290 027 26613	156

October 2020

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip VO LV3 19in 3600lm	515	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

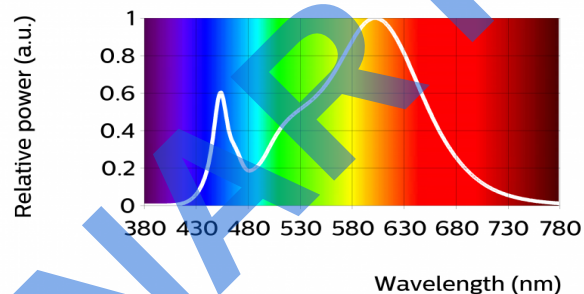
Optical characteristics – table per color (CCT)

Fortimo LED Strip VO 19in 3600lm 830 LV3

Parameter	Min	Typ	Max	Unit
Luminous flux	3140	3390	3650	lm
Module efficacy	160	171		lm/W
Correlated color temperature (CCT)		3000		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	830	lm	lm/W
80% I-nom 412mA	Tc 25 °C	2820	179
	Tc-nom 45 °C	2750	176
	Tc-life 80 °C	2600	171
I-nom 515mA	Tc 25 °C	3490	174
	Tc-nom 45 °C	3390	171
	Tc-life 80 °C	3210	165
I-life 650mA	Tc 25 °C	4330	168
	Tc-nom 45 °C	4200	165
	Tc-life 80 °C	3970	159

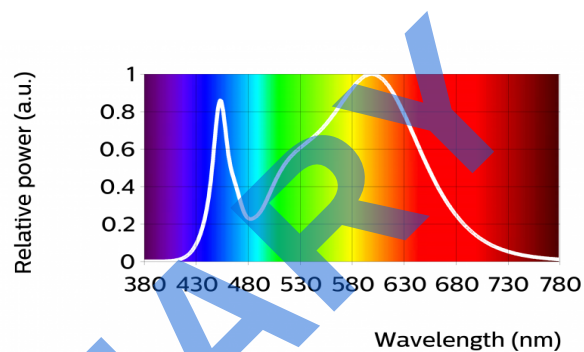


Fortimo LED Strip VO 19in 3600lm 835 LV3

Parameter	Min	Typ	Max	Unit
Luminous flux	3280	3545	3810	lm
Module efficacy	167	179		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 412mA	Tc 25 °C	2950	187
	Tc-nom 45 °C	2870	184
	Tc-life 80 °C	2720	178
I-nom 515mA	Tc 25 °C	3650	182
	Tc-nom 45 °C	3540	179
	Tc-life 80 °C	3350	173
I-life 650mA	Tc 25 °C	4520	175
	Tc-nom 45 °C	4400	172
	Tc-life 80 °C	4150	166

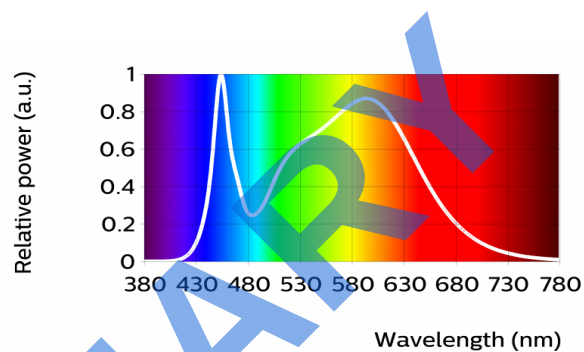


Fortimo LED Strip VO 19in 3600lm 840 LV3

Parameter	Min	Typ	Max	Unit
Luminous flux	3330	3600	3870	lm
Module efficacy	170	182		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 412mA	Tc 25 °C	3000	190
	Tc-nom 45 °C	2920	187
	Tc-life 80 °C	2770	181
I-nom 515mA	Tc 25 °C	3700	184
	Tc-nom 45 °C	3600	182
	Tc-life 80 °C	3410	176
I-life 650mA	Tc 25 °C	4590	178
	Tc-nom 45 °C	4460	175
	Tc-life 80 °C	4220	169



