

# Fortimo Strip ST LV6

Advance Fortimo LED Strip ST LV6 modules are an ideal choice for high-performance architectural and indoor luminaires. Designed for high efficiency, offered in variable lengths, allowing for daisy chaining, and incorporating tight Vf binning to create a high-quality base for your luminaire designs.

## Key features and benefits

### Features

- High flux density of up to 4000 lm per foot
- Narrow width of only 20mm
- High energy efficacy of up to 194lm/W at nominal conditions
- High lumen maintenance (TM21) of L90 36,000 hours
- 3 SDCM color consistency
- Tight Vf binning enables longer daisy chaining

### Benefits

- High energy efficacy and long lifetime provide optimized total cost of ownership
- Slim width and Zhaga compliant form factor provide excellent design-in options and assembly
- 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
FO Strip ST 23.7in 4000lm 927 LV6	9290 027 61913
FO Strip ST 23.7in 4000lm 930 LV6	9290 027 62013
FO Strip ST 23.7in 4000lm 935 LV6	9290 027 62113
FO Strip ST 23.7in 4000lm 940 LV6	9290 027 62213

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
FO Strip ST 23.7in 4000lm 9xx LV6	560	1440	1600	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> point)	45	85	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*	920	760	590	430	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.

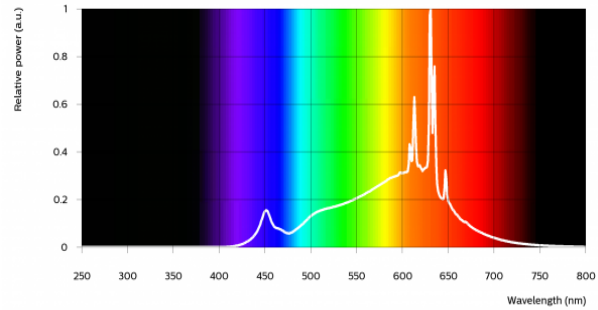
## Optical characteristics - table per color (CCT)

### FO Strip ST 23.7in 4000lm 927 LV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3330	3600	3870	lm
Efficacy	152	170		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 448mA	Tc 25 °C	2980	176
	Tc-nom 45 °C	2910	173
	Tc-life 85 °C	2730	165
I-nom 560mA	Tc 25 °C	3690	172
	Tc-nom 45 °C	3600	170
	Tc-life 85 °C	3380	162
I-life 1440mA	Tc 25 °C	8910	151
	Tc-nom 45 °C	8690	148
	Tc-life 85 °C	8140	141

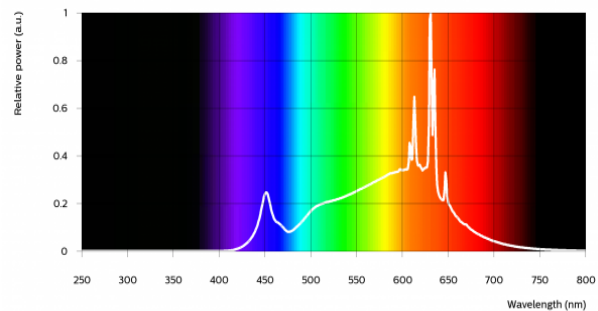


### FO Strip ST 23.7in 4000lm 930 LV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3500	3780	4060	lm
Efficacy	160	178		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 448mA	Tc 25 °C	3120	185
	Tc-nom 45 °C	3050	182
	Tc-life 85 °C	2870	173
I-nom 560mA	Tc 25 °C	3870	181
	Tc-nom 45 °C	3780	178
	Tc-life 85 °C	3550	170
I-life 1440mA	Tc 25 °C	9360	158
	Tc-nom 45 °C	9130	156
	Tc-life 85 °C	8550	148

