



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 when compared to 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 47.5in 4400lm 927-965 LV5	929001790413

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
- Can be split into two modules⁴
- (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.

4. Only two LED Modules can be produced from one full-length variable length module as wire trap connectors are only located on the last module section on each end of the full-length module. The method for separation of the variable length LED modules can be found in the Advance Fortimo LED Linear Module Design-In guide located here: [https://www.na.mytechnology.portal.signify.com/dam/jcr:e4de1316-8ca1-4f08-ad38-ef2cdd5e52bb/Advance%20Fortimo%20LED%20Linear%20Modules%20Design-in%20Guide%20\(PLT-1590DG\).pdf](https://www.na.mytechnology.portal.signify.com/dam/jcr:e4de1316-8ca1-4f08-ad38-ef2cdd5e52bb/Advance%20Fortimo%20LED%20Linear%20Modules%20Design-in%20Guide%20(PLT-1590DG).pdf)

Fortimo LED Strip Performance FlexTune LV5 47.5in 4400lm

Drive Currents

Parameter at I _{life}	Nominal [*]	Life ^{**}	Max ^{***}	Unit
FO Strip PR FT 47.5in 4400lm 9xx LV5	616	1300	1400	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.

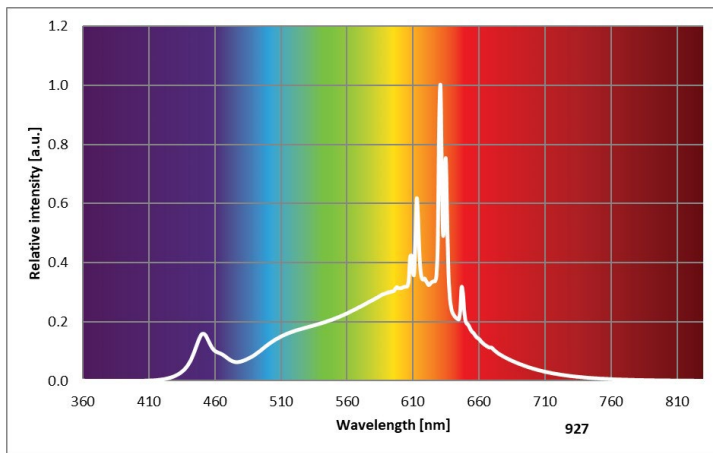
*** Maximum value for safe operation, do not operate above this value.

Optical Characteristics – Table per CCT

FO Strip PR FT 47.5in 4400lm 927 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3620	3920	4220	Lm
Module Efficiency	142	158	174	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
490 mA	25 °C	3230	165
	45 °C	3160	163
	85 °C	2960	155
616 mA	25 °C	4010	161
	45 °C	3920	158
	85 °C	3670	150
1300 mA	25 °C	7910	140
	45 °C	7730	138
	85 °C	7220	130



R9>0, Measurement precision ± 5% for the flux data, ± 1.5% for the Vf data, ± 1.5% for the power 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

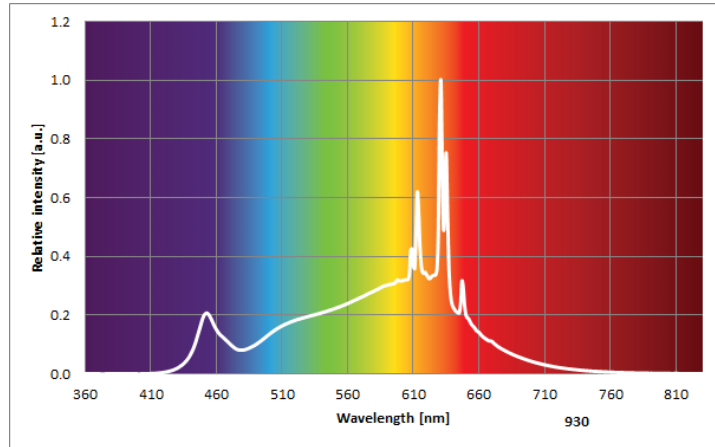
47.5in 4400lm

Optical Characteristics – Table per CCT

FO Strip PR FT 47.5in 4400lm 930 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3620	3920	4220	Lm
Module Efficiency	146	162	178	Lm/W
Correlated Color Temperature (CCT) Target		3000		K