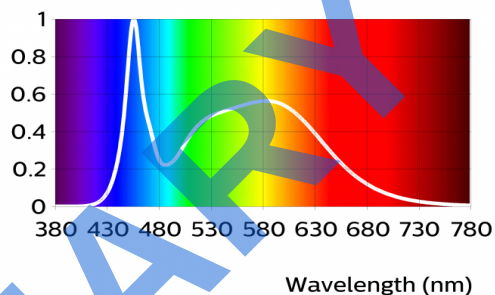
Fortimo LED Strip VO 19in 3600lm 850 LV3

Parameter	Min	Typ	Max	Unit
Luminous flux	3330	3600	3870	lm
Module efficacy	170	182		lm/W
Correlated color temperature (CCT)		5000		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

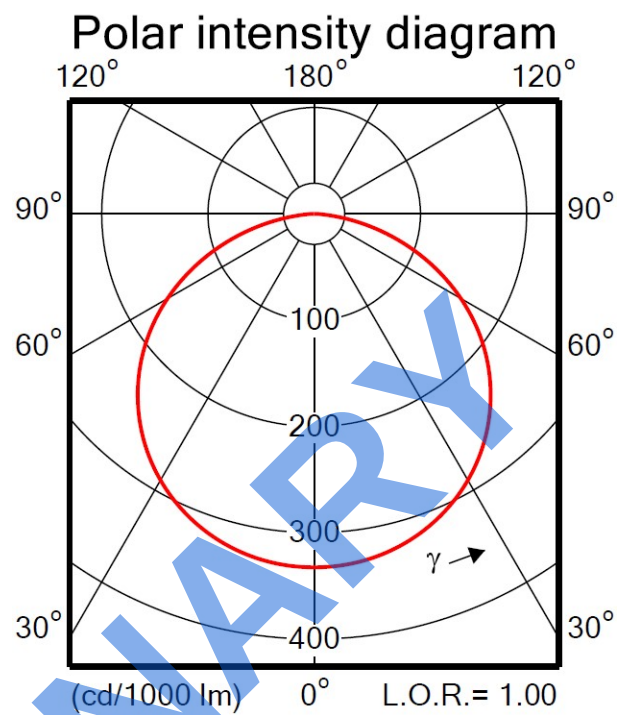
Operation point	850	lm	lm/W
80% I-nom 412mA	Tc 25 °C	3000	190
	Tc-nom 45 °C	2920	187
	Tc-life 80 °C	2770	181
I-nom 515mA	Tc 25 °C	3700	184
	Tc-nom 45 °C	3600	182
	Tc-life 80 °C	3410	176
I-life 650mA	Tc 25 °C	4590	178
	Tc-nom 45 °C	4460	175
	Tc-life 80 °C	4220	169

Relative power (a.u.)



Beam shape

The LED-module has a Lambertian light distribution.



Electrical characteristics

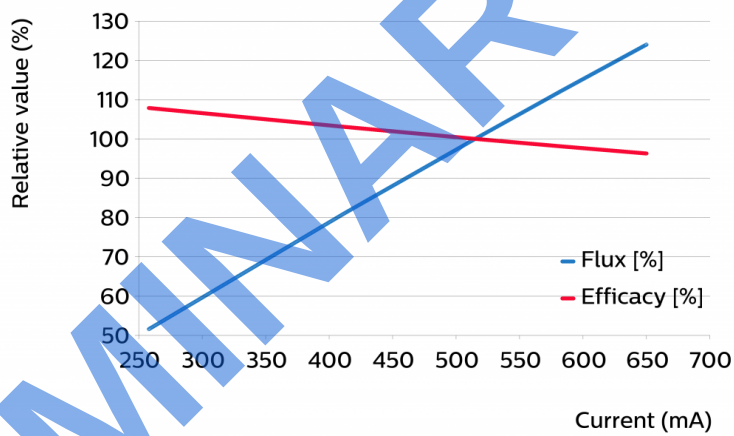
Parameter	Min	Typ	Max	Unit
Forward voltage	37.8	38.5	42.0	V
Power consumption	19.5	19.8	21.6	W = kWh/1000h
Number of modules in series per chain			1	

