



Fortimo LED strip performance FlexTune LV5 modules are the preferred light source for the Advance FlexTune system; which provides new level of design flexibility, control precision, and simplicity in tunable white lighting systems for commercial office, healthcare, hospitality, and education applications.

Fortimo LED strip performance FlexTune 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 CRI options when compared to the the previous generation (LV4). The modules also feature connectors at both ends to enable daisy chaining, and a high (>8kV) ESD rating for easy handling.

Commercial Product Name	12NC
FO Strip PR FT 11in 1100lm 927-965 LV5	929001764913

Features

- Pairs with Advance Xitanium SR FlexTune LED driver to provide: digital wireless control designed to provide precise CCT tuning and dimming control from 2700-6500K
- 3 SDCM color consistency
- (TM21) of L90 36,000 hours
- Connectors at both ends and tight Vf binning
- High Flux density of up to 2000lm/ft
- Narrow width of 20mm

Benefits

- Enables digital tuning of color temperature for tuneable white applications
- High energy efficacy and long lifetime¹
- Low total cost of ownership
- Slim width and varied lengths provide excellent design flexibility
- 5-year limited system warranty with Advance Xitanium LED drivers²
- Specifications enable DLC Premium category³

Applications

- Retail
- Hospitality
- Office
- Education

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 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 Performance FlexTune LV5 11in 1100lm

Drive Currents

Parameter at I_{life}	Nominal*	Life**	Max***	Unit
FO Strip PR FT 11in 1100lm 9xx LV5	154	325	350	mA

Module Temperatures

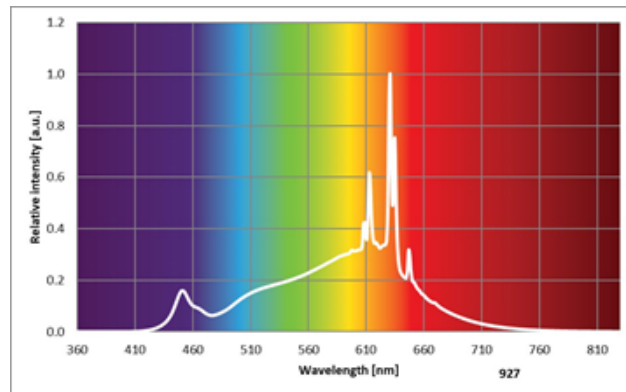
Parameter at I_{life}	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	45	85	95	°C

- * 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 PR FT 11in 1100lm 927 LV5				
Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	910	980	1050	Lm
Module Efficiency	142	158	174	Lm/W
Correlated Color Temperature (CCT) Target		2700		K
Color coordinates (CIEx, CIEy)		(0.457, 0.408)		-
Color consistency			3	SDCM
CRI	90			-

Operation point	T_c	lm	lm/W
125 mA	25 °C	800	165
	45 °C	780	162
	85 °C	730	154
154 mA	25 °C	1000	160
	45 °C	980	158
	85 °C	915	149
325mA	25°C	1985	140
	45 °C	1940	138
	85 °C	1815	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 Performance FlexTune LV5

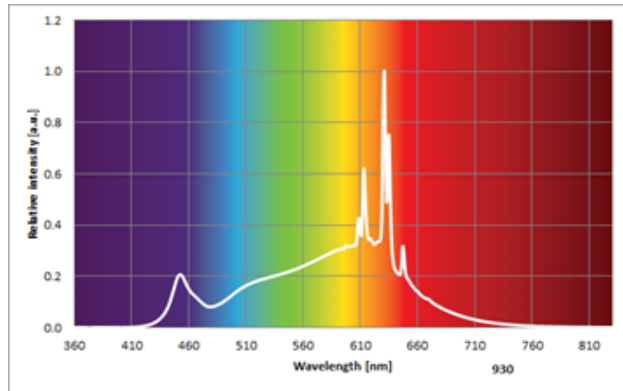
11in 1100lm

Optical Characteristics – Table per CCT

FO Strip PR FT 11in 1100lm 930 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	910	980	1050	Lm
Module Efficiency	146	162	178	Lm/W
Correlated Color Temperature (CCT) Target		3000		K

