



**Fortimo edge LV1** 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 Advance Xitanium LED drivers, it offers piece of mind for both OEM and end-user, backed up by a five-year limited system warranty<sup>1</sup>.

Commercial Product Name	12NC	Box Quantity
Fortimo edge 21.5in 8000lm 830 LV1	9290 017 49913	156
Fortimo edge 21.5in 8000lm 835 LV1	9290 017 50013	156
Fortimo edge 21.5in 8000lm 840 LV1	9290 017 50113	156
Fortimo edge 21.5in 8000lm 850 LV1	9290 017 50213	156

<sup>1</sup> For more information on the limited warranty please visit [www.philips.com/warranties](http://www.philips.com/warranties).

# Fortimo Edge 21.5in 8000lm 8xx LV1

## Features

- High energy efficacy
- High lumen maintenance
- High output and compact design
- High thermal capability llife 90°C Tc

## Benefits

- Perfect match with Xitanium edge industrial drivers
- Low total cost of ownership / Fast return on investment
- Lifetime<sup>2</sup> (low maintenance)
- Reliability (low maintenance)
- Usage in extreme application conditions and application heights

## Application

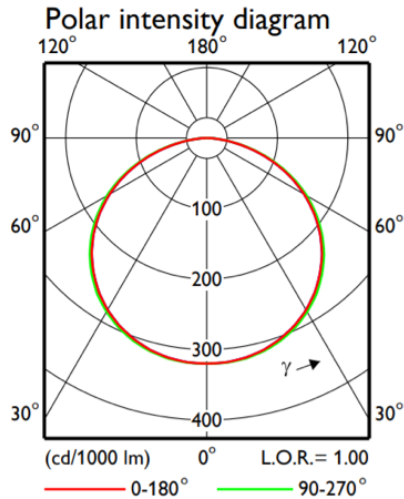
- High-bay industrial lighting
- High-bay big box retail lighting
- Vapor tight high temperature applications

## Electrical Characteristics

Fortimo Edge 21.5in 8000lm 8xx LV1

Parameter	Min	Typ	Max	Unit
Forward voltage	44.4	46.20	48.0	V
Thermal power		47.95		W

## Beam Shape



<sup>2</sup> 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.

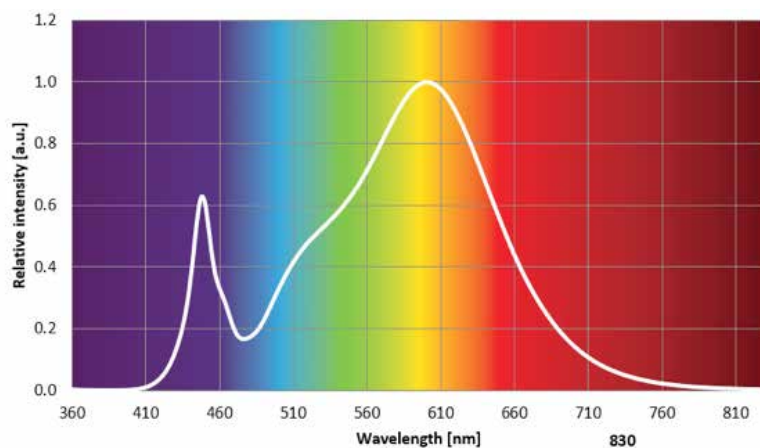
# Fortimo Edge 21.5in 8000lm 8xx LV1

## Optical Characteristics – Table per Color (CCT)

Fortimo edge 21.5in 8000lm 830 LV1				
Parameter	Min	Typ	Max	Unit
Luminous flux	6920	7480	8040	lm
Module efficacy	140	156	171	lm/W
Correlated color temperature (CCT)		3000		K
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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$

Operation point	Tc	lm	lm/W
750 mA	45 °C	5670	167
	65 °C	5510	164
	85 °C	5330	160
1300 mA	45 °C	9500	153
	65 °C	9220	150
	85 °C	8920	147
1350 mA	45 °C	9840	152
	65 °C	9550	149
	85 °C	9240	145