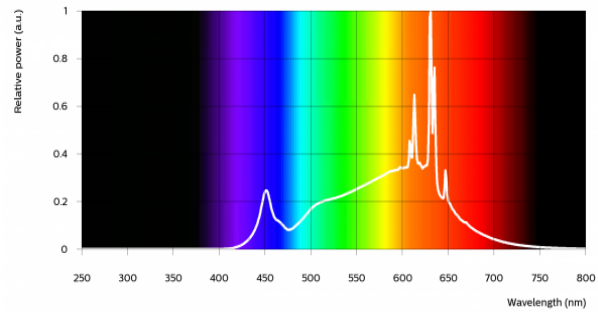


## FO Strip ST 23.7in 4000lm 935 LV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3530	3820	4110	lm
Efficacy	161	180		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 448mA	Tc 25 °C	3170	187
	Tc-nom 45 °C	3080	184
	Tc-life 85 °C	2890	175
I-nom 560mA	Tc 25 °C	3920	183
	Tc-nom 45 °C	3820	180
	Tc-life 85 °C	3580	171
I-life 1440mA	Tc 25 °C	9470	160
	Tc-nom 45 °C	9220	157
	Tc-life 85 °C	8600	149

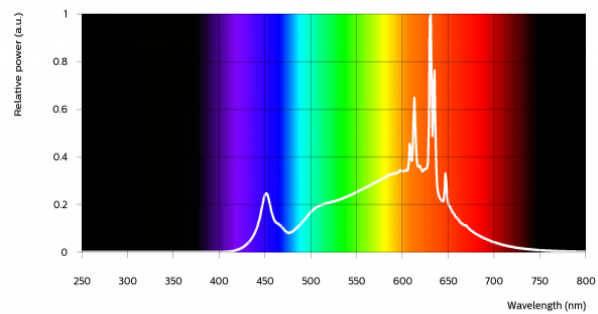


## FO Strip ST 23.7in 4000lm 940 LV6

Parameter	Min	Typ	Max	Unit
Luminous flux	3640	3930	4220	lm
Efficacy	166	185		lm/W
Correlated color temperature (CCT)		4000		K
Color consistency			3	SDCM
CRI	90			
R9	50			

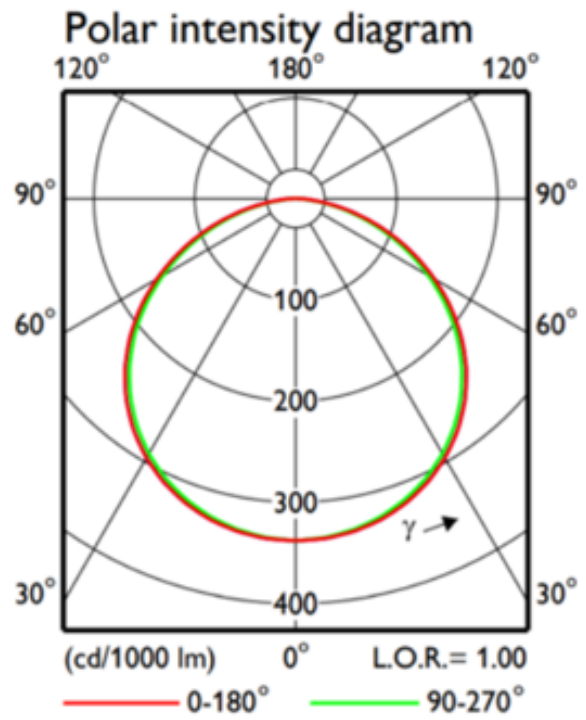
Measurement precision  $\pm 5\%$  for the flux data and  $\pm 6\%$  for the efficacy data. Measurement precision for color coordinates  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$  and R9  $\pm 3$ .

Operation point	940	lm	lm/W
80% I-nom 448mA	Tc 25 °C	3260	192
	Tc-nom 45 °C	3170	189
	Tc-life 85 °C	2970	180
I-nom 560mA	Tc 25 °C	4030	189
	Tc-nom 45 °C	3930	185
	Tc-life 85 °C	3680	176
I-life 1440mA	Tc 25 °C	9750	165
	Tc-nom 45 °C	9490	162
	Tc-life 85 °C	8850	153



## Beam shape

The LED module has a Lambertian light distribution.



