



## 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

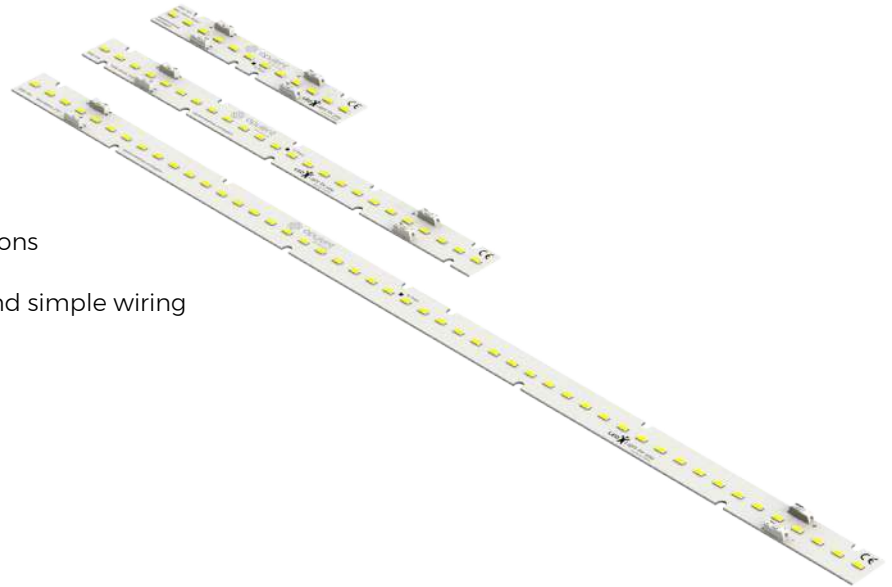
-Industry

-Retail



Architectural

Specialty



### 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 Opulent Americas 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, Opulent America's modules are easy to integrate into existing designs and can be quickly upgraded as LED performance improves.

### Custom Solutions

Opulent Americas 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 Opulent Americas

Opulent Americas 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, Opulent offers leading solid state lighting components, modules and custom solutions. Opulent customers get to market faster, with less resources, at lower costs. Visit [opulent-americas.com](http://opulent-americas.com) for more information.

RoHS CE

# Linear LED Modules from Opulent Americas

## 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 Opulent Americas

## Product Selection Table - 5.5" Linear Module

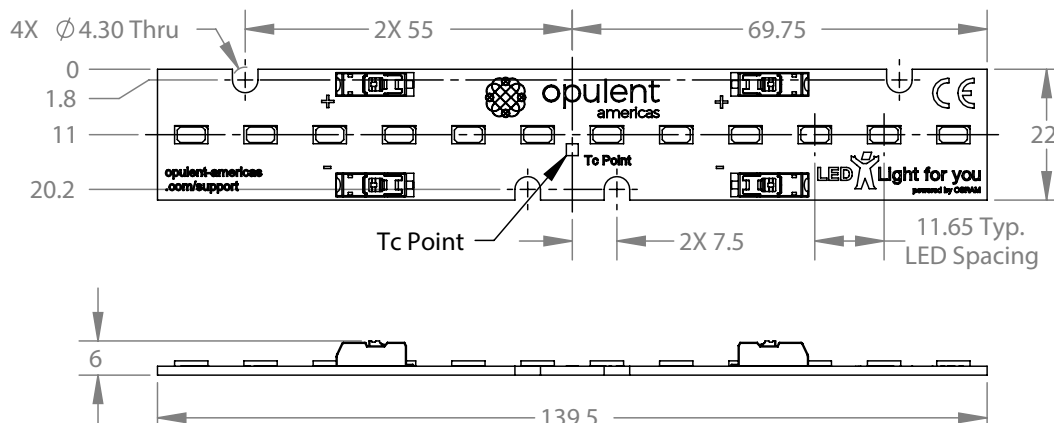
Series	Part Number	CCT	CRI	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
				Nominal 100mA	Max 150mA		Nominal	Max
Economy	SSB1-12F01-2780-00	2700K	>80	545	720	156	3.5	5.4
	SSB1-12F01-3080-00	3000K	>80	570	755	164	3.5	5.4
	SSB1-12F01-3580-00	3500K	>80	570	755	164	3.5	5.4
	SSB1-12F01-4080-00	4000K	>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

<sup>(1)</sup> Opulent Americas 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.

