



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 827-865 LV5	929001790213

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

Paramter at I _{life}	Nominal [*]	Life ^{**}	Max ^{***}	Unit
FO Strip PR FT 47.5in 4400lm 8xx LV5	616	1300	1400	mA

Module Temperatures

Paramter 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.

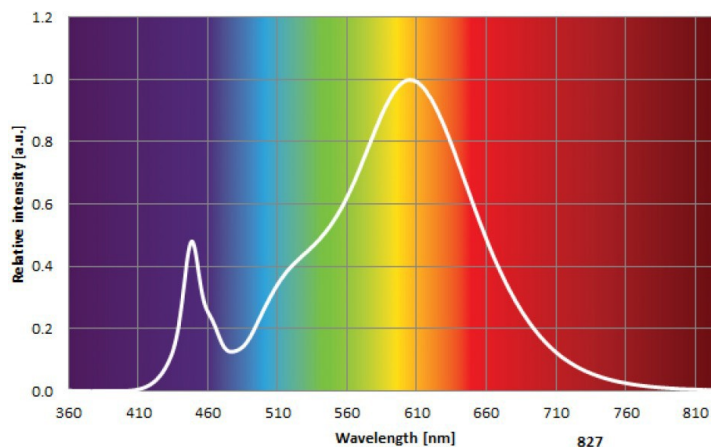
** Value at which life time is specified.

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

Optical Characteristics – Table per CCT

FO Strip PR FT 47.5in 4400lm 827 LV5				
Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3780	4080	4380	Lm
Module Efficiency	149	165	182	Lm/W
Correlated Color Temperature (CCT) Target		2700		K
Color coordinates (CIEx, CIEy)		(0.457, 0.408)		-
Color consistency			3	SDCM
CRI	80			-

Operation point	Tc	lm	lm/W
490 mA	25°C	3370	173
	45 °C	3280	170
	85 °C	3050	160
616 mA	25 °C	4190	169
	45 °C	4075	165
	85 °C	3785	156
1300 mA	25 °C	8335	148
	45 °C	8100	145
	85 °C	7515	136



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.

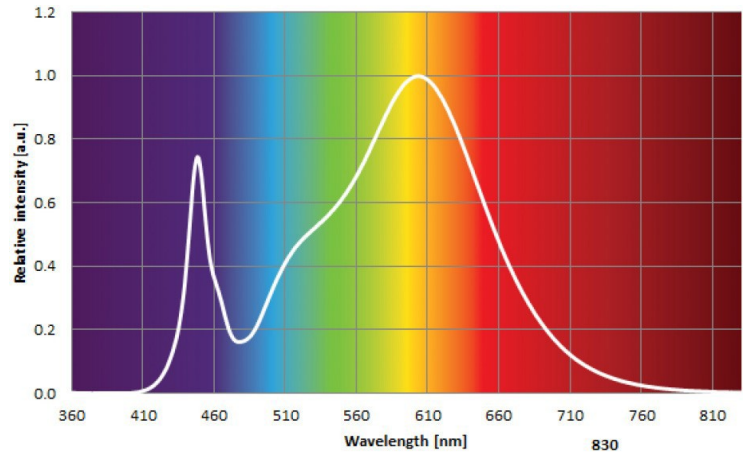
Fortimo LED Strip Performance FlexTune LV5

47.5in 4400lm

Optical Characteristics – Table per CCT

FO Strip PR FT 47.5in 4400lm 830 LV5				
Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3780	4080	4380	Lm
Module Efficiency	151	168	185	Lm/W
Correlated Color Temperature (CCT) Target		3000		K

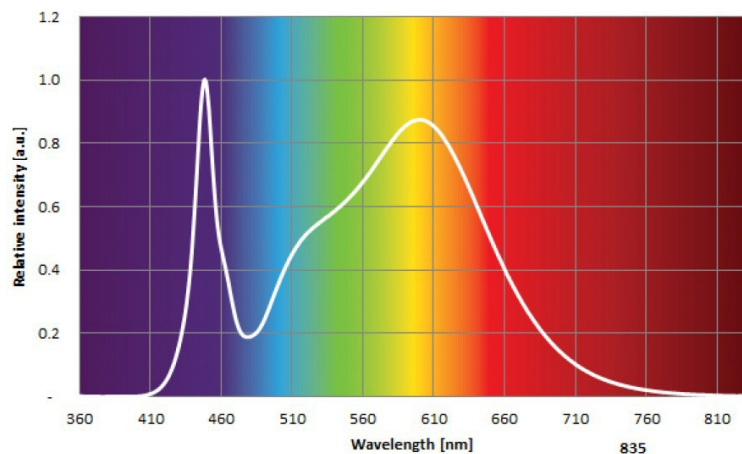
Operation point	Tc	lm	lm/W
490 mA	25 °C	3370	176
	45 °C	3280	172
	85 °C	3050	163
616 mA	25 °C	4190	171
	45 °C	4075	168
	85 °C	3785	158
1300 mA	25 °C	8335	151
	45 °C	8100	147
	85 °C	7515	138



