

Linear LED Modules

Built with OSRAM LEDs for high efficacy and cost optimization

Data Sheet

Version 1.0

Lean & Fast. Made Smarter.

High efficacy – Up to 187 lumens per watt with the ability to achieve DLC certification

Flexible design – 5.5", 11", 22" lengths that can be seamlessly connected end-to-end

Long life – backed by a 5 year warranty with 50,000 hours (L90 lifetime)

Easy to integrate – designed to Zhaga dimensions and screw hole specifications

Quick production – push terminals for quick and simple wiring

Primary Applications



Indoor lighting

-Office

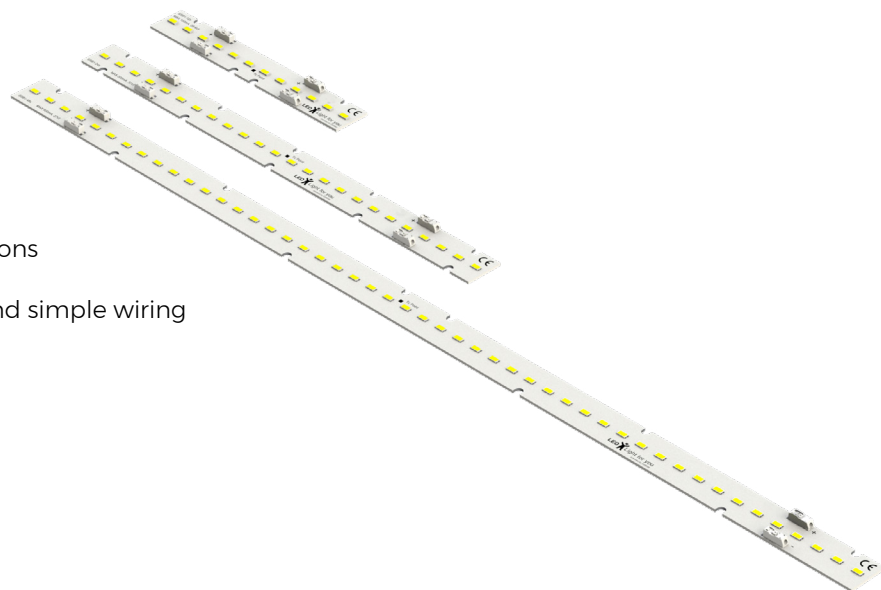
-Education

-Retail



-Hospitality

-Transportation



Superior Performance With Flexible Options

- 80 CRI is standard with custom CRI options available
- Private label or custom designs
- Adhesive tape can be added for rapid installation
- Pair with a standard driver for a complete light engine

Simplify Your Next Lighting Design

Introducing NewEnergy OSRAM linear LED modules for indoor office, industry and retail area lighting fixtures. The modules come in 5.5", 11", 22" configurations that are ideal for panel or linear lights. They are also flexible enough to support a range of specialty indoor applications. Designed to Zhaga standards, NewEnergy modules are easy to integrate into existing designs and can be quickly upgraded as LED performance improves.

Custom Solutions

NewEnergy operates facilities globally with ISO certifications for the LED lighting, automotive and medical industries. Our North Carolina based office provides quick engineering & sales support with an R&D lab for prototype development and custom solutions. Our in-house global manufacturing capabilities allow for both building in the United States as well as overseas at scale.

About NewEnergy

NewEnergy accelerates the adoption of LED technology through simple, modular products and custom designs. Through 30 years of experience, state of the art manufacturing, full traceability and advanced quality controls, NewEnergy offers leading solid state lighting components, modules and custom solutions. NewEnergy customers get to market faster, with less resources, at lower costs. Visit New-EnergyLLC.com for more information.

