

PHILIPS

LED Modules

Fortimo LED Strip Value Offer

44in 8400lm LV2



Philips Fortimo LED strip value offer (LED strip VO) is designed to meet all the basic needs of recessed ambient lighting applications, with excellent price per lumen value and high design flexibility. The LED strip VO offers 50,000 hrs life¹ of CRI80 light quality, at efficacies of up to 175 lm/W, and 3SDCM color consistency. The LED strip VO also offers a five-year limited system warranty².

Commercial Product Name	12NC	Box Quantity
Fortimo LED Strip VO 44in 8400lm 830 LV2	9290 017 52313	144
Fortimo LED Strip VO 44in 8400lm 835 LV2	9290 017 52413	144
Fortimo LED Strip VO 44in 8400lm 840 LV2	9290 017 52513	144
Fortimo LED Strip VO 44in 8400lm 850 LV2	9290 017 52613	144

Footnotes on last page.

Fortimo LED strip value offer 44in 8400lm LV2

Features

- Energy efficacy up to 175 lm/W (Tc 45°C). Lumen per foot varies per module type.
- 3 SDCM color consistency
- CRI80 color rendering
- 50,000 hrs' lifetime
- Push-in connectors
- Mechanical footprint compatible with LED strip product family and Zhaga

Benefits

- Flexible and economical fixture design
- High energy efficacy
- High quality of light
- Long lifetime
- Easy wiring and daisy-chaining
- Low system cost and optimized performance with five-year limited system warranty² when paired with Philips Advance Xitanium LED drivers or Philips CertaDrive gen 2 drivers

Applications

- Office
- Education
- Retail

Drive Currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo LED Strip VO 44in 8400lm 8xx LV2	800	1300	1400	mA

Module Temperatures

Module temperatures	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	45	80	85	°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.

* Max difference between Ts and Tc is 5°C

Fortimo LED strip value offer 44in 8400lm LV2

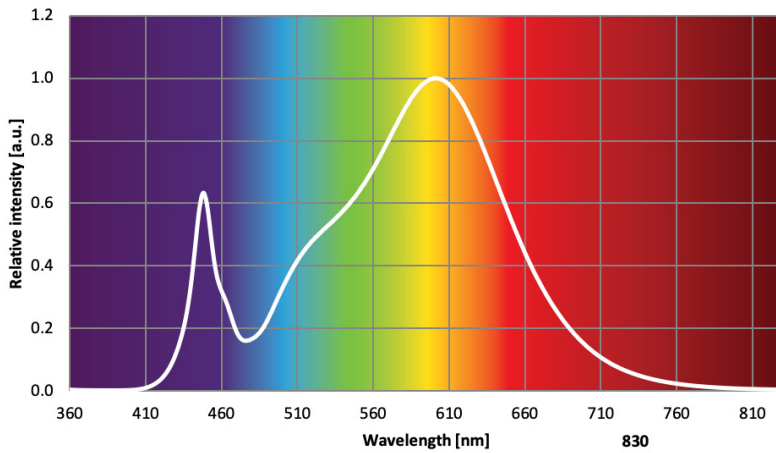
Optical Characteristics – Table per Color (CCT)

Fortimo LED strip VO 44in 8400lm 830 LV2

Parameter	Min	Typ	Max	Unit
Luminous flux	4620	5000	5370	lm
Module efficacy	136	151	166	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.4327, 0.4012)		–
Color consistency			3	SDCM
CRI	80			

R9=5. 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

Operation point	Tc	lm	lm/W
500 mA	45 °C	3250	164
	65 °C	3150	161
	85 °C	3050	158
1300 mA	45 °C	7670	135
	65 °C	7420	132
	85 °C	7150	129
1400 mA	45 °C	8170	132
	65 °C	7900	129
	85 °C	7620	126