Operation point	Tc	lm	lm/W
125 mA	25°C	800	169
	45 °C	780	167
	85°C	730	158
154 mA	25 °C	1000	165
	45 °C	980	162
	85 °C	915	154
325 mA	25 °C	1985	144
	45 °C	1940	142
	85 °C	1815	134

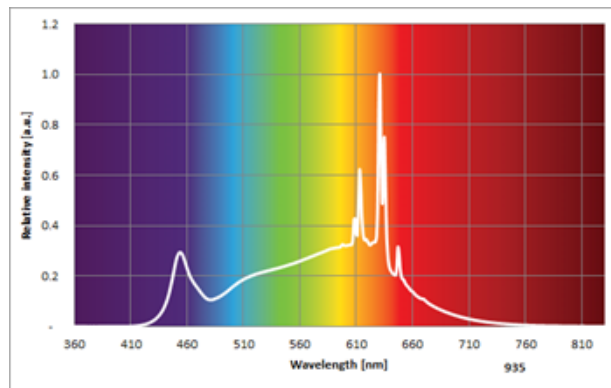


Using the Advance Xitanium SR FlexTune LED driver, set to constant light output. R9>0. Measurement precision $\pm 5\%$ for the flux data and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement precision for CRI ± 1.5 .

FO Strip PR FT 11in 1100lm 935 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	910	980	1050	Lm
Module Efficiency	147	164	180	Lm/W
Correlated Color Temperature (CCT) Target		3500		K

Operation point	Tc	lm	lm/W
125 mA	25°C	800	172
	45°C	780	170
	85 °C	730	161
154 mA	25°C	1000	168
	45°C	980	164
	85°C	915	157
325 mA	25°C	1985	147
	45 °C	1940	144
	85 °C	1816	137



Using the Advance Xitanium SR FlexTune LED driver, set to constant light output. R9>0. 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 .

Fortimo LED Strip Performance FlexTune LV5

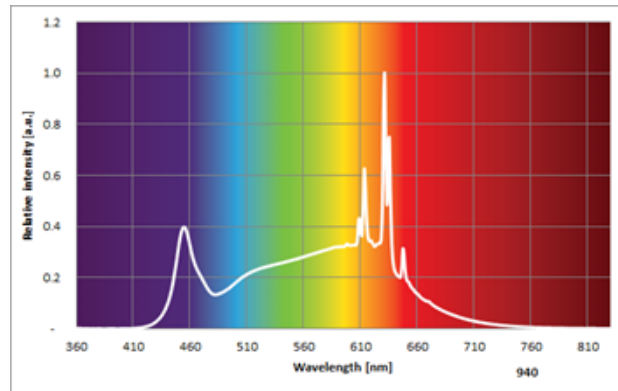
11in 1100lm

Optical Characteristics – Table per CCT

FO Strip PR FT 11in 1100lm 940 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	910	980	1050	Lm
Module Efficiency	149	166	183	Lm/W
Correlated Color Temperature (CCT) Target		4000		K

Operation point	Tc	lm	lm/W
125 mA	25 °C	800	175
	45 °C	780	172
	85 °C	730	163
154 mA	25 °C	1000	170
	45 °C	980	166
	85 °C	915	159
325 mA	25 °C	1985	149
	45 °C	1940	147
	85 °C	1815	139

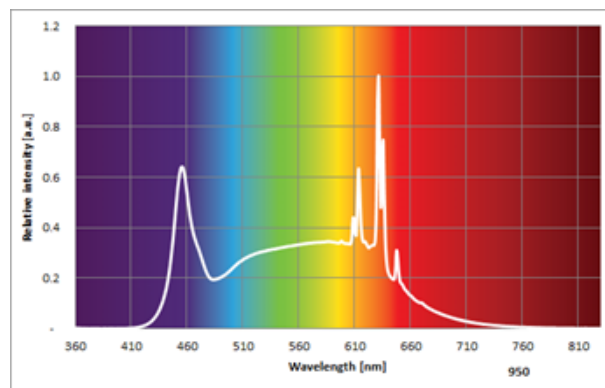


Using the Advance Xitanium SR FlexTune LED driver, set to constant light output. R9>0. Measurement precision $\pm 5\%$ for the flux data and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement precision for CRI ± 1.5 .

