



**Product Group:** Vishay Semiconductors, Diodes  
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The information below is also available in PDF format which can be read in Adobe® Acrobat® by clicking on this link:  
[http://www.vishay.com/marcom/hr/npi/npi\\_tlmx11xx\\_starled.pdf](http://www.vishay.com/marcom/hr/npi/npi_tlmx11xx_starled.pdf)  
 To access the product datasheets on the Vishay Web site, go to:  
<http://www.vishay.com/doc?83173> (TLMx11xx)

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## StarLED - an Ultra bright SMD Chip LED

### - A new Product Line -

### The smallest SMD LED available in wide range of Colours

#### The News:

These new devices have been designed to meet the increasing demand for AlInGaP and GaN based ultra-miniature size SMD LEDs. With dimensions of only 1.6mm (L) x 0.8mm (W) x 0.6mm (H), Vishays new StarLED series are compatible with the industry standard 0603 footprint. The package of the TLMx110x consists of a lead frame base, embedded in a clear epoxy.



Product	Color	Iv / mcd @ IF = 20 mA (typ.)	Dominant Wavelength/nm @ IF = 20mA (typ.)	Angle of Half Intensity (+/- typ.)
TLMS1100	Super red	63	633	80°
TLMO1100	Orange	80	606	80°
TLMY1100	Yellow	80	587	80°
TLMG1100	Green	35	570	80°
TLMP1100	Pure green	15	558	80°
TLMB1100	Blue	13	466	80°

#### Features:

- SMD LED with exceptional brightness
- Compatible with automatic placement equipment
- Reflow soldering, designed also for lead free solder process
- Available in 8 mm tape
- Low profile package
- High reliability lead frame based
- Temperature Range -40°C to +100°C
- Very low power consumption
- Luminous intensity ratio in one packaging unit  $I_{Vmax}/I_{Vmin} < 1,6$
- ESD withstand voltage up to 1 KV

**The Key Applications:**

- Backlight keypads
- Thinner mobile phones
- Indicator and backlight for audio and video equipment
- Indicator and backlight for battery driven equipment
- Indicator and backlight in office equipment
- Flat backlight for LCDs, switches and symbols
- Consumer appliances
- Medical instruments

**The Perspective:**

For high volume, mainstream and cost effective applications the new Vishay Semiconductor Single ESD Protection Diode Series in SOD523 SMD package represents a high industry standard.

**Availability:**

**TLMx11xx - Series: Samples available, Production Quantities Q3 / 2004**

**Lead times: 5 Weeks**

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