



**Fortimo LED strip performance LV5 modules** comes with a multitude of performance and product advancements that include higher efficacy, higher lumen output, increased lumen maintenance, additional mechanical designs and additional CCT and CRI options when compared to the previous generation (LV4).

With these advancements, the Fortimo LED strip module is the ideal choice for high-performance high-quality luminaires for direct and indirect lighting in offices, banks, schools, public buildings, supermarkets and other applications to replace high energy efficiency T5 fluorescent lighting.

Commercial Product Name	12NC
FO Strip ST 5.5in 1000lm 927 LV5	929001785313
FO Strip ST 5.5in 1000lm 930 LV5	929001785413
FO Strip ST 5.5in 1000lm 935 LV5	929001785513
FO Strip ST 5.5in 1000lm 940 LV5	929001785613

#### Features

- High flux density of up to 4000 lm per foot
- Narrow width of only 20mm
- 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<sup>1</sup> provide optimized total cost of ownership
- Slim width, 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<sup>2</sup>
- Specifications enable DLC Premium category<sup>3</sup>

#### Applications

- Retail
- Hospitality
- Office

1. Average rated life is based on engineering data testing and probability analysis. The hours are at the B50, L70 point – 50,000 hours life with 70% lumen maintenance at Tc point.  
 2. View limited warranty at [www.signify.com/warranties](http://www.signify.com/warranties) for details and restrictions.  
 3. Fortimo LED strip LV5 is not a DesignLights Consortium™ (DLC) qualified product. It is an OEM component that meets certain performance specifications that are geared toward meeting DLC Standard Tier (v4.0) in a fully assembled fixture. The customer is liable for proper design, manufacturing, testing and qualification according to DLC requirements.

# Fortimo LED Strip Statement LV5 5.5in 1000lm

## Drive Currents

Parameter at $I_{life}$	Nominal'	Life''	Max'''	Unit
FO Strip ST 5.5in 1000lm 9xx LV5	140	325	350	mA

## Module Temperatures

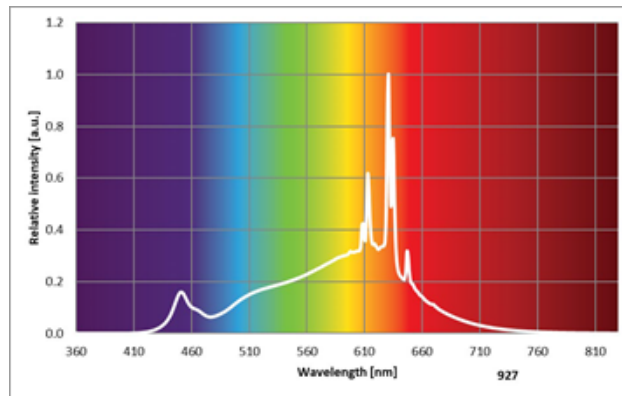
Parameter at $I_{life}$	Nominal'	Life''	Max'''	Unit
$T_c$ (case temperature at $T_c$ point)	45	85	95	°C

- \* 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 CCT

FO Strip ST 5.5in 1000lm 927 LV5				
Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	820	890	960	Lm
Module Efficiency	145	161	177	Lm/W
Correlated Color Temperature (CCT) Target		2700		K
Color coordinates (CIEx, CIEy)		(0.457, 0.406)		-
Color consistency			3	SDCM
CRI	90			-

Operation point	$T_c$	lm	lm/W
110 mA	25 °C	725	169
	45 °C	710	166
	85 °C	660	157
140 mA	25 °C	910	164
	45 °C	890	161
	85 °C	830	153
325 mA	25 °C	1970	141
	45 °C	1925	139
	85 °C	1795	131



R9>0, Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5.

