



# Fortimo Strip XU LV1

Fortimo LED Strip XU is a high efficiency LED module from Advance with enhanced uniformity. With the ability to be separated every inch, LED Strip XU allows OEMs the maximum design flexibility and supply chain simplification.

## Key features and benefits

### Features

- High flux density of up to 2500 lm per foot
- Breakable every inch to fit any luminaire size
- Tight VF binning on the LED and module level at low current
- 3 SDCM color consistency
- Designed for daisy chaining

### Benefits

- High energy efficacy and long lifetime provide optimized total cost of ownership
- Ability to break into two 2ft boards for SKU reduction
- Enhanced uniformity at low currents for discerning applications
- High quality and warm color temperatures of light enables new application areas like hospitality
- 5-year limited system warranty with Advance Xitanium LED drivers
- Specifications enable DLC Premium category

### Applications

- Retail
- Hospitality
- Office

## Ordering data

Commercial product name	12NC	Box quantity
FO Strip XU 47.5in 4000lm 927 LV1	9290 027 70313	120
FO Strip XU 47.5in 4000lm 930 LV1	9290 027 70413	120
FO Strip XU 47.5in 4000lm 935 LV1	9290 027 70513	120
FO Strip XU 47.5in 4000lm 940 LV1	9290 027 70613	120

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
FO Strip XU 47.5in 4000lm 9xx LV1	680	2000	2200	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> point)	45	80	90	°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

## Suggested maximum current at elevated ambient

Setting	1	2	3	4	Unit
Luminaire maximum ambient	35	45	55	65	°C
Suggested maximum current*	2000	2000	1700	1200	mA

\* Drive current that may be possible at the reference external ambient temperature. The maximum suggested current given is for a typical non-lensed luminaire design with good thermal transfer capability. Use of a lensed luminaire or luminaires with non-optimal thermal characteristics will require a further current reduction to meet the same maximum ambient temperature. The current suggestion is based on the module T<sub>c</sub>-life and thermal testing must be used to verify T<sub>c</sub>-life is never exceeded for your specific luminaire. It may be necessary to adjust the final current value in order to meet the T<sub>c</sub>-life rating of the module.

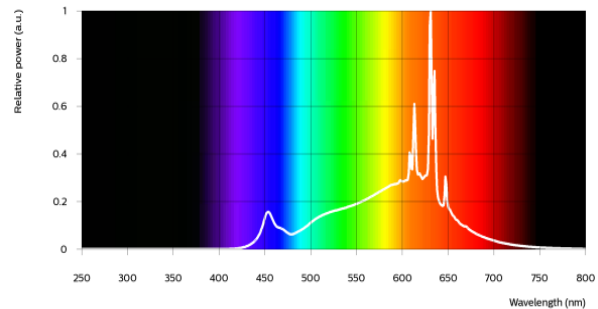
## Optical characteristics - table per color (CCT)

### FO Strip XU 47.5in 4000lm 927 LV1

Parameter	Min	Typ	Max	Unit
Luminous flux	3400	3680	3960	lm
Efficacy	152	169		lm/W
Correlated color temperature (CCT)		2700		K
Color consistency			3	SDCM
CRI	90			
R9	50			

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

Operation point	927	lm	lm/W
80% I-nom 544mA	Tc 25 °C	3030	174
	Tc-nom 45 °C	2960	171
	Tc-life 80 °C	2800	164
I-nom 680mA	Tc 25 °C	3770	171
	Tc-nom 45 °C	3680	169
	Tc-life 80 °C	3480	162
I-life 2000mA	Tc 25 °C	10450	154
	Tc-nom 45 °C	10190	152
	Tc-life 80 °C	9620	145

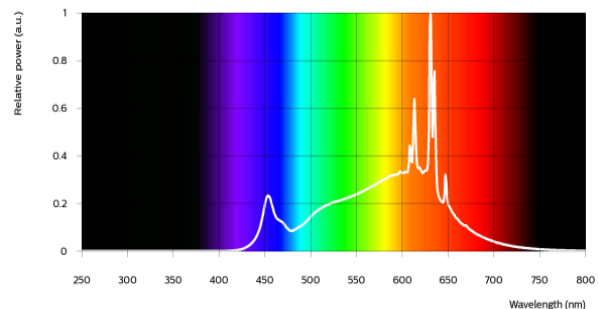


### FO Strip XU 47.5in 4000lm 930 LV1

Parameter	Min	Typ	Max	Unit
Luminous flux	3570	3860	4150	lm
Efficacy	156	173		lm/W
Correlated color temperature (CCT)		3000		K
Color consistency			3	SDCM
CRI	90			
R9	50			

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

Operation point	930	lm	lm/W
80% I-nom 544mA	Tc 25 °C	3110	178
	Tc-nom 45 °C	3110	175
	Tc-life 80 °C	3040	168
I-nom 680mA	Tc 25 °C	3860	176
	Tc-nom 45 °C	3860	173
	Tc-life 80 °C	3770	166
I-life 2000mA	Tc 25 °C	10700	158
	Tc-nom 45 °C	10700	155
	Tc-life 80 °C	10440	149