CE
RoHS



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES

Linear LED Modules from NewEnergy

Order Code Formatting

Series	-	LED Count	LED Code	-	Color Temperature	Color Rendering Index	-	Internal Code
SSB1 - Economy Linear LED PCB Assembly		12 - 12 LEDs	F01 - Duris E5 LED		30 - 3000K	70 - 70 CRI		XX
SPB1 - Performance Linear LED PCB Assembly		24 - 24 LEDs			40 - 4000K	80 - 80 CRI		
		48 - 48 LEDs			50 - 5000K	90 - 90 CRI		

Electrical Characteristics

Part Number	Forward Voltage (v)		Typical Thermal Resistance - Junction to Solder Point (K/W) RTh J-HS
	Typical	Maximum	
SSB1-12x	34.4	38.4	20
SSB1-24x	34.4	38.4	20
SSB1-48x	34.4	38.4	20
SPB1-12x	33.5	38.4	12
SPB1-24x	33.5	38.4	12
SPB1-48x	33.5	38.4	12

Intended for connection to a class 2 power source with a maximum operating voltage of 50 Vdc

Maximum Ratings

Part Number	DC Current (A)	Tsp Temp (°C)	Power (W)
SXB1-12x	.150	105	5.8
SXB1-24x	.300	105	10.5
SXB1-48x	.600	105	23.0

Board Material Properties

Property	Value	Unit
Thickness	.059	in
Construction	FR4	-
Temperature	130	°C
Flame Rating	V-0	-
Copper Thickness	1	oz

Linear LED Modules from NewEnergy

Product Selection Table - 5.5" Linear Module

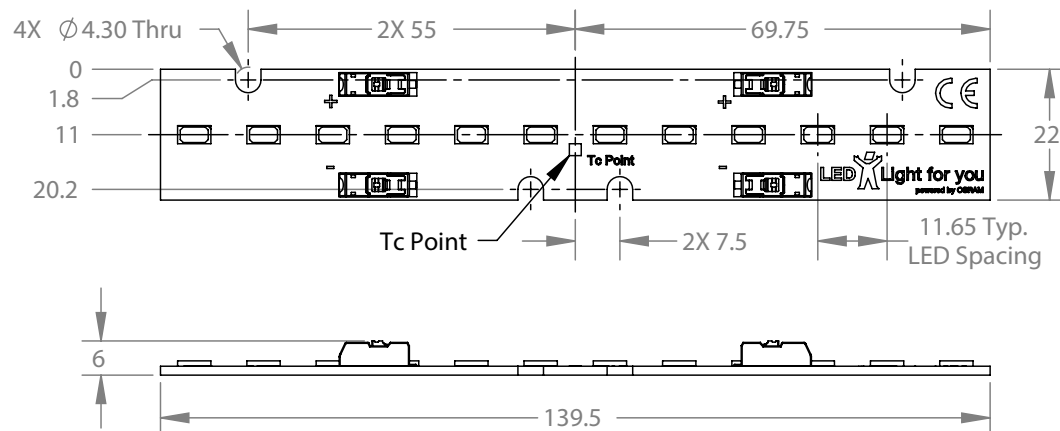
Series	Part Number	CCT	CRI	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
				Nominal 100mA	Max 150mA		Nominal	Max
Economy	SSB1-12F01-2780-00	2700K	>80	545	720	156	3.5	5.4
	SSB1-12F01-3080-00	3000K	>80	570	755	164	3.5	5.4
	SSB1-12F01-3580-00	3500K	>80	570	755	164	3.5	5.4
	SSB1-12F01-4080-00	4000K	>80	596	790	172	3.5	5.4
	SSB1-12F01-5080-00	5000K	>80	596	790	172	3.5	5.4
	SSB1-12F01-5780-00	5700K	>80	596	790	172	3.5	5.4
Performance	SPB1-12F01-2780-00	2700K	>80	570	800	164	3.5	5.4
	SPB1-12F01-3080-00	3000K	>80	596	840	172	3.5	5.4
	SPB1-12F01-3580-00	3500K	>80	622	877	179	3.5	5.4
	SPB1-12F01-4080-00	4000K	>80	622	877	179	3.5	5.4
	SPB1-12F01-5080-00	5000K	>80	648	914	187	3.5	5.4
	SPB1-12F01-5780-00	5700K	>80	648	914	187	3.5	5.4

⁽¹⁾ NewEnergy may ship modules in flux bins higher than the values specified by the order code without advance notice. Shipments will always adhere to the chromaticity bin restrictions specified by the order code.