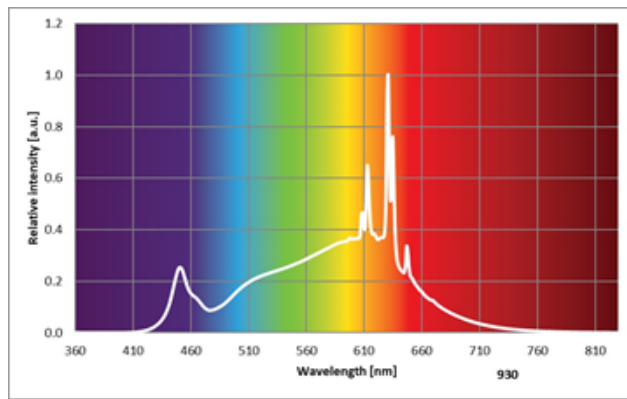
# Fortimo LED Strip Statement LV5 5.5in 1000lm

## Optical Characteristics – Table per CCT

### FO Strip ST 5.5in 1000lm 930 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	840	910	980	Lm
Module Efficiency	158	164	180	Lm/W
Correlated Color Temperature (CCT) Target		3000		K
Color coordinates (CIEx, CIEy)		(0.433,0.399)		-
Color consistency			3	SDCM
CRI	90			-

Operation point	Tc	lm	lm/W
110 mA	25 °C	740	172
	45 °C	725	169
	85 °C	675	160
140 mA	25 °C	930	167
	45 °C	910	164
	85 °C	850	155
325 mA	25 °C	2015	144
	45 °C	1965	141
	85 °C	1835	134



R9>0, 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  $\pm 1.5$ .

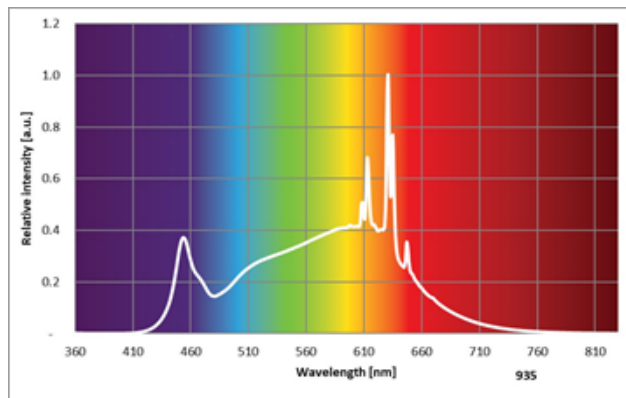
# Fortimo LED Strip Statement LV5 5.5in 1000lm

## Optical Characteristics – Table per CCT

### FO Strip ST 5.5in 1000lm 935 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	870	940	1010	Lm
Module Efficiency	152	169	186	Lm/W
Correlated Color Temperature (CCT) Target		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.388)		-
Color consistency			3	SDCM
CRI	90			-

Operation point	Tc	lm	lm/W
110 mA	25 °C	770	177
	45 °C	750	174
	85 °C	700	165
140 mA	25 °C	965	172
	45 °C	940	169
	85 °C	880	160
325 mA	25 °C	2105	150
	45 °C	2055	147
	85 °C	1915	139



R9>0, 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  $\pm 1.5$ .

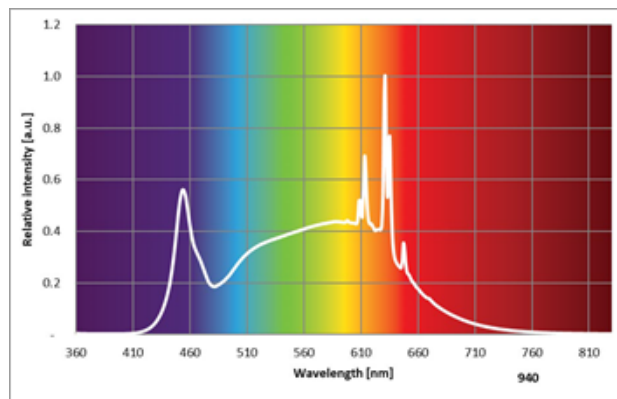
# Fortimo LED Strip Statement LV5 5.5in 1000lm

## Optical Characteristics – Table per CCT

### FO Strip ST 5.5in 1000lm 940 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	890	960	1030	Lm
Module Efficiency	156	173	190	Lm/W
Correlated Color Temperature (CCT) Target		4000		K
Color coordinates (CIEx, CIEy)		(0.381, 0.376)		-
Color consistency			3	SDCM
CRI	90			-

Operation point	Tc	lm	lm/W
110 mA	25 °C	785	181
	45 °C	765	178
	85 °C	715	169
140 mA	25 °C	985	176
	45 °C	960	173
	85 °C	895	164
325 mA	25 °C	2150	154
	45 °C	2095	151
	85 °C	1955	142



R9>0, 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  $\pm 1.5$ .