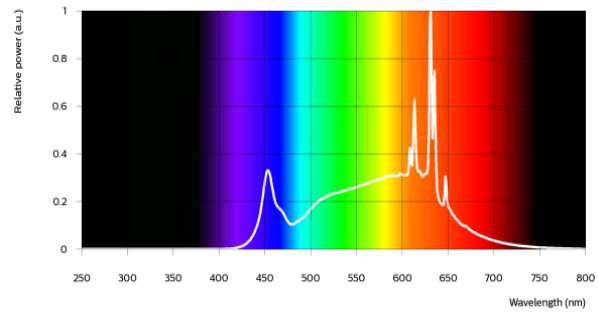


## FO Strip XU 47.5in 4000lm 935 LV1

Parameter	Min	Typ	Max	Unit
Luminous flux	3590	3880	4170	lm
Efficacy	156	173		lm/W
Correlated color temperature (CCT)		3500		K
Color consistency			3	SDCM
CRI	90			
R9	50			

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

Operation point	935	lm	lm/W
80% I-nom 544mA	Tc 25 °C	3110	178
	Tc-nom 45 °C	3110	174
	Tc-life 80 °C	3020	166
I-nom 680mA	Tc 25 °C	3880	176
	Tc-nom 45 °C	3880	173
	Tc-life 80 °C	3770	165
I-life 2000mA	Tc 25 °C	10890	161
	Tc-nom 45 °C	10890	158
	Tc-life 80 °C	10590	150

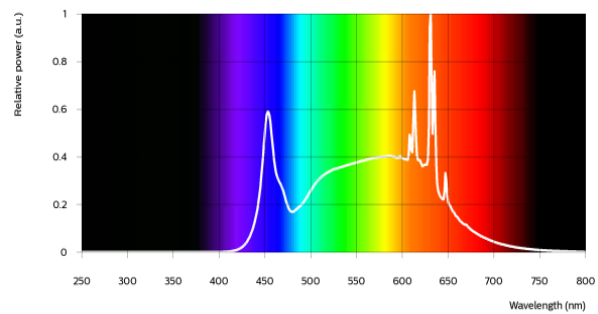


## FO Strip XU 47.5in 4000lm 940 LV1

Parameter	Min	Typ	Max	Unit
Luminous flux	3720	4020	4320	lm
Efficacy	161	179		lm/W
Correlated color temperature (CCT)		4000		K
Color consistency			3	SDCM
CRI	90			
R9	50			

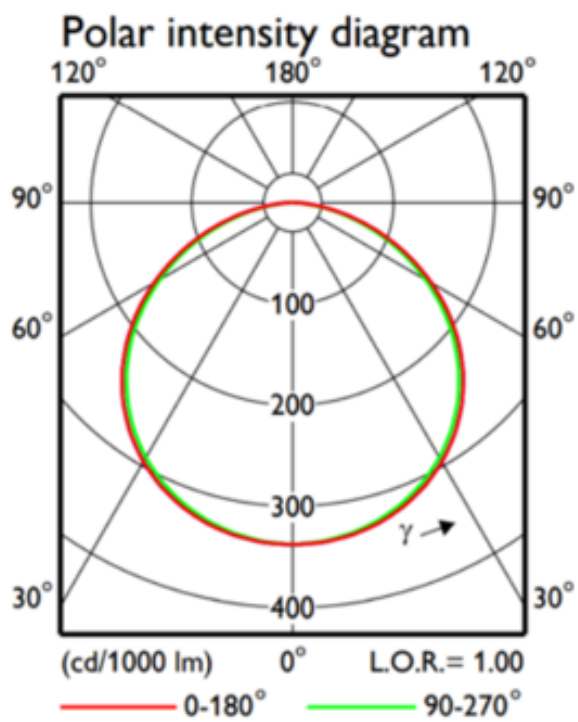
Measurement precision  $\pm 5\%$  for the flux data and  $\pm 6\%$  for the efficacy data. Measurement precision for color coordinates  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$  and R9  $\pm 3$ .

Operation point	940	lm	lm/W
80% I-nom 544mA	Tc 25 °C	3220	184
	Tc-nom 45 °C	3220	181
	Tc-life 80 °C	3130	172
I-nom 680mA	Tc 25 °C	4020	183
	Tc-nom 45 °C	4020	179
	Tc-life 80 °C	3910	171
I-life 2000mA	Tc 25 °C	11290	167
	Tc-nom 45 °C	11290	163
	Tc-life 80 °C	10980	156



## Beam shape

The LED-module has a Lambertian light distribution.



## Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	31.5	32.1	32.8	V
Power consumption	21.4	21.8	22.3	W
Minimum forward current for performance (including dimming) (1)	6.8			mA
Number of modules in series per chain			1	

\*Measurement precision for  $V_f$  +/- 3%. Measurement precision for power +/- 3.3%.