FO Strip PR FT 11in 1100lm 950 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	910	980	1050	Lm
Module Efficiency	152	169	186	Lm/W
Correlated Color Temperature (CCT) Target		5000		K

Operation point	Tc	lm	lm/W
125 mA	25 °C	800	178
	45 °C	780	175
	85 °C	730	166
154 mA	25 °C	1000	173
	45 °C	980	169
	85 °C	915	161
325 mA	25 °C	1985	152
	45 °C	1940	150
	85 °C	1815	142



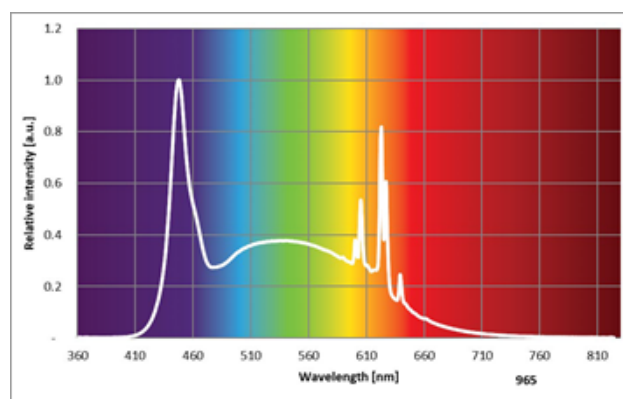
Fortimo LED Strip Performance FlexTune LV5

11in 1100lm

Optical Characteristics – Table per CCT

FO Strip PR FT 11in 1100lm 965 LV5				
Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	980	1060	1140	Lm
Module Efficiency	156	173	190	Lm/W
Correlated Color Temperature (CCT) Target		6500		K
Color coordinates (CIEx, CIEy)		(0.312, 0.325)		-
Color consistency			3	SDCM
CRI	90			-

Operation point	Tc	lm	lm/W
125 mA	25 °C	865	181
	45 °C	840	178
	85 °C	790	169
154 mA	25 °C	1080	176
	45 °C	1060	173
	85 °C	985	164
325 mA	25 °C	2145	154
	45 °C	2095	151
	85 °C	1955	144



R9>0, 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 .

Fortimo LED Strip Performance FlexTune LV5

11in 1100lm

Absolute Ratings

Parameter	Min.	Typ.	Max.	Unit
Current through the LED module (I-max)			350	mA
Working voltage			44	V _{dc}
Isolation breakdown voltage	700			V _{dc}
Ambient Temperature	-20 ⁴			°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	0.9
72	0.6
96	0.44

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

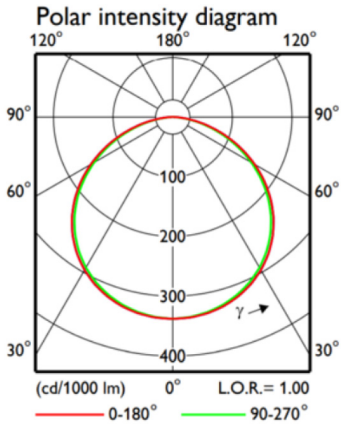
Estimated Number of Full Thermal Product Cycles @ 25°C Ambient Temperature

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

Fortimo LED Strip Performance FlexTune LV5 11in 1100lm

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 = 77mA, Tc = 45°C	39.15	39.65	40.15	V
Thermal power; If = 77mA, Tc = 45°C		3.1		W