<sup>(2)</sup> Nominal Values @ Tj = 50°C

<sup>(3)</sup> 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 Opulent Americas

## Product Selection Table - 11" Linear Module

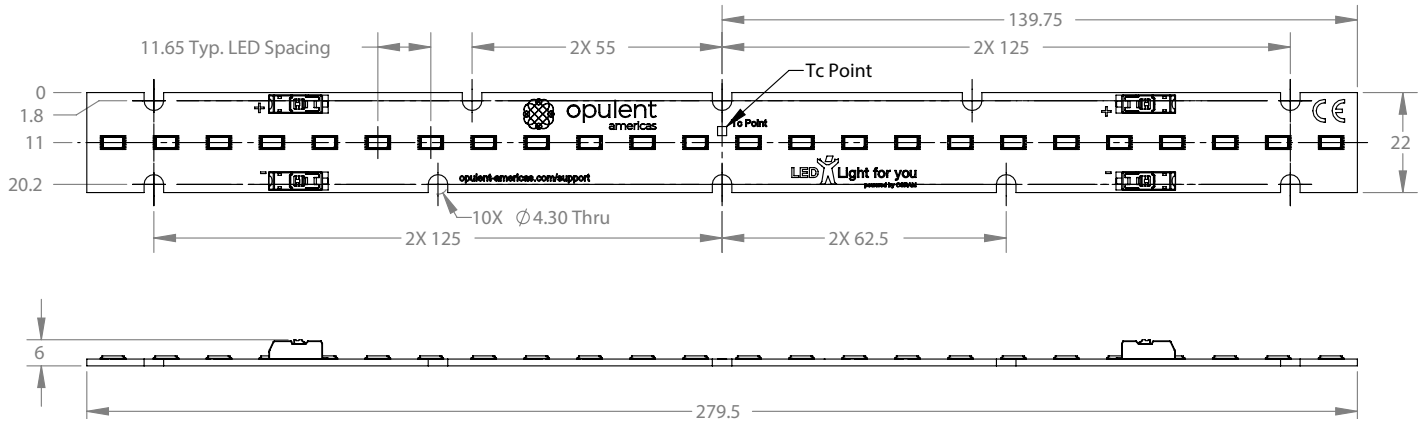
Series	Part Number	CCT	CRI	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
				Nominal 200mA	Max 300mA		Nominal	Max
Economy	SSB1-24F01-2780-00	2700K	>80	1090	1440	156	6.9	10.7
	SSB1-24F01-3080-00	3000K	>80	1140	1510	164	6.9	10.7
	SSB1-24F01-3580-00	3500K	>80	1140	1510	164	6.9	10.7
	SSB1-24F01-4080-00	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

<sup>(1)</sup> Opulent Americas 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.

