

PHILIPS

LED Modules

Fortimo LED Line High Flux PR

2ft 7500lm 8xx 1R NA



Fortimo LED Line high flux PR is designed to provide top performance for high lumen and high temperature applications such as high-bay linear systems.

Together with the wide range of available Philips Advance Xitanium LED drivers, it offers piece of mind for both OEM and end-user, backed up by a five-year limited system warranty¹.

Commercial Product Name	12NC
Fortimo Line 2ft PR 7500lm 830 2R NA LV3	929000797313
Fortimo Line 2ft PR 7500lm 835 2R NA LV3	929000797413
Fortimo Line 2ft PR 7500lm 840 2R NA LV3	929000797513
Fortimo Line 2ft PR 7500lm 850 2R NA LV3	929000797613

Fortimo LED Line PR 2ft 7500lm 8xx 1R NA

Features

- Tc Life of 90°C
- High energy efficiency of up to 185 lm/W
- Variation of color temperatures : 3000K, 3500K, 4000K and 5000K
- High color rendering of CRI>80
- High quality of light with 3 SDCM color consistency
- Lumen levels up to 4345lm/ft
- Zhaga compatible

Benefits

- Enables LED fixture designs in thermally challenging applications of -40°C - +55°C ambient temperatures
- High energy efficacy and optimal total cost of ownership
- Flexible system design due to pairing with Philips Advance Xitanium window drivers with SimpleSet technology
- 5-year limited system warranty with Philips Advance Xitanium LED drivers²

Applications

- High-bay industrial lighting
- High-bay big box retail lighting
- Vapor tight high temperature applications

Optical Characteristics – at Tc of 55°C

Commercial Product Name	CCT (K)	CRI ³ (Ra)	R9	Color Consistency (SDCM) ⁴	Radiation Angle
Fortimo Line 2ft PR 7500lm 830 2R NA LV3	3000	>80	>0	3	120°
Fortimo Line 2ft PR 7500lm 835 2R NA LV3	3500				
Fortimo Line 2ft PR 7500lm 840 2R NA LV3	4000				
Fortimo Line 2ft PR 7500lm 850 2R NA LV3	5000				

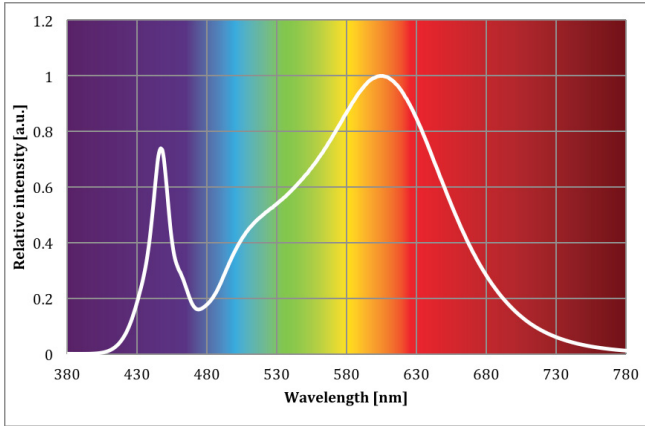
Commercial Product Name	Typical Current (mA)	Flux ⁵ (lm)			Efficacy ⁶ (lm/W)		
		Min.	Typ.	Max.	Min.	Typ.	Max.
Fortimo Line 2ft PR 7500lm 830 2R NA LV3	1230	6680	7220	7770	155	173	190
Fortimo Line 2ft PR 7500lm 835 2R NA LV3		6840	7390	7950	159	177	195
Fortimo Line 2ft PR 7500lm 840 2R NA LV3		6960	7510	8080	161	180	198
Fortimo Line 2ft PR 7500lm 850 2R NA LV3		7110	7690	8270	165	184	203
Fortimo Line 2ft PR 7500lm 830 2R NA LV3	1400	7550	8160	8780	152	170	187
Fortimo Line 2ft PR 7500lm 835 2R NA LV3		7730	8350	8980	156	173	191
Fortimo Line 2ft PR 7500lm 840 2R NA LV3		7860	8490	9130	158	176	195
Fortimo Line 2ft PR 7500lm 850 2R NA LV3		8040	8680	9340	162	180	199
Fortimo Line 2ft PR 7500lm 830 2R NA LV3	600	3360	3620	3900	167	186	205
Fortimo Line 2ft PR 7500lm 835 2R NA LV3		3430	3710	3990	171	190	210
Fortimo Line 2ft PR 7500lm 840 2R NA LV3		3490	3770	4060	174	194	213
Fortimo Line 2ft PR 7500lm 850 2R NA LV3		3570	3860	4150	178	198	218