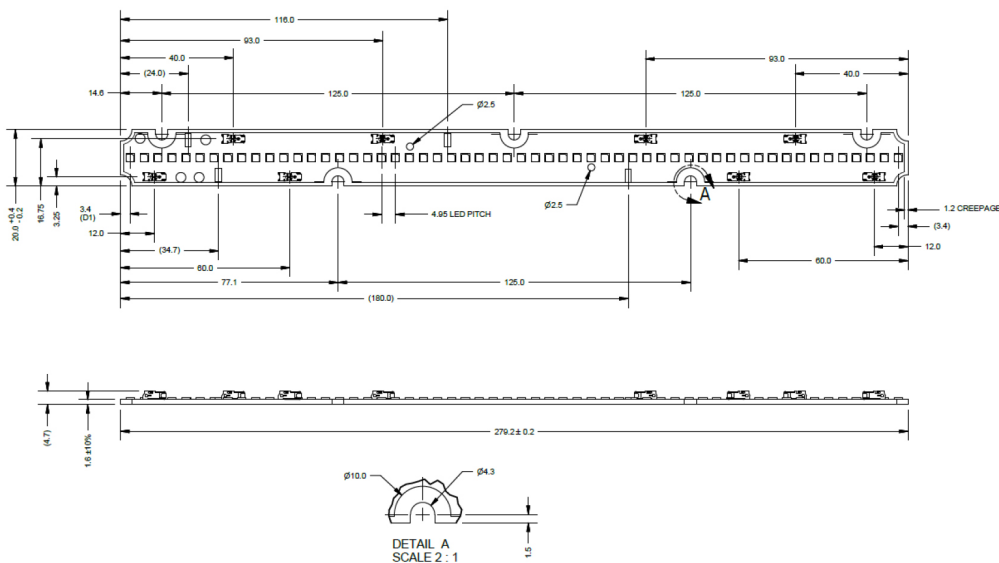
Wiring

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

Mechanical Characteristics

Specification Item	Min	Typ	Max	Unit
Length	279	279.2	279.4	mm
Width	19.8	20.0	20.4	mm
Height Excl. Connector		2.3		mm
Height Incl. Connector		4.6		mm
Warpage			0.75	%

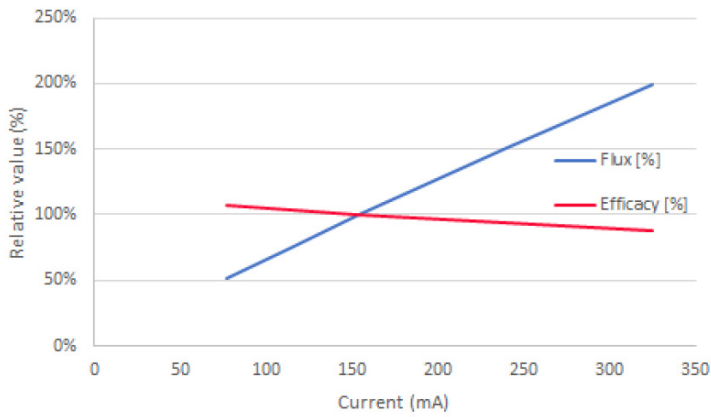
FO Strip PR FT 11in 1100lm xxx LV5



Fortimo LED Strip Performance FlexTune LV5 11in 1100lm

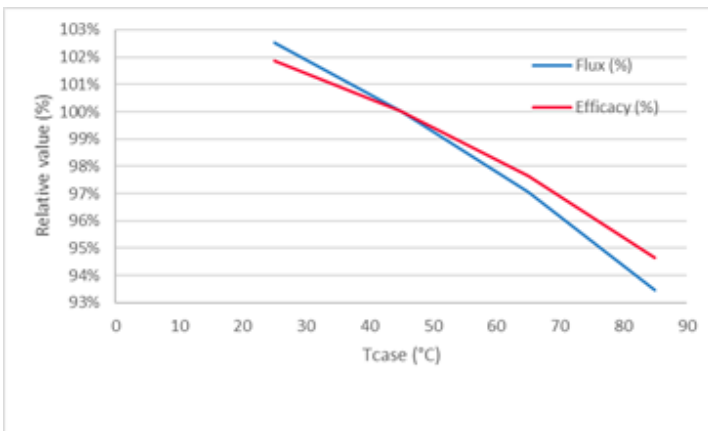
Tuning Information

Flux and Efficacy Vs. Current (at Nominal Temperature)



I [mA]	Flux [%]	Efficacy [%]
77	51%	107%
116	76%	103%
154	100%	100%
240	151%	94%
325	199%	88%

Flux and Efficacy Vs. Tc



Tc [°C]	Flux [%]	Efficacy [%]
85	93%	95%
65	97%	98%
45	100%	100%
25	103%	102%

Fortimo LED Strip Performance FlexTune LV5

11in 1100lm

Lumen Maintenance Based on Theoretical TM21 Calculations

Operation point	Tc	L70	L80	L90
80% I-nom 125 mA	Tc-nom 25 °C	>36K	>36K	>36K
	Tc 45°C	>36K	>36K	>36K
	Tc-life 85°C	>36K	>36K	>34K
I-nom 154 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.