⁽²⁾ Nominal Values @ Tj = 50°C

⁽³⁾ Maximum Values @ Tj = 65°C

Mechanical Dimensions



1. Four Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 4x M3-.5 Socket Head Cap Screws

Linear LED Modules from NewEnergy

Product Selection Table - 11" Linear Module

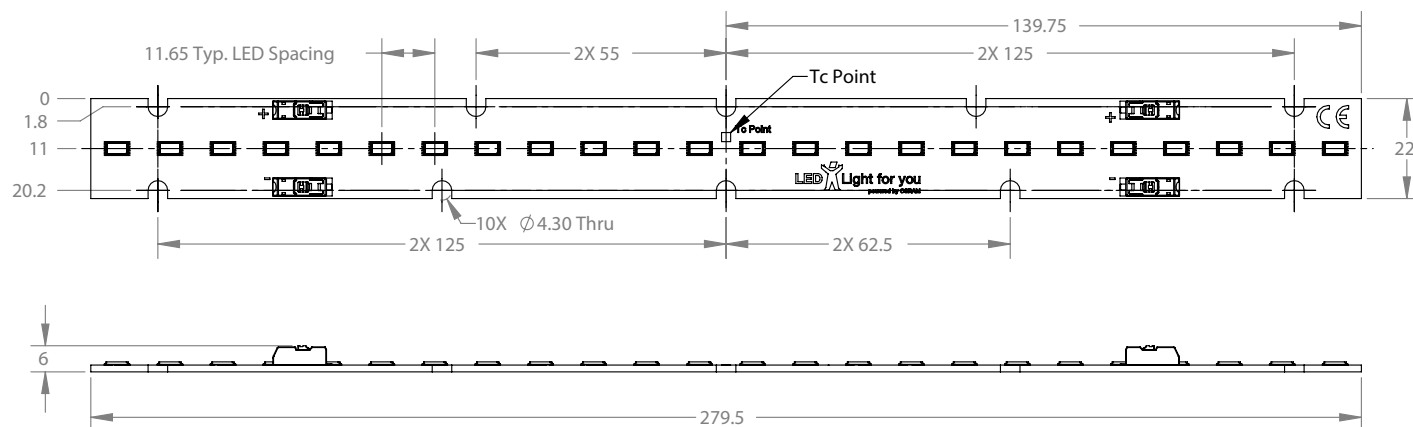
Series	Part Number	CCT	CRI	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
				Nominal 200mA	Max 300mA		Nominal	Max
Economy	SSB1-24F01-2780-00	2700K	>80	1090	1440	156	6.9	10.7
	SSB1-24F01-3080-00	3000K	>80	1140	1510	164	6.9	10.7
	SSB1-24F01-3580-00	3500K	>80	1140	1510	164	6.9	10.7
	SSB1-24F01-4080-00	4000K	>80	1192	1580	172	6.9	10.7
	SSB1-24F01-5080-00	5000K	>80	1192	1580	172	6.9	10.7
	SSB1-24F01-5780-00	5700K	>80	1192	1580	172	6.9	10.7
Performance	SPB1-24F01-2780-00	2700K	>80	1140	1600	164	6.9	10.7
	SPB1-24F01-3080-00	3000K	>80	1192	1680	172	6.9	10.7
	SPB1-24F01-3580-00	3500K	>80	1244	1754	179	6.9	10.7
	SPB1-24F01-4080-00	4000K	>80	1244	1754	179	6.9	10.7
	SPB1-24F01-5080-00	5000K	>80	1296	1828	187	6.9	10.7
	SPB1-24F01-5780-00	5700K	>80	1296	1828	187	6.9	10.7

⁽¹⁾ NewEnergy may ship modules in flux bins higher than the values specified by the order code without advance notice. Shipments will always adhere to the chromaticity bin restrictions specified by the order code.