Operation point	Tc	lm	lm/W
490 mA	25 °C	3230	169
	45 °C	3160	167
	85 °C	2960	158
616 mA	25 °C	4010	165
	45 °C	3920	162
	85 °C	3670	154
1300 mA	25 °C	7910	144
	45 °C	7730	142
	85 °C	7220	134

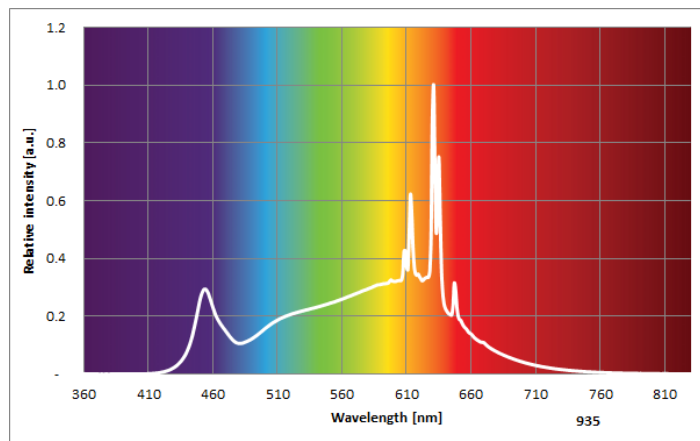


Using the Advance Xitanium SR FlexTune LED driver, set to constant light output. R9>0, Measurement precision $\pm 5\%$ for the flux data, $\pm 1.5\%$ for the Vf data, $\pm 1.5\%$ for the power data, and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement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

FO Strip PR FT 47.5in 4400lm 935 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3620	3920	4220	Lm
Module Efficiency	147	164	180	Lm/W
Correlated Color Temperature (CCT) Target		3500		K

Operation point	Tc	lm	lm/W
490 mA	25 °C	3230	172
	45 °C	3160	170
	85 °C	2960	161
616 mA	25 °C	4010	168
	45 °C	3920	165
	85 °C	3670	157
1300 mA	25 °C	7910	147
	45 °C	7730	144
	85 °C	7220	137



Using the Advance Xitanium SR FlexTune LED driver, set to constant light output. R9>0, Measurement precision $\pm 5\%$ for the flux data, $\pm 1.5\%$ for the Vf data, $\pm 1.5\%$ for the power 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

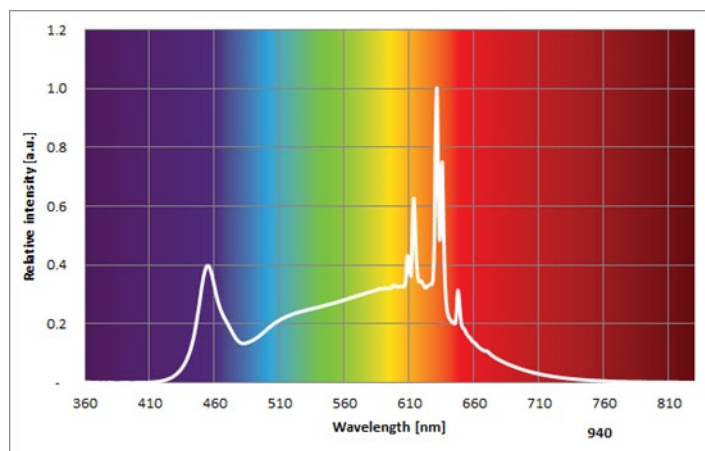
47.5in 4400lm

Optical Characteristics – Table per CCT

FO Strip PR FT 47.5in 4400lm 940 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3620	3920	4220	Lm
Module Efficiency	149	166	183	Lm/W
Correlated Color Temperature (CCT) Target		4000		K