Footnotes on the last page.

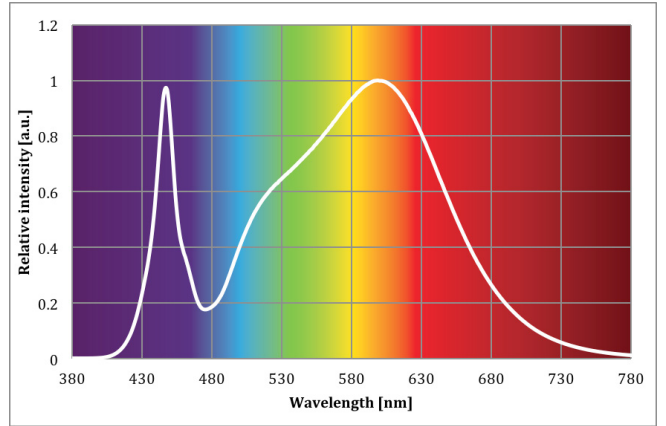
Fortimo LED Line PR 2ft 7500lm 8xx 1R NA

Optical Characteristics – at Tc of 55°C

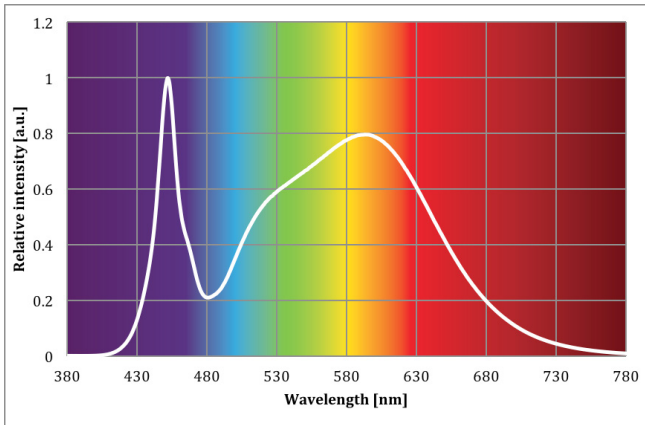
830



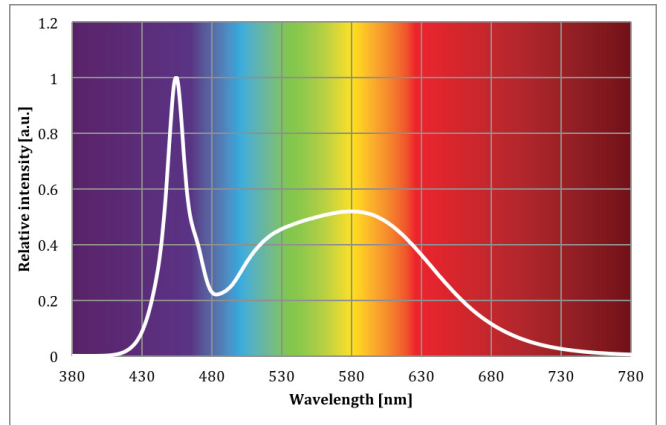
835



840



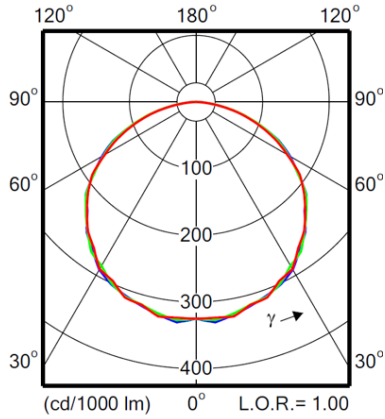
850



Fortimo LED Line PR 2ft 7500lm 8xx 1R NA

Beam Shape

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



Electrical Characteristics

Commercial Product Name	Typical Current (mA)	Forward Voltage (V)			Power (W)		
		Min.	Typ.	Max.	Min.	Typ.	Max.
Fortimo Line 2ft PR 7500lm 830 2R NA LV3	1230	33.1	34.0	34.9	40.7	41.8	42.9
Fortimo Line 2ft PR 7500lm 835 2R NA LV3							
Fortimo Line 2ft PR 7500lm 840 2R NA LV3							
Fortimo Line 2ft PR 7500lm 850 2R NA LV3							
Fortimo Line 2ft PR 7500lm 830 2R NA LV3	1400	33.5	34.4	35.3	46.9	48.2	49.4
Fortimo Line 2ft PR 7500lm 835 2R NA LV3							
Fortimo Line 2ft PR 7500lm 840 2R NA LV3							
Fortimo Line 2ft PR 7500lm 850 2R NA LV3							

System configuration : 12s6p

Lifetime

Parameter	Nominal ⁷	Life ⁸	Max. ⁹
Tc (°C)	55	90	100
Current (mA)	1230	1400	1400
Δu'v' at 6000 Hours ¹⁰			0.007

Fortimo LED Line PR 2ft 7500lm 8xx 1R NA

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

Warranted number of full thermal product cycles at which the survival rate of the population $\geq 90\%$, at 25°C ambient temperature.

Case Temperature Tc [°C]	Amount of Cycles
25	>100,000
35	>100,000
45	>100,000
55	67,000
65	26,000
75	12,000
85	6,000
90	5,000

Abs Max Ratings

Parameter	Min.	Max.	Unit
Current through the LED Module (I-max)		1400	mA
Case Temperature (Tc Max)		100	°C
ESD (Direct Contact)		8	kV
ESD (Air)		15	kV
Isolation Breakdown Voltage	700		Vdc
Ambient Temperature	-40	55	°C
PCB Reflectivity	70%		
Number of Modules per Chain		2	

Application Information

Compliance and Approval

UL8750 (UL recognized)