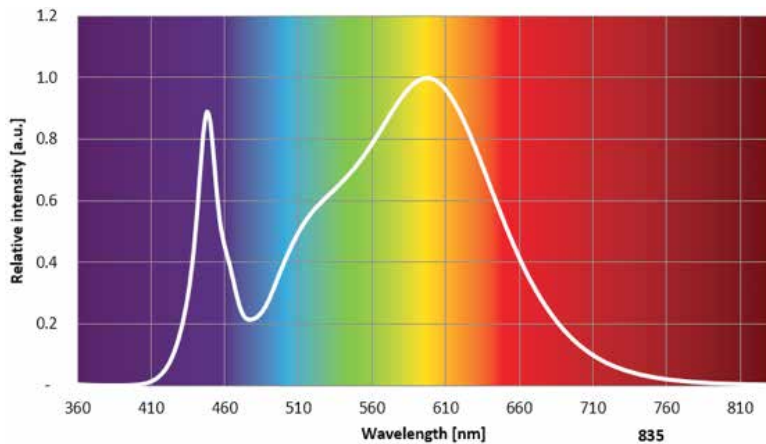
# Fortimo Edge 21.5in 8000lm 8xx LV1

## Optical Characteristics – Table per Color (CCT)

Fortimo edge 21.5in 8000lm 835 LV1				
Parameter	Min	Typ	Max	Unit
Luminous flux	7205	7790	8370	lm
Module efficacy	147	163	179	lm/W
Correlated color temperature (CCT)		3500		K
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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$

Operation point	Tc	lm	lm/W
750 mA	45 °C	5910	174
	65 °C	5740	170
	85 °C	5560	167
1300 mA	45 °C	9890	160
	65 °C	9610	156
	85 °C	9290	153
1350 mA	45 °C	10240	158
	65 °C	9950	155
	85 °C	9620	151



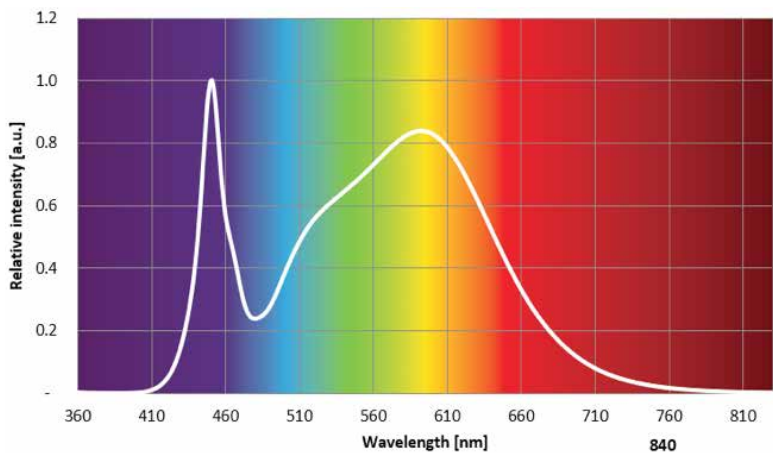
# Fortimo Edge 21.5in 8000lm 8xx LV1

## Optical Characteristics – Table per Color (CCT)

Fortimo edge 21.5in 8000lm 840 LV1				
Parameter	Min	Typ	Max	Unit
Luminous flux	7450	8050	8650	lm
Module efficacy	151	168	185	lm/W
Correlated color temperature (CCT)		4000		K
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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$

Operation point	Tc	lm	lm/W
750 mA	45 °C	6110	179
	65 °C	5930	176
	85 °C	5740	172
1300 mA	45 °C	10220	165
	65 °C	9920	162
	85 °C	9600	158
1350 mA	45 °C	10580	164
	65 °C	10270	160
	85 °C	9940	157



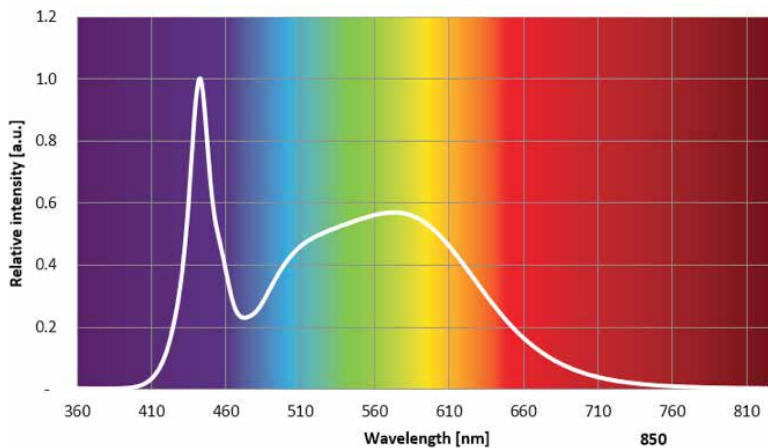
# Fortimo Edge 21.5in 8000lm 8xx LV1

## Optical Characteristics – Table per Color (CCT)

Fortimo edge 21.5in 8000lm 850 LV1				
Parameter	Min	Typ	Max	Unit
Luminous flux	7450	8050	8650	lm
Module efficacy	151	168	185	lm/W
Correlated color temperature (CCT)		5000		K
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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$