Fortimo LED strip value offer 44in 8400lm LV2

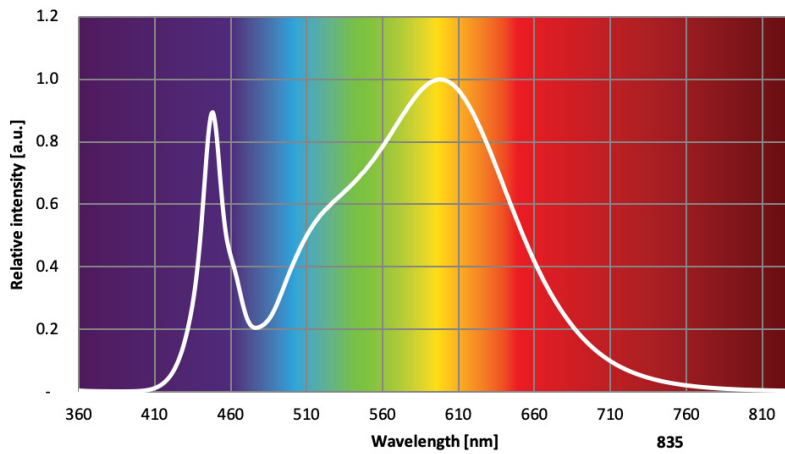
Optical Characteristics – Table per Color (CCT)

Fortimo LED strip VO 44in 8400lm 835 LV2

Parameter	Min	Typ	Max	Unit
Luminous flux	4870	5270	5660	lm
Module efficacy	144	160	176	lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.4062, 0.3896)		–
Color consistency			3	SDCM
CRI	80			

R9=5, 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

Operation point	Tc	lm	lm/W
500 mA	45 °C	3420	173
	65 °C	3320	170
	85 °C	3210	166
1300 mA	45 °C	8080	142
	65 °C	7820	139
	85 °C	7540	136
1400 mA	45 °C	8610	139
	65 °C	8330	136
	85 °C	8030	133



Fortimo LED strip value offer 44in 8400lm LV2

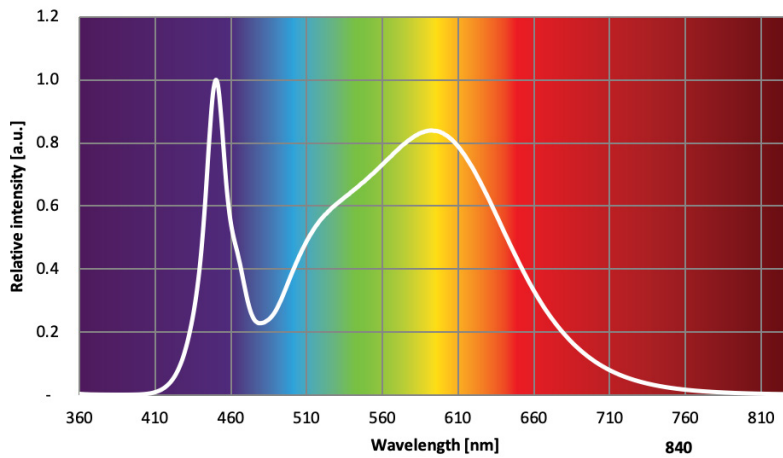
Optical Characteristics – Table per Color (CCT)

Fortimo LED strip VO 44in 8400lm 840 LV2

Parameter	Min	Typ	Max	Unit
Luminous flux	4960	5360	5760	lm
Module efficacy	146	162	178	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.3807, 0.3776)		–
Color consistency			3	SDCM
CRI	80			

R9=5, 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

Operation point	Tc	lm	lm/W
500 mA	45 °C	3480	176
	65 °C	3380	172
	85 °C	3260	169
1300 mA	45 °C	8220	145
	65 °C	7950	141
	85 °C	7660	138
1400 mA	45 °C	8760	142
	65 °C	8470	138
	85 °C	8160	135