## Electrical characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage	37.7	37.9	38.7	V
Power consumption		21.2		W
Number of modules in series per chain			1	

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

## System chain limits for Same Length modules

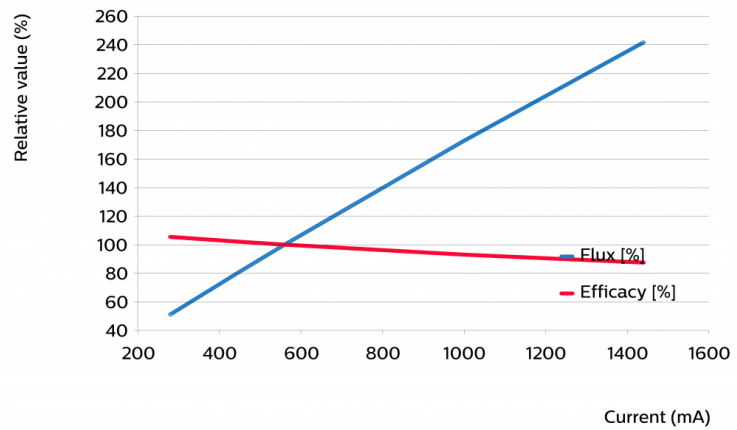
Total length (in)	Total current limit (mA)
44	2.88
66	2.37
88	1.76

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

## Tuning information

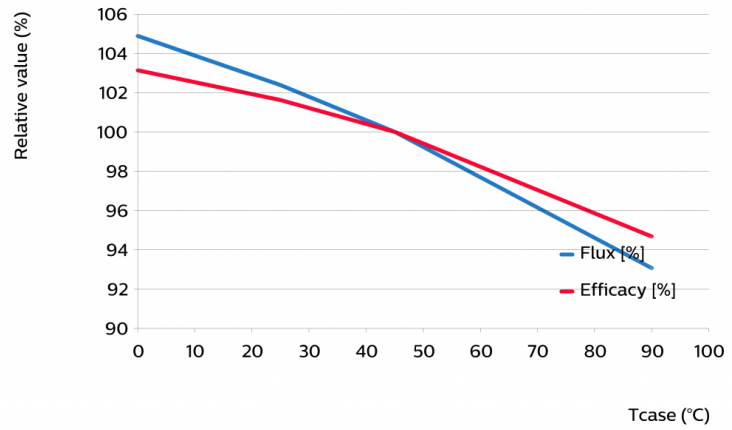
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1440	242	87
1000	173	93
560	100	100
448	81	102
280	51	105



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

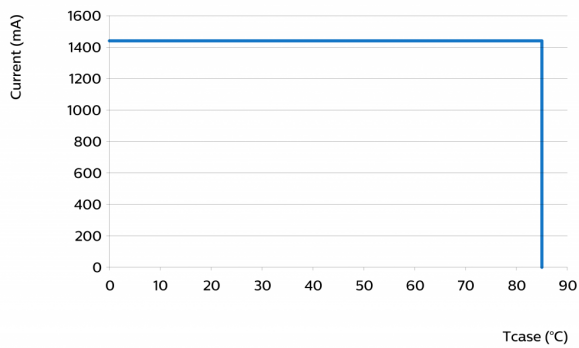
Tc [°C]	Flux [%]	Efficacy [%]
90	93	95
45	100	100
25	102	102
0	105	103



## Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70	L80	L90
		B50	B50	B50
80% I-nom 448mA	Ts nom 45°C	>60	>60	>36
	Ts 70°C	>60	>60	>36
	Ts-l-life 85°C	>60	>60	>36
I-nom 560mA	Ts nom 45°C	>60	>60	>36
	Ts 70°C	>60	>60	>36
	Ts-l-life 85°C	>60	>60	>36
I-life 1440mA	Ts nom 45°C	>60	>60	>36
	Ts 70°C	>60	>60	>36
	Ts-l-life 85°C	>60	>60	>36