Operation point	Tc	lm	lm/W
750 mA	45 °C	6110	179
	65 °C	5930	176
	85 °C	5740	172
1300 mA	45 °C	10220	165
	65 °C	9920	162
	85 °C	9600	158
1350 mA	45 °C	10580	164
	65 °C	10270	160
	85 °C	9940	157



# Fortimo Edge 21.5in 8000lm 8xx LV1

## Theoretical TM21 Calculations Based on LED LM80

Operation point	Lumen maintenance x 1000 hours	L70	L80	L90
80% I-nom 830 mA	Ts-nom 65 °C	>50	>50	>50
	Ts 75 °C	>50	>50	45
	Ts-life 90 °C	>50	>50	39
I-nom 1038 mA	Ts-nom 65 °C	>50	>50	>50
	Ts 75 °C	>50	>50	45
	Ts-life 90 °C	>50	>50	39
I-life 1300 mA	Ts-nom 65 °C	>50	>50	48
	Ts 75 °C	>50	>50	41
	Ts-life 90 °C	>50	>50	36

## Abs Max. Ratings

Parameter	Min.	Typ.	Max.	Unit
Current through the LED module (I-max)			1350	mA
Case temperature (Tc-max)			95	°C
Working voltage			48	Vdc
Dielectric withstand voltage	700			Vdc

## Drive Currents

Parameter	Nominal*	Life**	Max***	Unit
Fortimo edge 21.5in 8000lm 8xx LV1	1038	1300	1350	mA

## Drive Temperatures

Module temperatures	Nominal*	Life**	Max***	Unit
Tc (case temperature at Tc point)	65	90	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.

\* Max difference between Ts and Tc is 5°C

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

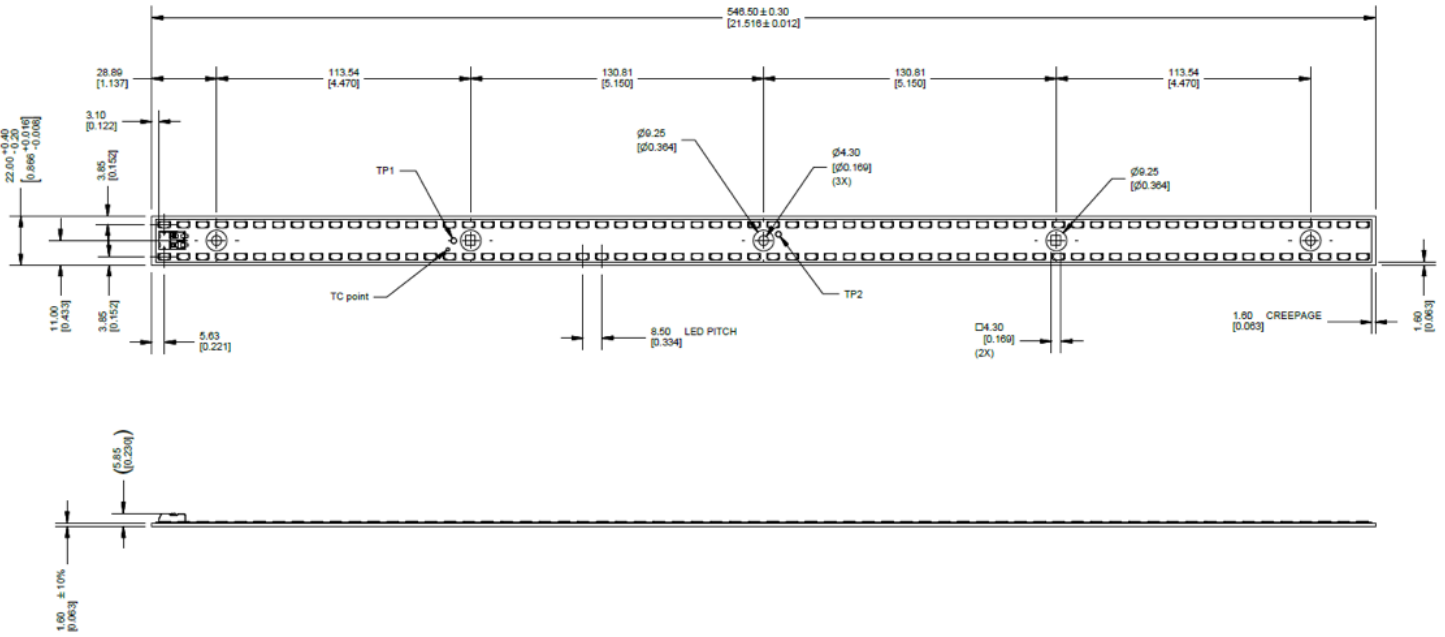
Case Temperature Tc2 [°C]	Amount of Cycles
25	>100,000
35	>100,000
45	>100,000
55	>100,000
65	>100,000
75	>100,000
85	92,000
90	61,000