Environmental

RoHS / REACH

Application Information

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

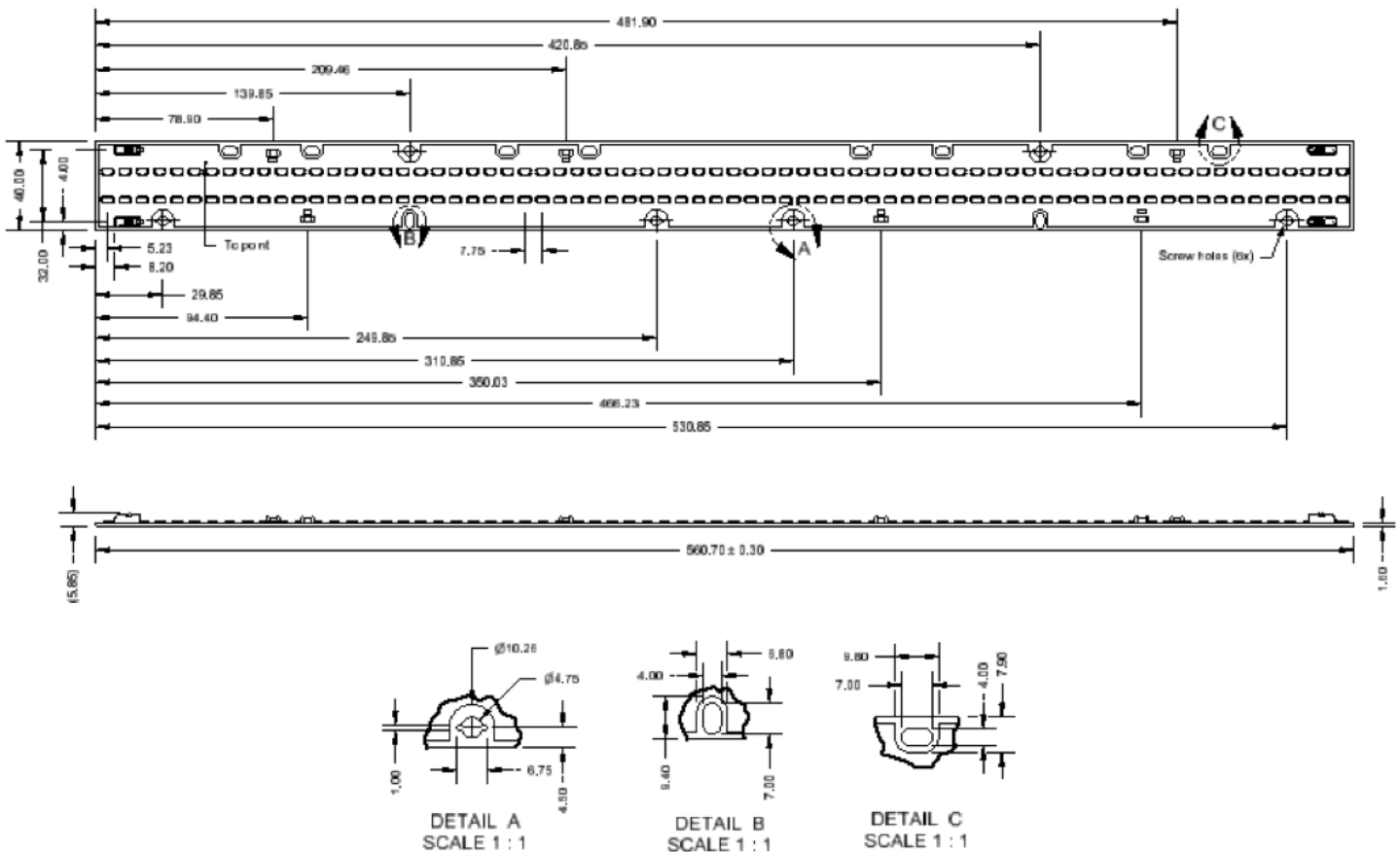
Fortimo LED Line PR 2ft 7500lm 8xx 1R NA

Wiring

Specification Item	Value	Unit	Condition
Input Wire Cross-Section	0.2...0.75	mm ²	solid
	18...24	AWG	
	0.45...0.7	mm ²	stranded
	20...22	AWG	
Input Wire Strip Length	7.5...8.5	mm	

Mechanical Characteristics

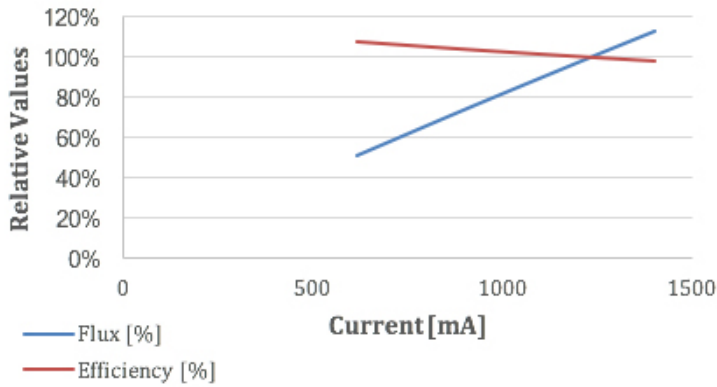
Parameter	Min.	Typ.	Max.	Unit
Length	560.4	560.7	561.0	mm
Width	39.8	40.0	40.2	mm
Height Excl. Connector	1.45	1.60	1.75	mm
Height Incl. Connector	5.50	5.85	6.20	mm
Warpage (IPC-TM-650)			0.75	mm