Operation point	Tc	lm	lm/W
490 mA	25 °C	3230	175
	45 °C	3160	172
	85 °C	2960	163
616 mA	25 °C	4010	170
	45 °C	3920	167
	85 °C	3670	159
1300 mA	25 °C	7910	149
	45 °C	7730	147
	85 °C	7220	139

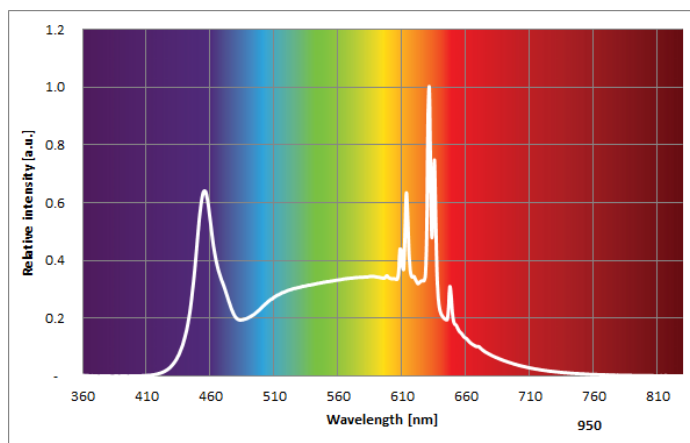


Using the Advance Xitanium SR FlexTune LED driver, set to constant light output. $R_9 > 0$, Measurement precision $\pm 5\%$ for the flux data, $\pm 1.5\%$ for the Vf data, $\pm 1.5\%$ for the power data, and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement precision for CRI ± 1.5 .

FO Strip PR FT 47.5in 4400lm 950 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3620	3920	4220	Lm
Module Efficiency	152	169	186	Lm/W
Correlated Color Temperature (CCT) Target		5000		K

Operation point	Tc	lm	lm/W
490 mA	25 °C	3230	178
	45 °C	3160	175
	85 °C	2960	166
616 mA	25 °C	4010	173
	45 °C	3920	170
	85 °C	3670	161
1300 mA	25 °C	7910	152
	45 °C	7730	150
	85 °C	7220	142



Fortimo LED Strip Performance FlexTune LV5

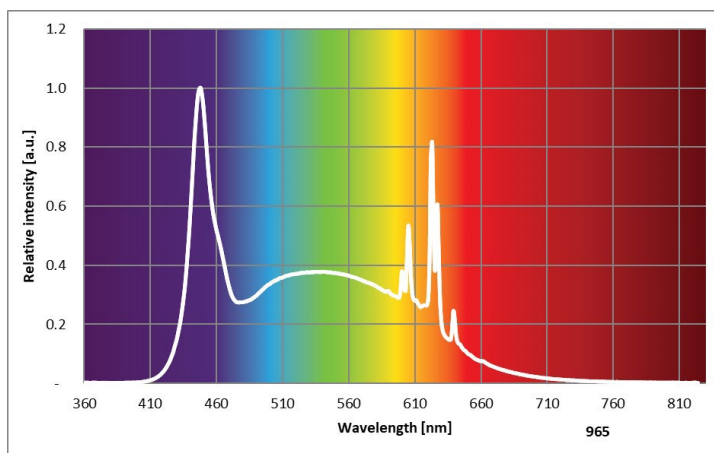
47.5in 4400lm

Optical Characteristics – Table per CCT

FO Strip PR FT 47.5in 4400lm 965 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3900	4220	4540	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
490 mA	25 °C	3480	181
	45 °C	3400	178
	85 °C	3180	168
616 mA	25 °C	4330	176
	45 °C	4220	173
	85 °C	3940	164
1300 mA	25 °C	8620	156
	45 °C	8400	153
	85 °C	7830	144