Surge protection of the module must be provided by the driver or other components. Advance Xitanium and Certadriver 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 Edge 21.5in 8000lm 8xx LV1

## Mechanical Characteristics

Parameter	Min.	Typ.	Max.	Unit
Warpage (IPC-TM-650)			5	%



## Application Information

### Compliance and Standards

UL8750

### Environmental

RoHS / REACH

### Application Information

Dimming	Yes
---------	-----

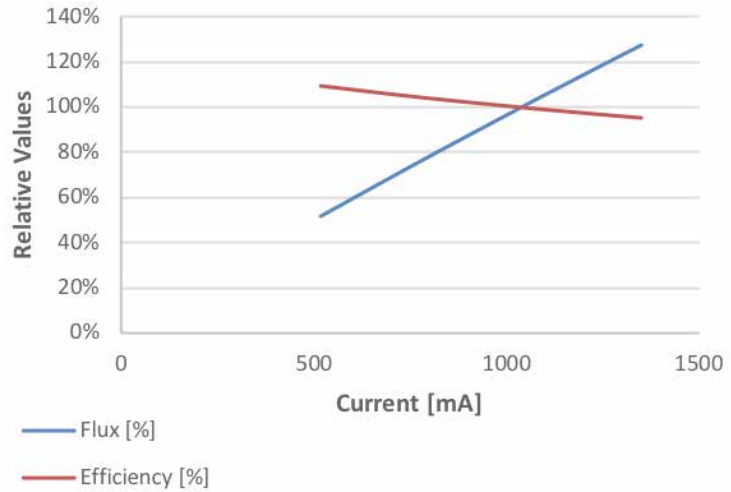


# Fortimo Edge 21.5in 8000lm 8xx LV1

## Tuning Information

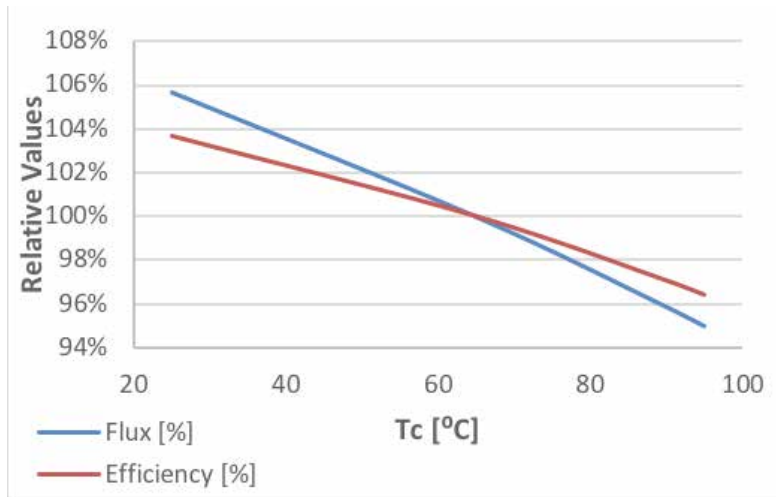
### Flux and Efficacy Versus Current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
519	52	109
779	76	104
1038	100	100
1142	109	98
1246	119	97
1350	128	95



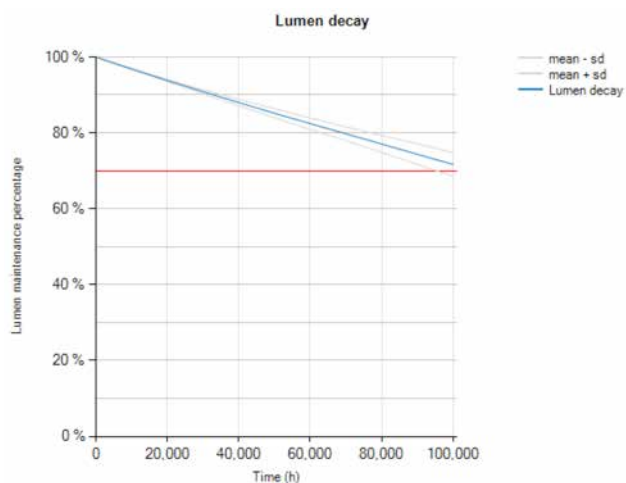
### Flux and Efficacy Versus Temperature at Tc (at I nominal)

Tc [°C]	Flux [%]	Efficacy [%]
95	95	96
90	96	97
65	100	100
25	106	104



# Fortimo Edge 21.5in 8000lm 8xx LV1

## Lumen Maintenance



The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract.