<sup>(2)</sup> Nominal Values @ Tj = 50°C

<sup>(3)</sup> 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

# Linear LED Modules from Opulent Americas

## Product Selection Table - 22" Linear Module

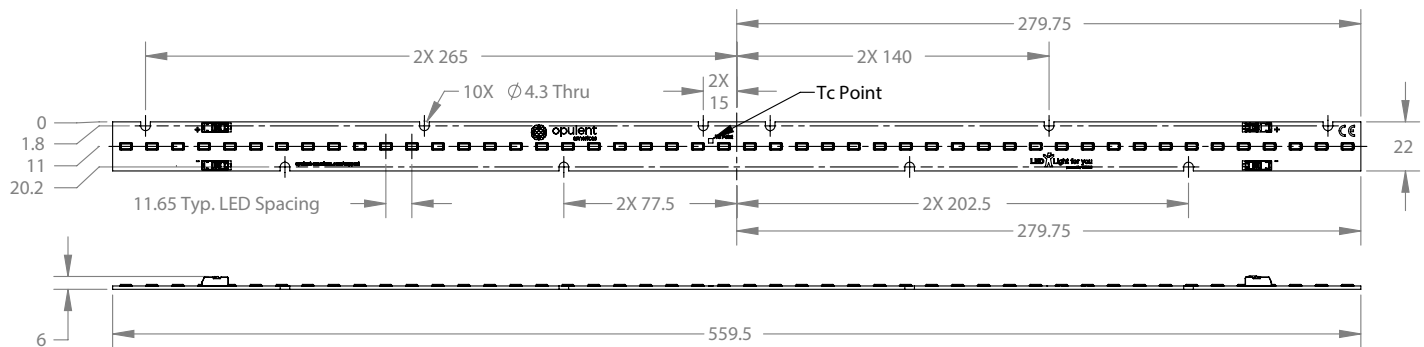
Series	Part Number	CCT	CRI	Luminous Flux (lm)		Efficacy Nominal (lm/W)	Watts (W)	
				Nominal 400mA	Max 600mA		Nominal	Max
Economy	SSB1-48F01-2780-00	2700K	>80	2180	2880	156	14.0	21.4
	SSB1-48F01-3080-00	3000K	>80	2280	3020	164	14.0	21.4
	SSB1-48F01-3580-00	3500K	>80	2280	3020	164	14.0	21.4
	SSB1-48F01-4080-00	4000K	>80	2384	3160	172	14.0	21.4
	SSB1-48F01-5080-00	5000K	>80	2384	3160	172	14.0	21.4
	SSB1-48F01-5780-00	5700K	>80	2384	3160	172	14.0	21.4
Performance	SPB1-48F01-2780-00	2700K	>80	2280	3200	164	14.0	21.4
	SPB1-48F01-3080-00	3000K	>80	2384	3360	172	14.0	21.4
	SPB1-48F01-3580-00	3500K	>80	2488	3508	179	14.0	21.4
	SPB1-48F01-4080-00	4000K	>80	2488	3508	179	14.0	21.4
	SPB1-48F01-5080-00	5000K	>80	2592	3656	187	14.0	21.4
	SPB1-48F01-5780-00	5700K	>80	2592	3656	187	14.0	21.4

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<sup>(2)</sup> Nominal Values @ Tj = 50°C