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

Tuning information

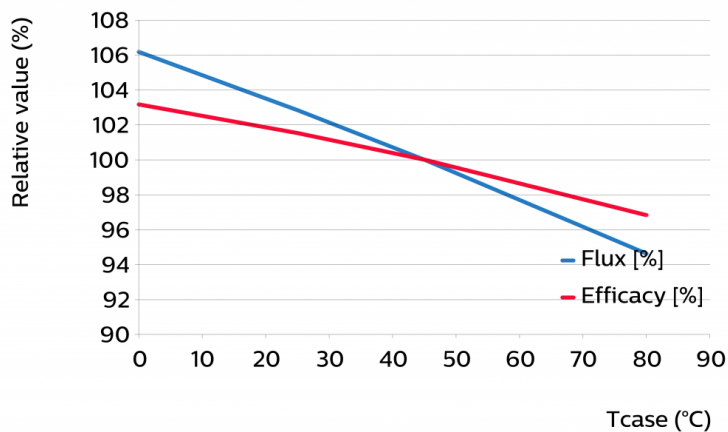
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
650	124	96
582	112	98
515	100	100
412	81	103
258	52	108



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

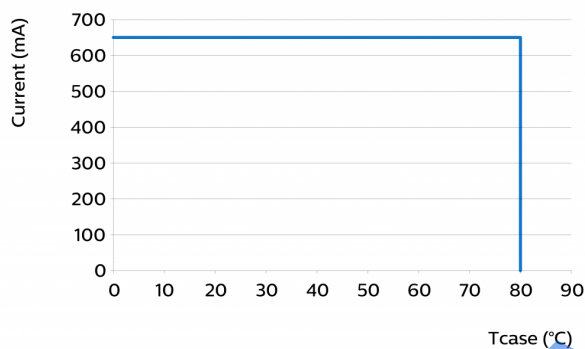
Tc [°C]	Flux [%]	Efficacy [%]
80	95	97
45	100	100
25	103	102
0	106	103



Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70	L80	L90
		B50	B50	B50
80% I-nom 412 mA	Tc nom 45°C	>50	>50	40
	Tc 75°C	>50	>50	35
	Tc-life 80°C	>50	>50	34
I-nom 515 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

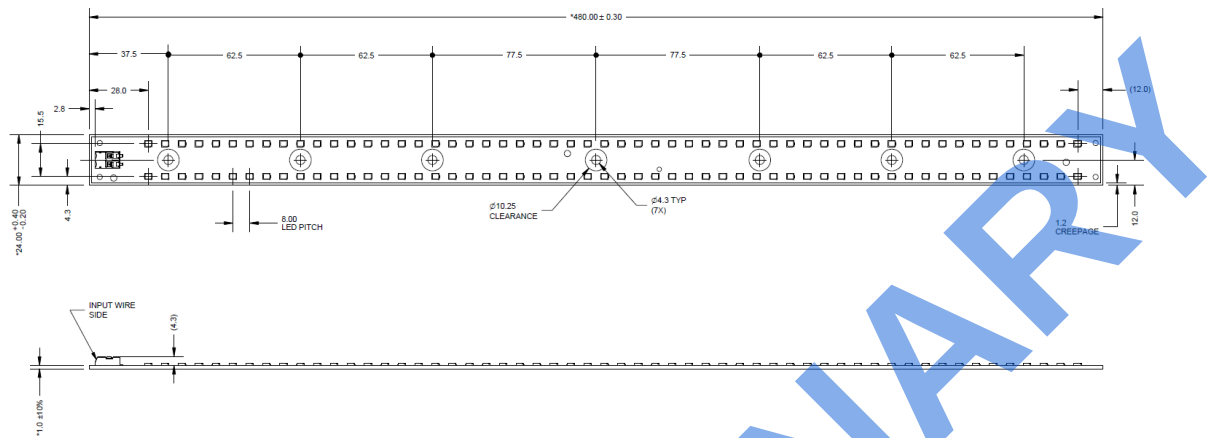
Case Temperature - Tc [°C]	Amount of Cycles
45 (or less)	>100000
55	>100000
65	98000
75	44000
85	22000

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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