Fortimo LED Line PR 2ft 7500lm 8xx 1R NA

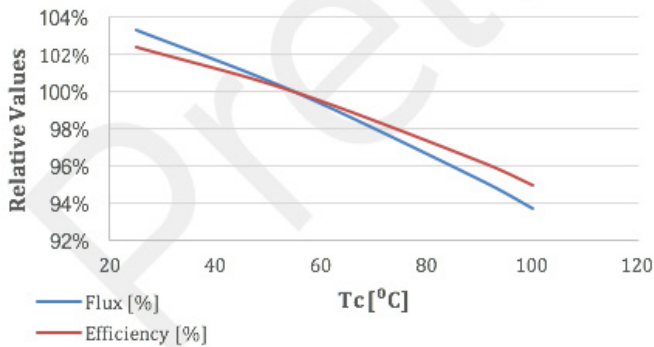
Tuning Information

Flux and Efficacy Vs. Current



I [A]	Flux [%]	Efficacy [%]
300	XX	XX
615	51	107
923	76	104
1230	100	100
1287	104	99
1343	109	99
1400	113	98

Flux and Efficacy Vs. Temperature at Tc



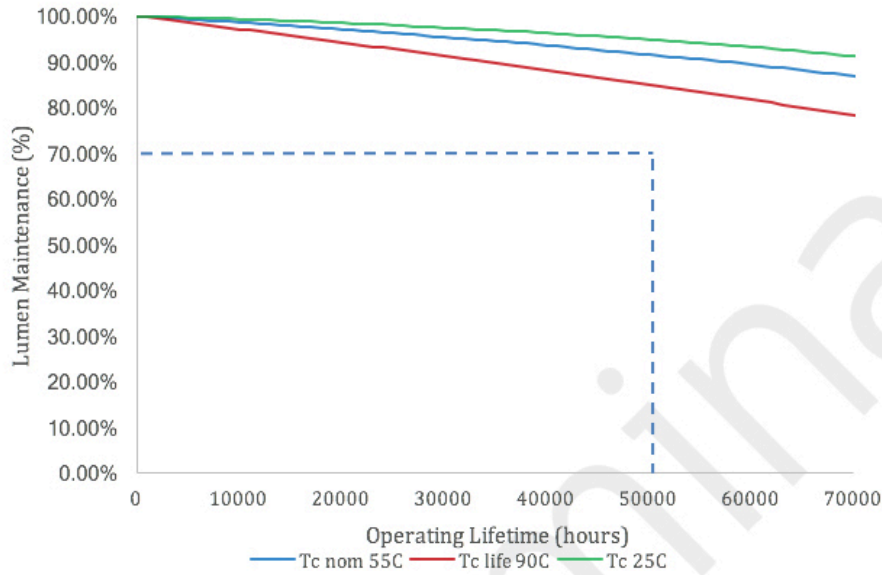
Tc [°C]	Flux [%]	Efficacy [%]
100	94	95
90	95	96
55	100	100
25	103	102

Fortimo LED Line PR 2ft 7500lm 8xx 1R NA

Lumen Maintenance

Lumen Maintenance: at I Life and Tc Life Conditions

Fortimo LED Line PR 2ft 7500lm 8xx 1R NA LV



Precautions in Handling and Use

See Philips design-in guide on the My Technology Portal. <https://www.na.mytechnologyportal.lighting.philips.com>.

Fortimo LED Line PR 2ft 7500lm 8xx 1R NA

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. View limited warranty at http://www.usa.lighting.philips.com/connect/tools_literature/warranties.wpd for details and restrictions.
3. Measurement tolerance is ± 1.5 for CRI
4. Measurement tolerance is ± 0.003 for the color coordinates data
5. Measurement tolerance is $\pm 5\%$ for the flux
6. Measurement tolerance is $\pm 5\%$ for efficacy
7. Nominal value at which performance is specified
8. Value at which lifetime is specified (maximum conditions for warranty)
9. Maximum value for safety
10. Specifications stated while $T_c < 90^\circ\text{C}$ and $I < 1120\text{mA}$



© 2017 Philips Lighting Holding B.V. All rights reserved. Philips 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/leddrivers



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