<sup>(3)</sup> Maximum Values @ Tj = 65°C

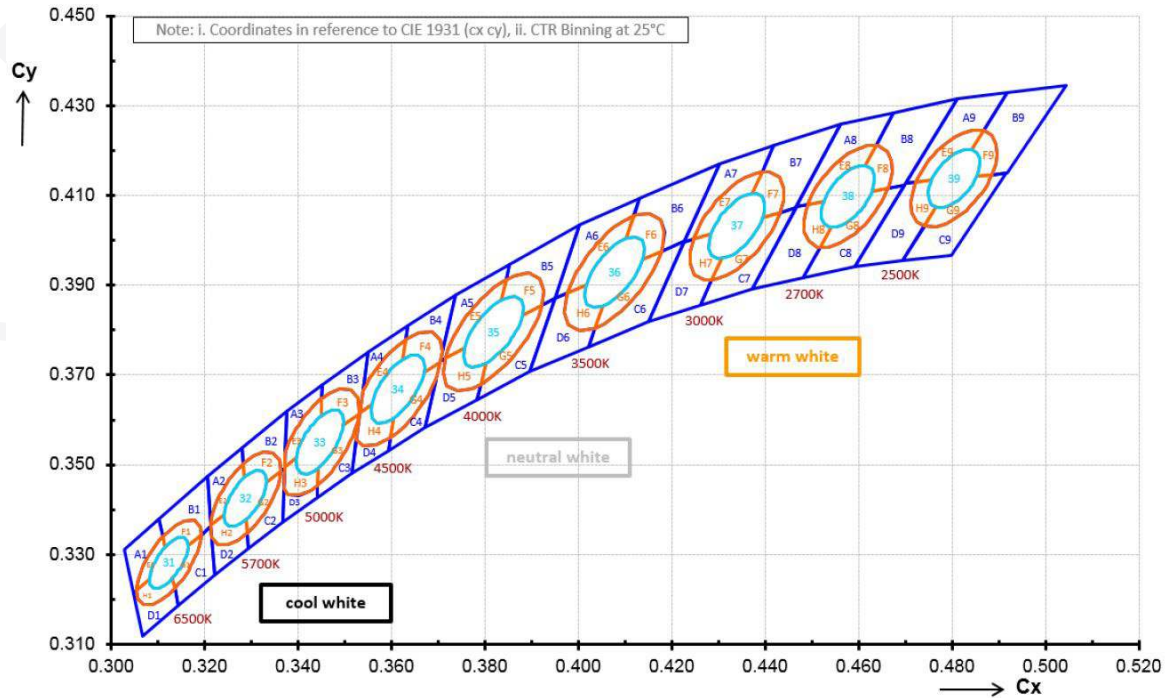
## Mechanical Dimensions



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

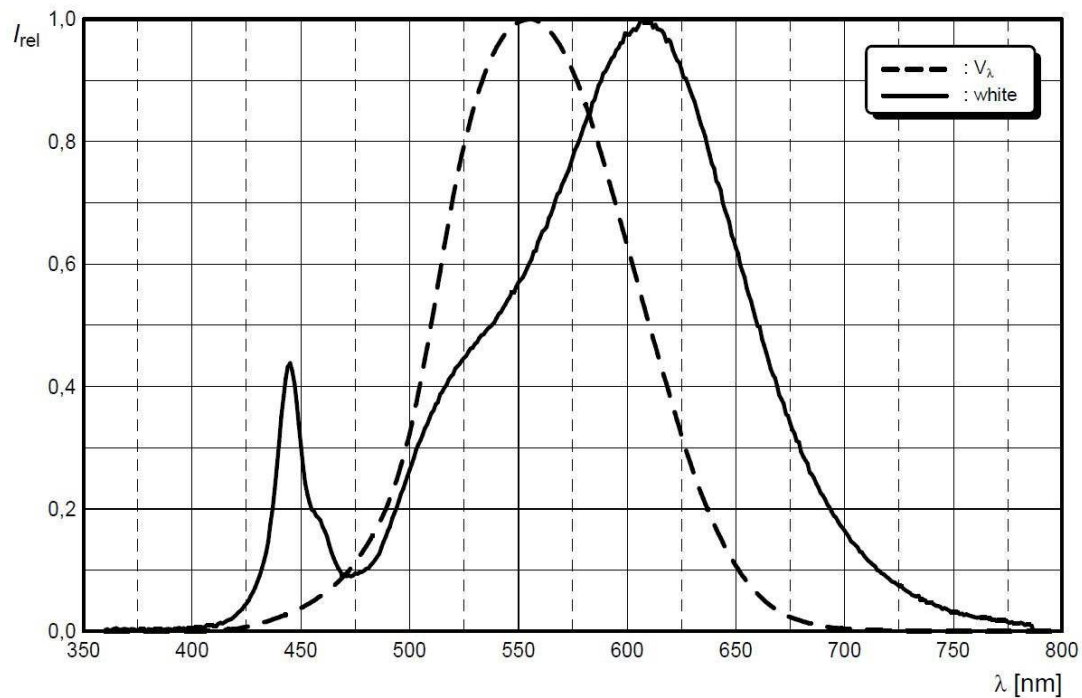
# Linear LED Modules from Opulent Americas