Using the Advance Xitanium SRFlexTune 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 835 LV5				
Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3780	4080	4380	Lm
Module Efficiency	153	170	187	Lm/W
Correlated Color Temperature (CCT) Target		3500		K

Operation point	Tc	lm	lm/W
490 mA	25 °C	3370	179
	45 °C	3280	175
	85 °C	3050	165
616 mA	25 °C	4190	174
	45 °C	4075	171
	85 °C	3785	161
1300 mA	25 °C	8335	153
	45 °C	8100	150
	85 °C	7515	140



Using the Advance Xitanium SRFlexTune 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

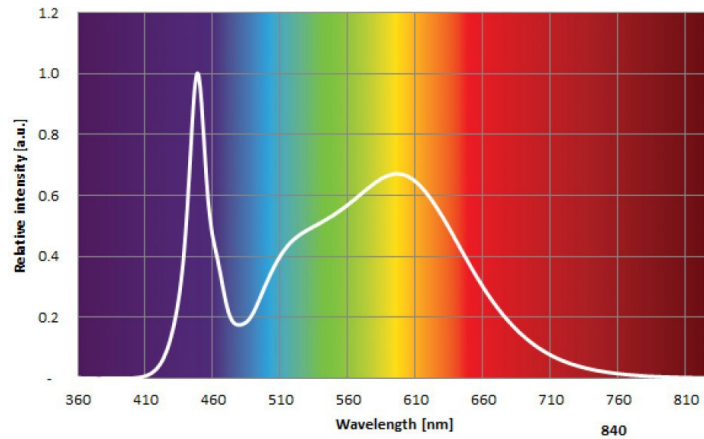
47.5in 4400lm

Optical Characteristics – Table per CCT

FO Strip PR FT 47.5in 4400lm 840 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3780	4080	4380	Lm
Module Efficiency	155	172	189	Lm/W
Correlated Color Temperature (CCT) Target		4000		K

Operation point	Tc	lm	lm/W
490 mA	25 °C	3370	181
	45 °C	3280	177
	85 °C	3050	167
616 mA	25 °C	4190	176
	45 °C	4075	173
	85 °C	3785	162
1300 mA	25 °C	8335	155
	45 °C	8100	151
	85 °C	7515	142

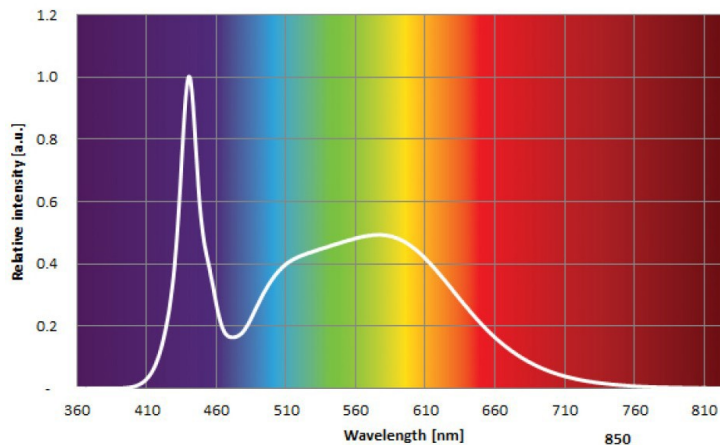


Using the Advance Xitanium SR FlexTune LED driver, set to constant light output. $R_9 > 0$, Measurement precision $\pm 5\%$ for the flux data, $\pm 1.5\%$ for the Vf data, $\pm 1.5\%$ for the power data, and $\pm 6\%$ for the efficacy data. Measurement precision for color coordinates ± 0.005 . Measurement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

FO Strip PR FT 47.5in 4400lm 850 LV5

Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	3780	4080	4380	Lm
Module Efficiency	158	175	193	Lm/W
Correlated Color Temperature (CCT) Target		5000		K

Operation point	Tc	lm	lm/W
490 mA	25 °C	3370	184
	45 °C	3280	181
	85 °C	3050	170
616 mA	25 °C	4190	179
	45 °C	4075	176
	85 °C	3785	165
1300 mA	25 °C	8335	157
	45 °C	8100	154
	85 °C	7515	144



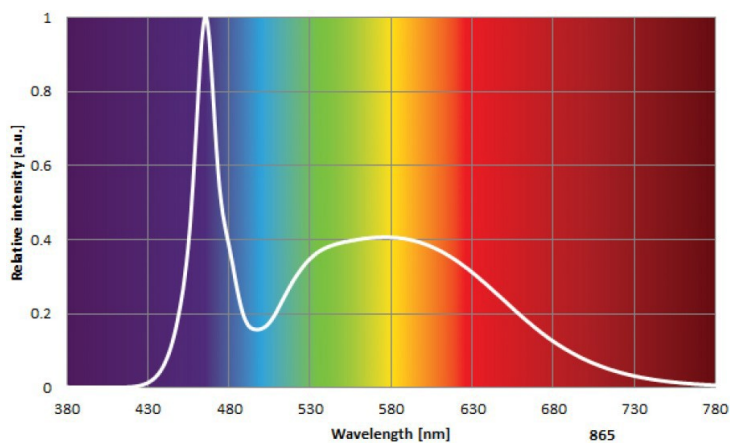
Fortimo LED Strip Performance FlexTune LV5