(1) LED module comes in five different  $V_f$  bins designated alphabetically. Pairing of same bin modules is recommended for luminaires with multiple LED modules. Please review the design-in guide or contact the Design-in team for further information.

## System chain limits for Same Length modules

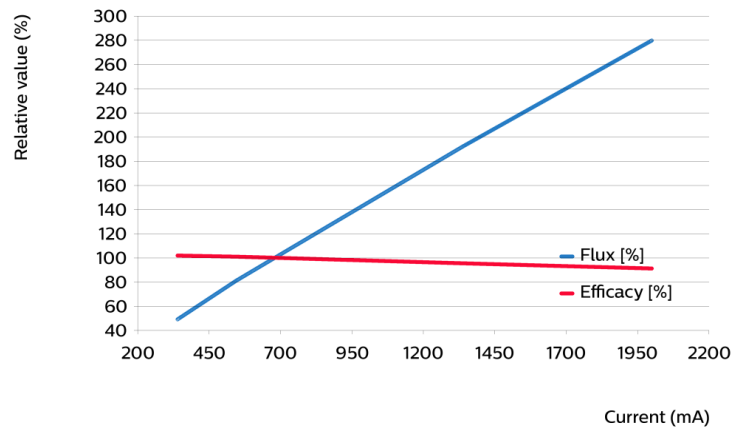
Total length (in)	Total current limit (mA)
48	2000
72	1600
96	1400

\*Please review the design-in guide or contact the Design-in team for further information.

## Tuning information

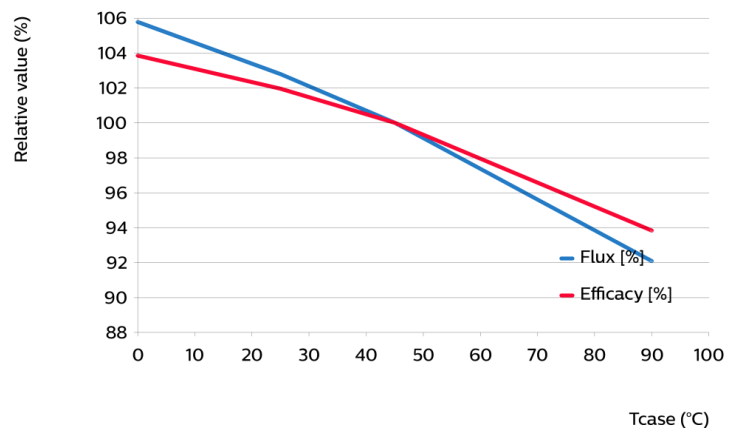
Flux and efficacy versus current (at  $T_c$  nominal)

I [mA]	Flux [%]	Efficacy [%]
2000	280	91
1340	192	95
680	100	100
544	81	101
340	49	102



Flux and efficacy versus temperature at  $T_c$  (at I nominal)

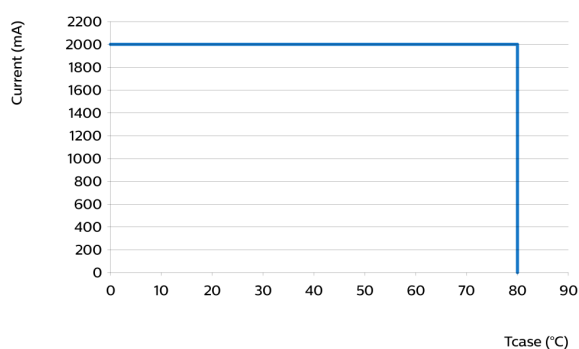
$T_c$ [°C]	Flux [%]	Efficacy [%]
90	92	94
45	100	100
25	103	102
0	106	104



## Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70	L80	L90
		B50	B50	B50
80% I-nom 544mA	Ts-nom 25°C	>60	>60	34
	Ts 45°C	>60	>60	32
	Ts-life 80°C	>60	>60	30
I-nom 680mA	Ts-nom 25°C	>60	>60	34
	Ts 45°C	>60	>60	32
	Ts-life 80°C	>60	>60	30
I-life 2000mA	Ts-nom 25°C	>60	>60	34
	Ts 45°C	>60	>60	32
	Ts-life 80°C	>60	>60	30

## Performance Window



## Thermal switching table

Warranted Number of Full Thermal Product Cycles at 25°C ambient temperature

Case Temperature - Tc [°C]	Amount of Cycles
35 (or less)	>100,000
45	>100,000
55	>100,000
65	100,000
75	42,000
80	28,000

## Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.25...0.75	mm <sup>2</sup>	solid, stranded
	18...24	AWG	solid, stranded
Input wire strip length	7.5...9.5	mm	





## Application information

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### Certificates and Standards

UL 8750

### Environmental

RoHS/REACH

### Application

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

There cannot be any ice/fog/mist on any part of the module surface during the application at -40°C.

### Notes

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View limited warranty at [www.signify.com/warranties](http://www.signify.com/warranties) for details and restrictions.