## Standard White Chromaticity Regions



## Relative Spectral Emission

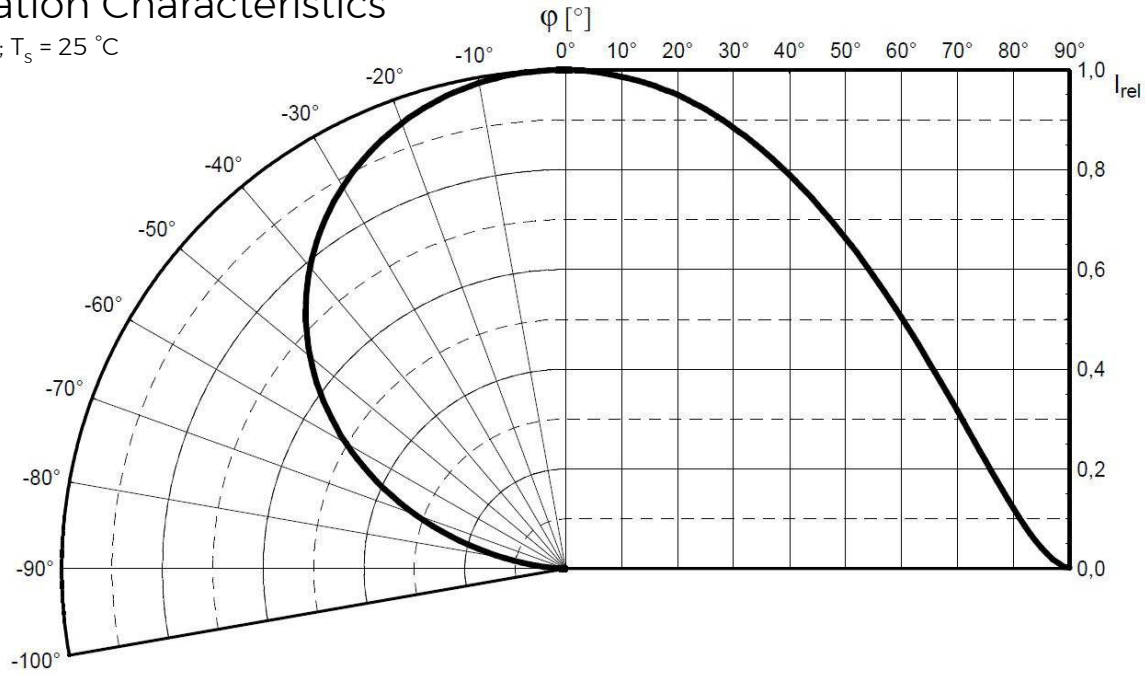
$\phi_{rel} = f(\lambda)$ ;  $T_s = 25^\circ\text{C}$ ;  $I_F = 65\text{ mA}$



# Linear LED Modules from Opulent Americas

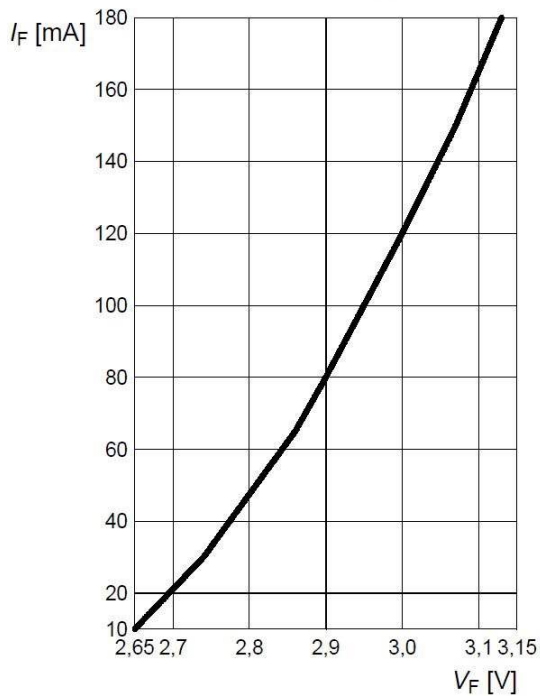
## Radiation Characteristics

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



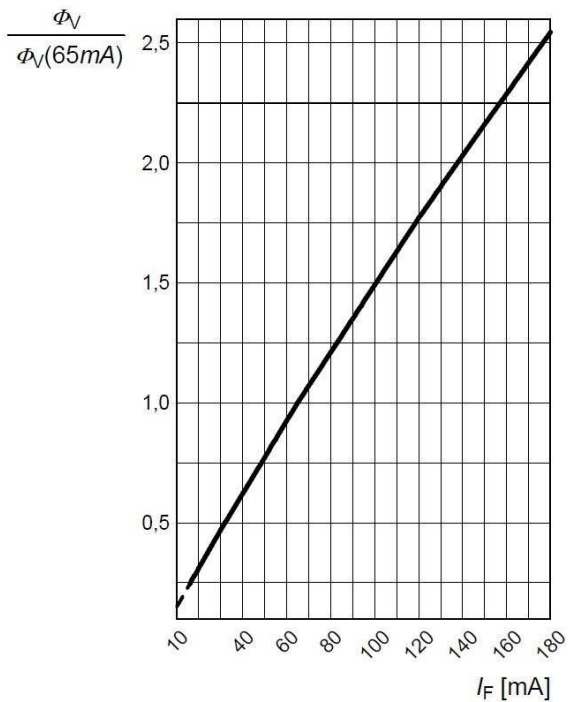
## Forward Current

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



## Relative Luminous Flux

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



## LED Specifications

See OSRAM Datasheet at [www.osram.com](http://www.osram.com) for more LED Specifications