Fortimo LED strip value offer 44in 8400lm LV2

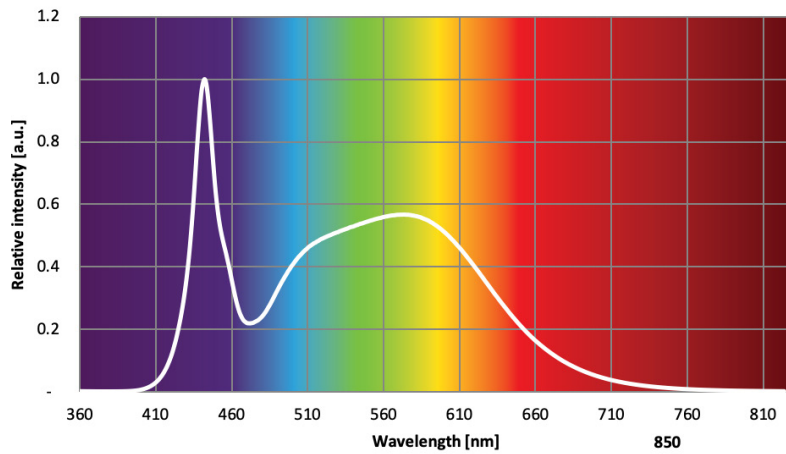
Optical Characteristics – Table per Color (CCT)

Fortimo LED strip VO 44in 8400lm 850 LV2

Parameter	Min	Typ	Max	Unit
Luminous flux	4960	5360	5760	lm
Module efficacy	146	162	178	lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.3411, 0.3504)		–
Color consistency			3	SDCM
CRI	80			

R9=5, 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

Operation point	Tc	lm	lm/W
500 mA	45 °C	3480	176
	65 °C	3380	172
	85 °C	3260	169
1300 mA	45 °C	8220	145
	65 °C	7950	141
	85 °C	7660	138
1400 mA	45 °C	8760	142
	65 °C	8470	138
	85 °C	8160	135

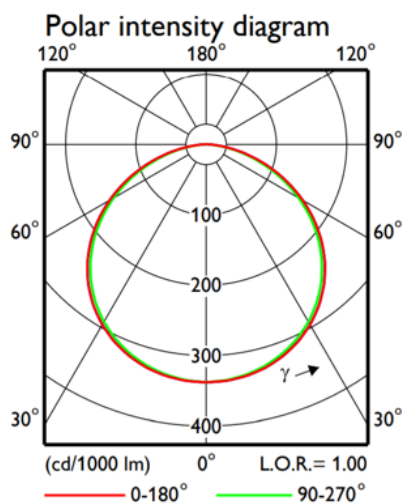


Fortimo LED strip value offer 44in 8400lm LV2

Electrical Characteristics

Fortimo LED strip VO 44in 8400lm 8xx LV2				
Parameter	Min	Typ	Max	Unit
Forward voltage	40.4	41.3	42.2	V
Thermal power		33.04		W