⁽²⁾ Nominal Values @ Tj = 50°C

⁽³⁾ Maximum Values @ Tj = 65°C

Mechanical Dimensions



1. Four Poke-In Connectors accept 18-24 AWG solid or stranded wire
2. Recommended Mounting Hardware: 10x M3-.5 Socket Head Cap Screws

Product Selection Table - 22" Linear Module

⁽³⁾ Maximum Values @ Tj = 65°C

Technical drawing of the LED strip assembly, showing top and side views with dimensions and labels.

Top View Dimensions and Labels:

- Overall length: 559.5
- Section 1: 2X 265
- Section 2: 2X 140
- Section 3: 2X 77.5
- Section 4: 2X 202.5
- Section 5: 279.75
- Section 6: 279.75
- LED Spacing: 11.65 Typ. LED Spacing
- LED Type: 10X $\varnothing 4.3$ Thru
- Mounting: 2X 15
- Feature: Tc Point
- Label: LED Light bar type

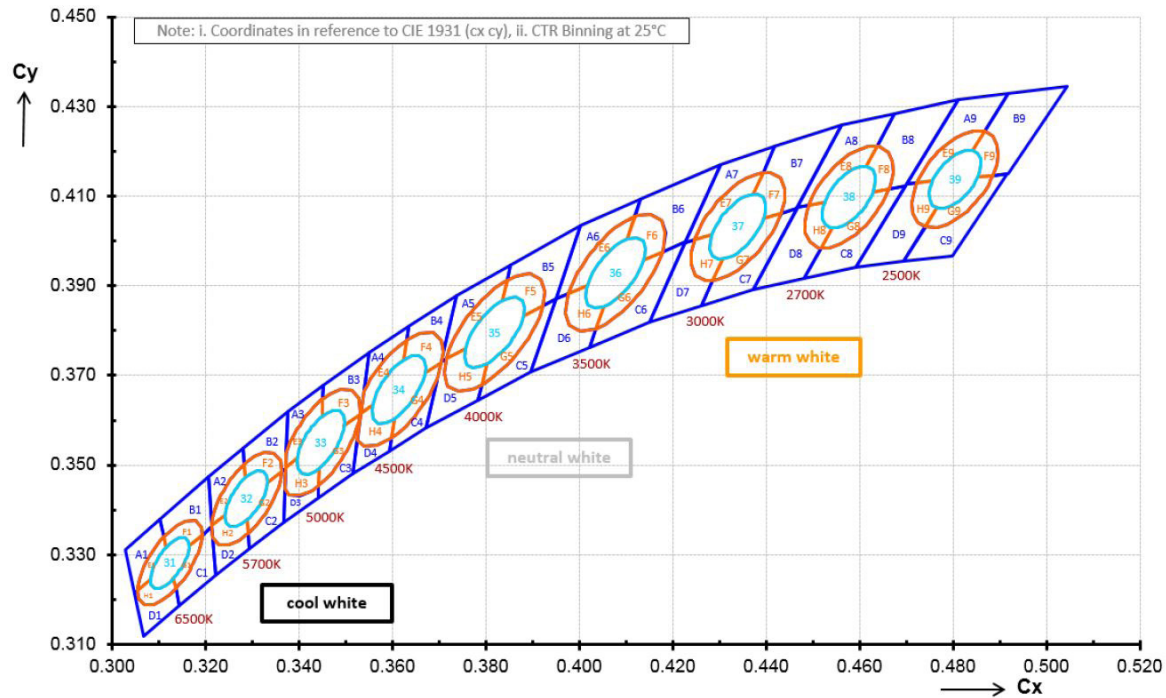
Side View Dimensions and Labels:

- Overall height: 20.2
- Mounting height: 1.8
- LED height: 0
- Bottom height: 6

-
- NewEnergy**TM

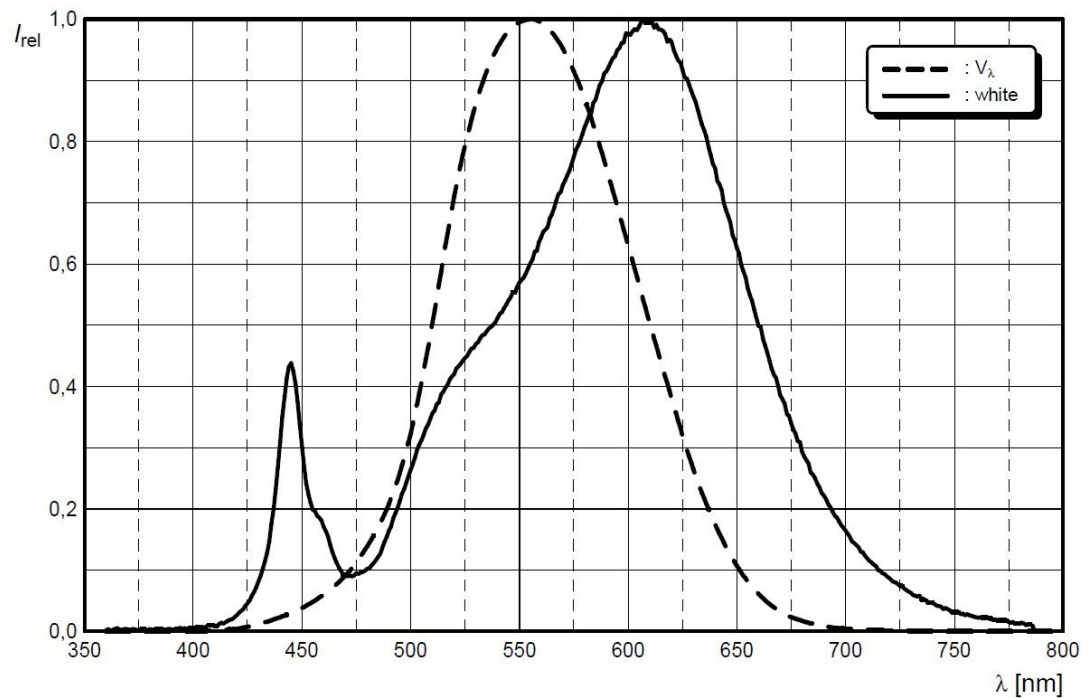
Linear LED Modules from NewEnergy

Standard White Chromaticity Regions



Relative Spectral Emission

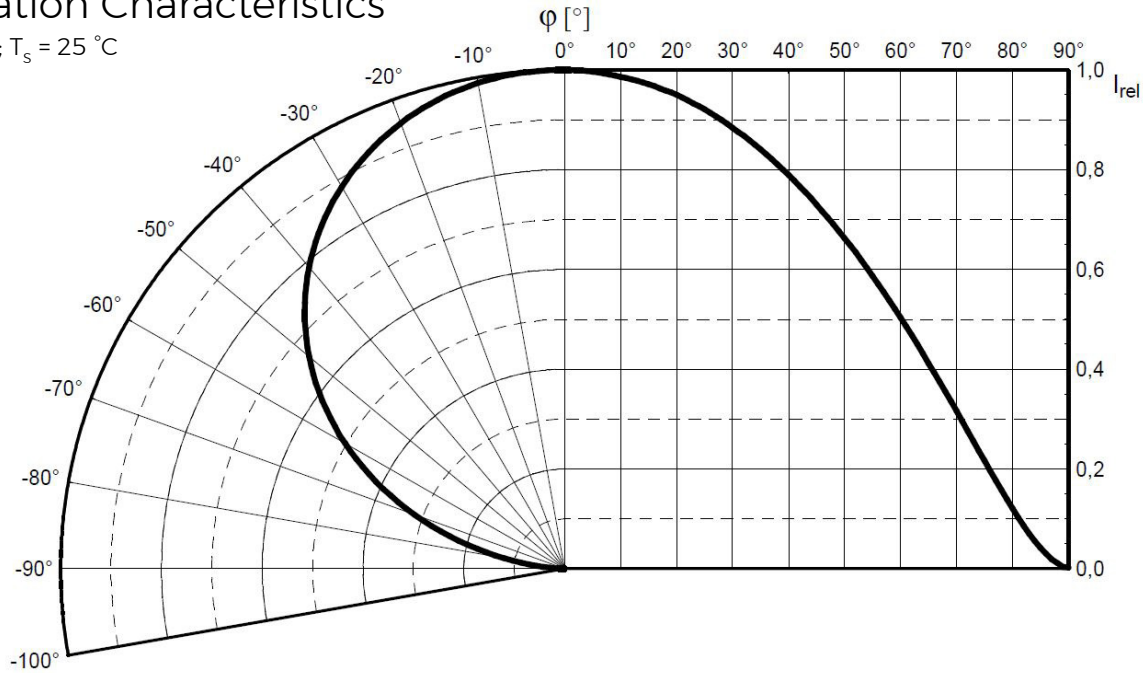
$\phi_{rel} = f(\lambda)$; $T_s = 25^\circ\text{C}$; $I_F = 65\text{ mA}$