47.5in 4400lm

Optical Characteristics – Table per CCT

FO Strip PR FT 47.5in 4400lm 865 LV5				
Parameter	Min. (@ Inom)	Typ. (@ Inom)	Max. (@ Inom)	Unit
Luminous Flux	4080	4400	4740	Lm
Module Efficiency	162	180	198	Lm/W
Correlated Color Temperature (CCT) Target		6500		K
Color coordinates (CIEx, CIEy)		(0.312, 0.325)		-
Color consistency			3	SDCM
CRI	80			-

Operation point	Tc	lm	lm/W
490 mA	25 °C	3625	189
	45 °C	3525	185
	85 °C	3280	174
616 mA	25 °C	4505	184
	45 °C	4400	180
	85 °C	4070	170
1300 mA	25 °C	8965	162
	45 °C	8715	158
	85 °C	8080	149



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)			2100	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

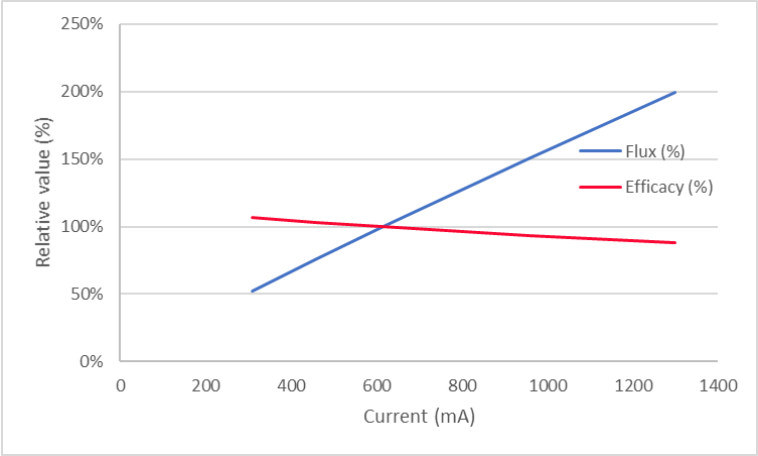
Estimated Number of Full Thermal Product Cycles @ 25°C Ambient Temperature

Case Temperature T _c [°C]	Amount of Cycles
45	100,000
55	100,000
65	100,000
75	65,000
85	25,000

Fortimo LED Strip Performance FlexTune LV5 47.5in 4400lm

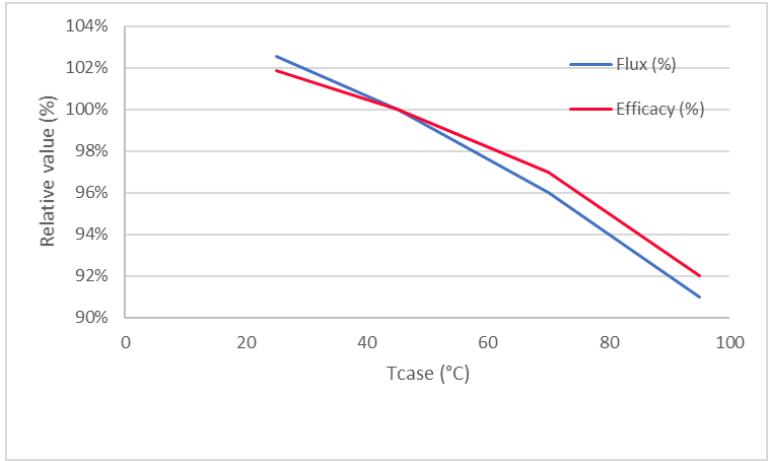
Tuning Information

Flux and Efficacy Vs. Current (at Nominal Temperature)



I [mA]	Flux [%]	Efficacy [%]
308	52%	107%
460	76%	103%
616	100%	100%
960	151%	94%
1300	199%	88%

Flux and Efficacy Vs. Tc



Tc [°C]	Flux [%]	Efficacy [%]
95	91%	92%
70	96%	97%
45	100%	100%
25	103%	102%

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Lumen Maintenance Based on Theoretical TM21 Calculations

Operation point	Tc	L70	L80	L90
80% I-nom 490 mA	Tc-nom 25 °C	>50	>50	50
	Tc 45 °C	>50	>50	50
	Tc-life 85 °C	>50	>50	41
I-nom 616 mA	Tc-nom 25 °C	>50	>50	50
	Tc 45 °C	>50	>50	50
	Tc-life 85 °C	>50	>50	41
I-life 1300 mA	Tc-nom 25 °C	>50	>50	50
	Tc 45°C	>50	>50	50
	Tc-life 85 °C	>50	>50	41

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

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