Beam Shape

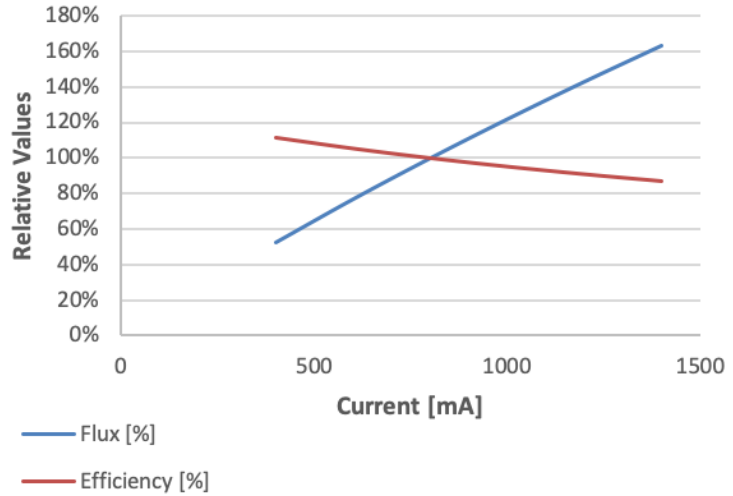


Fortimo LED strip value offer 44in 8400lm LV2

Tuning Information

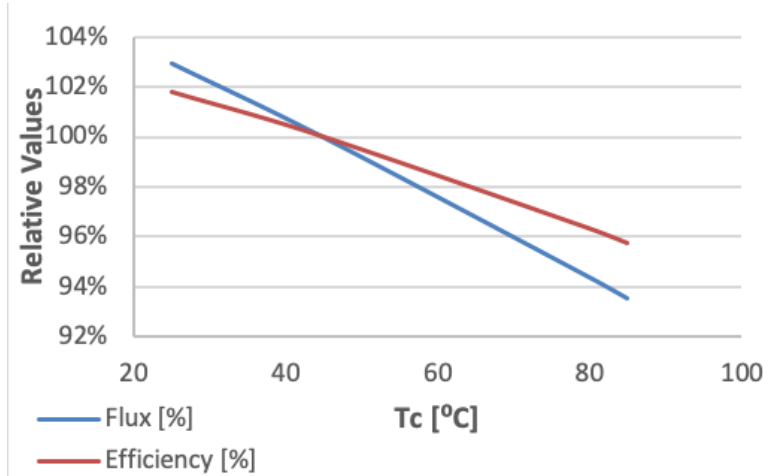
Flux and Efficacy Versus Current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
400	53	111
600	77	105
800	100	100
1000	122	95
1200	143	91
1300	163	87



Flux and Efficacy Versus Temperature at Tc (at I nominal)

Tc [°C]	Flux [%]	Efficacy [%]
85	94	96
80	94	96
45	100	100
25	103	102



Fortimo LED strip value offer 44in 8400lm LV2

Theoretical TM21 Calculations Based on LED LM80

Operation point	Lumen maintenance x 1000 hours	L70	L80	L90
I-life 1300 mA	Ts-nom 45 °C	>50	>50	47
	Ts 65 °C	>50	>50	41
	Ts 77 °C	>50	>50	36
	Ts-life 80 °C	>50	>50	35

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

Case Temperature Tc2 [°C]	Amount of Cycles
25	>100,000
35	>100,000
45	>100,000
55	>100,000
65	>100,000
75	>100,000
85	95,000

Surge protection of the module must be provided by the driver or other components. Philips 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.

Fortimo LED strip value offer 44in 8400lm LV2

Absolute Ratings

Parameter	Min.	Typ.	Max.	Unit
Current through the LED module (I-max)			1400	mA
Case temperature (Tc-max)			85	°C
ESD (Direct)*			1	kV
Working voltage			48	V _{dc}
Dielectric withstand voltage	700			V _{dc}

* This LED module is an ESD sensitive device with ESD protection up to 1kV, tested according CAN/CSA-IEC 61000-4-2. Proper precautions to protect the product must be in place to maintain product reliability and warranty. These precautions are described in the design-in guide for the product and ANSI/ESD S20.20-2014. Precautions include, but are not limited to: ESD protection areas, equipment grounding, personal ESD protective measures and anti-static clothing, conductive flooring, ionizers, ESD packaging, etc. This product is not field replaceable

Application Information

Compliance and Approval

UL 8750

Environmental

RoHS/REACH

Application Information

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

Footnotes

1. Average rated life is based on engineering data and probability analysis. The hours are at the B50, L70 point – 50,000 hours life with 70% lumen maintenance at Tc point.
2. For more information on Philips' limited warranty please visit www.philips.com/warranties.

© 2018 Signify Holding. All rights reserved.
Signify reserves the right to make changes in specifications and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences resulting from the use of this publication.
philips.com/ledmodulesna



Philips Lighting North America Corporation
10275 W. Higgins Road, Rosemont IL 60018
Tel: 800-322-2086 Fax: 888-423-1882
Customer/Technical Service: 800-372-3331
OEM Support: 866-915-5886

Philips Lighting Canada Ltd.
281 Hillmount Rd,
Markham, ON, Canada L6C 2S3
Tel. 800-668-9008