Linear LED Modules from NewEnergy

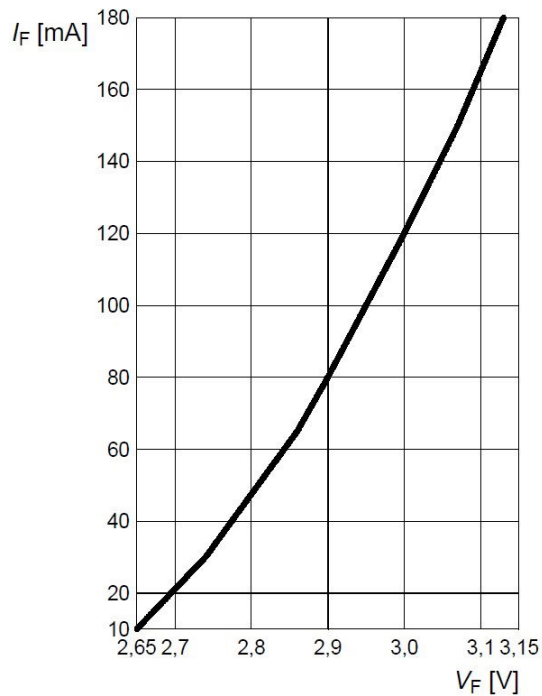
Radiation Characteristics

$$I_{\text{rel}} = f(\Phi); T_s = 25^\circ\text{C}$$



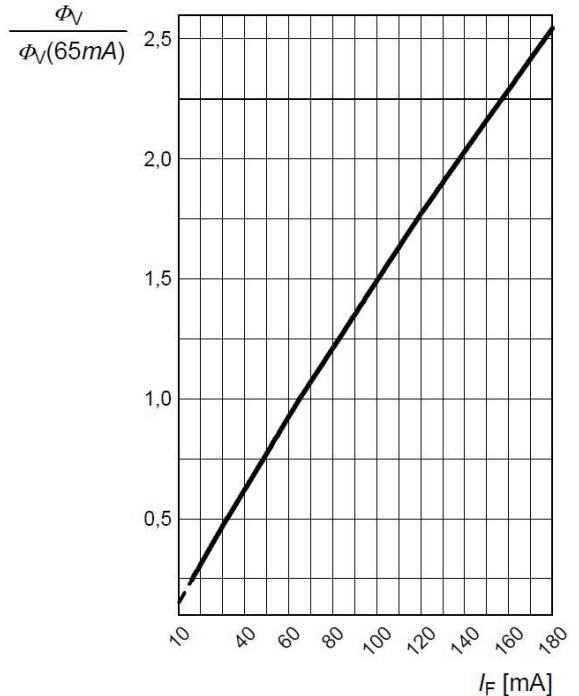
Forward Current

$$I_F = f(V_F); T_s = 25^\circ\text{C}$$



Relative Luminous Flux

$$\Phi_V / \Phi_V(65 \text{ mA}) = f(I_F); T_s = 25^\circ\text{C}$$



LED Specifications

See OSRAM Datasheet at www.osram.com for more LED Specifications