# Fortimo LED Strip Statement LV5 5.5in 1000lm

## Absolute Ratings

Parameter	Min.	Typ.	Max.	Unit
Current through the LED module (I-max)			350	mA
Working voltage			44	V <sub>dc</sub>
Isolation breakdown voltage	700			V <sub>dc</sub>
Ambient Temperature	-20 <sup>4</sup>			°C

4. There cannot be any ice/fog/mist on any part of the module surface during the application at -20°C.

## System Chain Limits for Same Length Modules

Total length (in)	Total current limit (A)
48	1.8
66	0.66
96	0.48

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

## Application Information

### Compliance and Approval

UL & cUL - UL8750

### Environmental

RoHS / REACH

IP Rating	No IP rating
Overheating Protection	No protection
Luminaire Class	UL Class 2

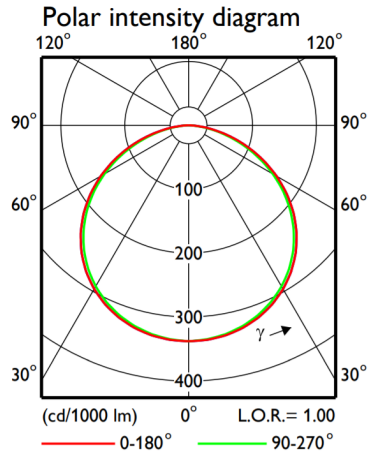
## Estimated Number of Full Thermal Product Cycles @ 25°C Ambient Temperature

Case Temperature Tc [°C]	Amount of Cycles
45	>100K
55	>100K
65	88K
75	36K
85	16K

# Fortimo LED Strip Statement LV5 5.5in 1000lm

## Beam Shape

The Fortimo LED strip generates a Lambertian beam shape, which is a pragmatic starting point for OEMs wishing to design secondary optics.



## Electrical Characteristics

Parameter	Min	Typ	Max	Unit
Forward voltage; If = 140mA, Tc = 45°C	39.1	39.6	40.1	V
Thermal power; If = 140mA, Tc = 45°C		2.8		W

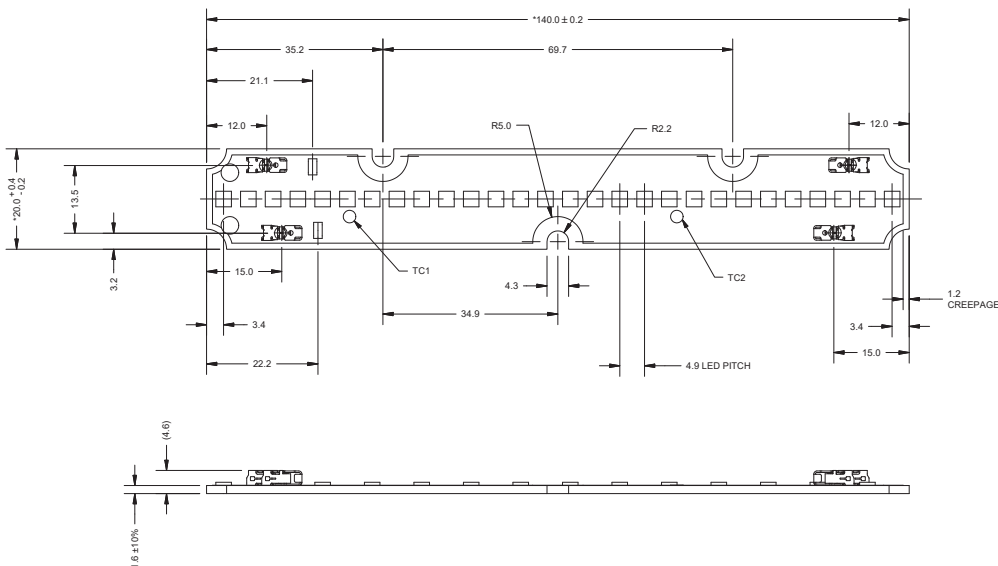
## Wiring

Specification Item	Value	Unit	Condition
Input Wire Cross-Section	0.2...0.8	mm <sup>2</sup>	Solid
	18...24	AWG	
	0.45...0.7	mm <sup>2</sup>	Stranded
	20...22	AWG	
Input Wire Strip Length	4.5...5.5	mm	