R9>0, Measurement precision $\pm 5\%$ for the flux data, $\pm 1.5\%$ for the Vf data, $\pm 1.5\%$ for the power 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

47.5in 4400lm

Absolute Ratings

Parameter	Min.	Typ.	Max.	Unit
Current through the LED module (I-max)			1400	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)
96	0.44
114	0.3
192	0.22

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

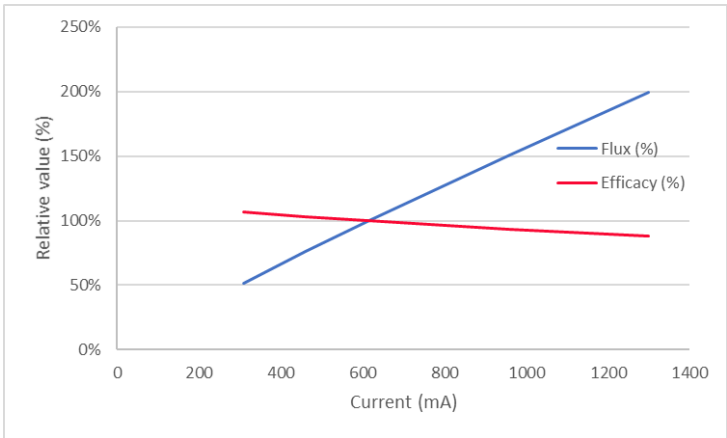
Case Temperature Tc [°C]	Amount of Cycles
45	>100K
55	>100K
65	88K
75	36K
85	16K

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Fortimo LED Strip Performance FlexTune LV5 47.5in 4400lm

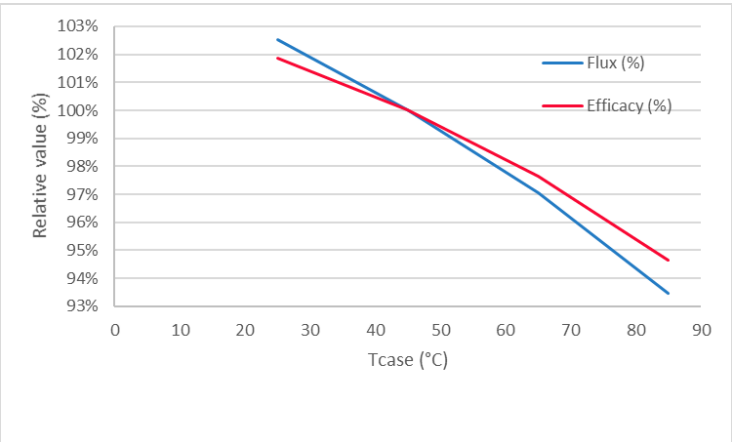
Tuning Information

Flux and Efficacy Vs. Current (at Nominal Temperature)



I [mA]	Flux [%]	Efficacy [%]
308	51%	107%
460	76%	103%
616	100%	100%
960	151%	94%
1300	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 47.5in 4400lm

Lumen Maintenance Based on Theoretical TM21 Calculations

Operation point	Tc	L70	L80	L90
80% I-nom 490 mA	Tc 25 °C	>36k	>36k	>36k
	Tc-nom 45 °C	>36k	>36k	>36k
	Tc-life 85 °C	>36k	>36k	34k
I-nom 616 mA	Tc 25 °C	>36k	>36k	>36k
	Tc-nom 45 °C	>36k	>36k	>36k
	Tc-life 85 °C	>36k	>36k	34k
I-life 1300 mA	Tc 25 °C	>36k	>36k	>36k
	Tc-nom 45 °C	>36k	>36k	>36k
	Tc-life 85 °C	>36k	>36k	34k

Application limited to indoor applications (office/hospitality/educational), indoor warehouse and light industry.

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