## Performance Window



## Thermal switching table

Warranted number of full thermal product cycles at 25°C ambient temperature

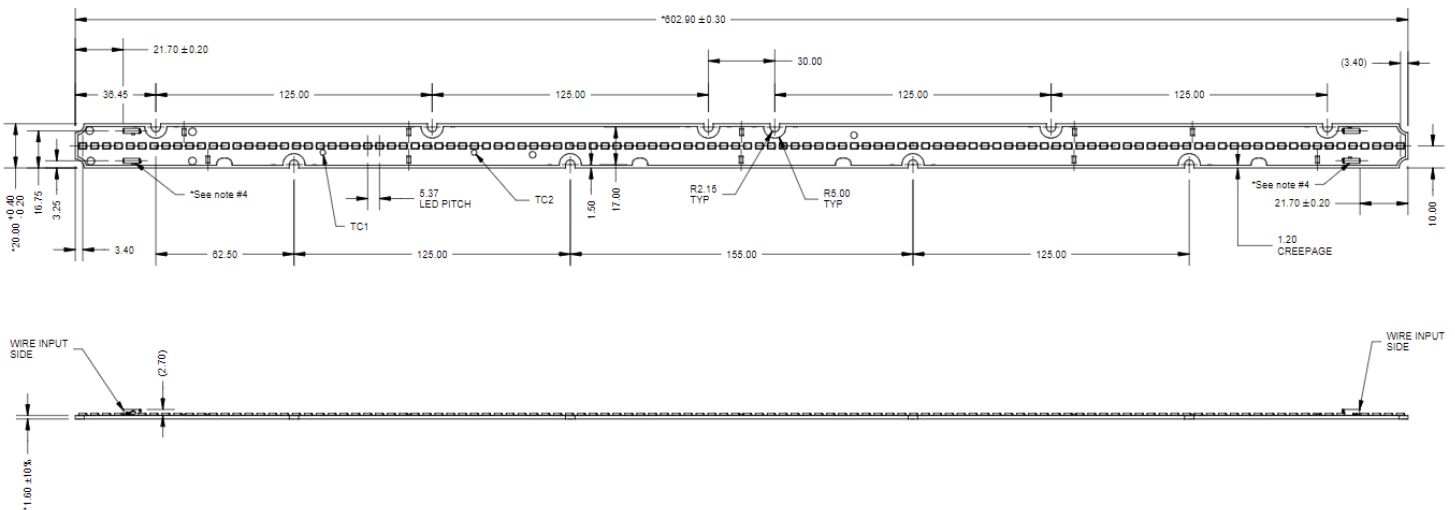
Case Temperature - Tc [°C]	Amount of Cycles
45 (or less)	>100,000
55	>100,000
65	80,000
75	35,000
85	15,000
90	10,000

## 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	

## Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	602.6	602.9	603.2	mm
Width	19.8	20	20.2	mm
Height PCB	1.4	1.6	1.8	mm
Height total		4.3		mm
Warpage (IPC-TM-650)			0.75	%





## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1600	mA
Case temperature (Tc-max)		90	°C
ESD (direct contact)	8		kV
Working voltage		60	V <sub>dc</sub>
Ambient temperature	-40		°C

Surge protection of the module must be provided by the driver or other components. Advance Xitanium and Certadrive drivers have built in protection circuitry and will protect the module up to the specified driver surge rating. When using third party drivers testing or confirmation from manufacturer is suggested to ensure adequate module protection.

## Application information

### Certificates and Standards

UL 8750

### Environmental

RoHS/REACH

### Application

IP rating	No IP rating
Overheating protection	No protection
Luminaire class	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

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