## Mechanical Characteristics

Specification Item	Min	Typ	Max	Unit
Length	139.8	140.0	140.2	mm
Width	19.8	20.0	20.4	mm
Height Excl. Connector		2.3		mm
Height Incl. Connector		4.6		mm
Warpage			0.75	%

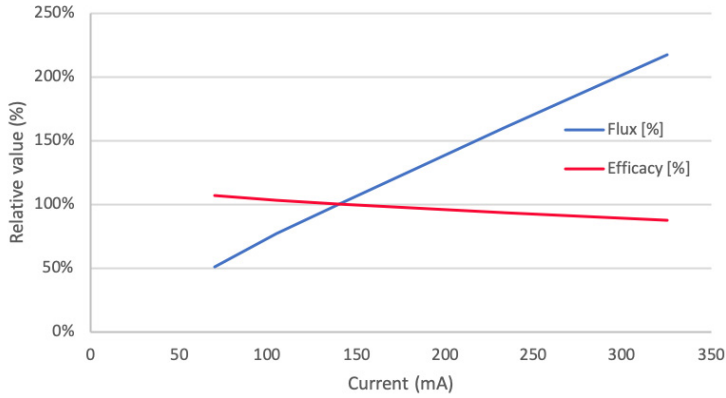
## FO Strip ST 5.5in 1000lm xxx LV5



# Fortimo LED Strip Statement LV5 5.5in 1000lm

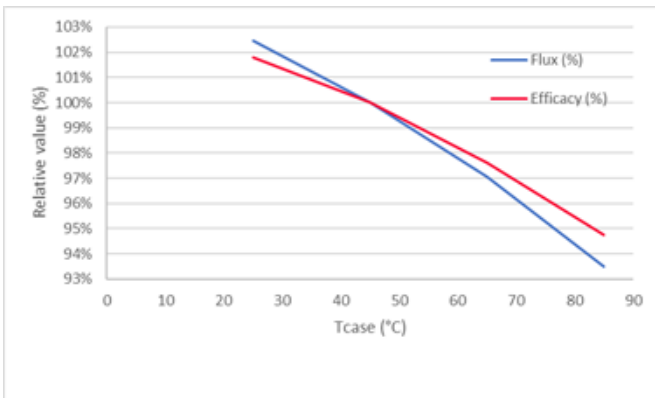
## Tuning Information

### Flux and Efficacy Vs. Current (at Nominal Temperature)



I [mA]	Flux [%]	Efficacy [%]
70	51%	106%
105	76%	103%
140	100%	100%
233	161%	93%
325	218%	87%

### Flux and Efficacy Vs. Tc



Tc [°C]	Flux [%]	Efficacy [%]
85	94%	95%
65	97%	98%
45	100%	100%
25	102%	102%



# Fortimo LED Strip Statement LV5 5.5in 1000lm

## Lumen Maintenance Based on Theoretical TM21 Calculations

Operation point	Tc	L70	L80	L90
80% I-nom 110 mA	Tc-nom 25 °C	>36K	>36K	>36K
	Tc 45 °C	>36K	>36K	>36K
	Tc-life 85 °C	>36K	>36K	>34K
I-nom 140 mA	Tc-nom 25 °C	>36K	>36K	>36K
	Tc 45 °C	>36K	>36K	>36K
	Tc-life 85 °C	>36K	>36K	>34K
I-life 325 mA	Tc-nom 25 °C	>36K	>36K	>36K
	Tc 45 °C	>36K	>36K	>36K
	Tc-life 85 °C	>36K	>36K	>34K

Application limited to indoor applications (office/hospitality/educational).

The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract.

