

T-1 3/4 (5mm) CYLINDRICAL LED LAMPS

BRIGHT RED SHR15x GREEN SUG15x
 HIGH EFFICIENCY RED SUR15x YELLOW SUY15x
 ORANGE SUO15x
 SUPER BRIGHT RED/ SUPER BRIGHT GREEN SMGR15x



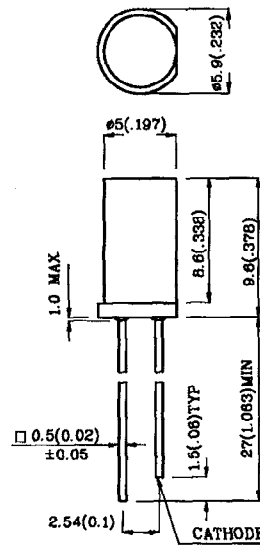
❖Dimensions

❖Features

CYLINDRICAL TYPE, TOP DIFFUSED.
 LOW POWER CONSUMPTION.
 SUPER BRIGHT RED AND SUPER GREEN BI-COLOR VERSION IS AVAILABLE.
 I.C. COMPATIBLE.
 RELIABLE AND RUGGED.
 LONG LIFE - SOLID STATE RELIABILITY.
 AVAILABLE ON TAPE AND REEL.

❖Description

The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.
 The Green and Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.
 The High Efficiency Red and Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.
 The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.
 The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.



Notes:
 1. All dimensions are in millimeters (inches).
 2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.

❖Selection Guide

Part No.	Dice	Case-Color	Iv (mcd) @ 10 mA *20mA		Viewing Angle
			Min.	Max.	
SHR15D	BRIGHT RED (GaP)	RED DIFFUSED	0.5	3.2	100°
SUR15D	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3.2	12.5	100°
SUO15D	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	3.2	12.5	100°
SUG15D	GREEN (GaP)	GREEN DIFFUSED	1.3	8.0	100°
SUY15D	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	1.3	8.0	100°
SMGR15M	SUPER BRIGHT RED (GaAlAs)	WHITE DIFFUSED	*12.5	*60.0	80°
	SUPER BRIGHT GREEN (GaP)		*5.0	*20.0	

Note:
 1. $\theta/2$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

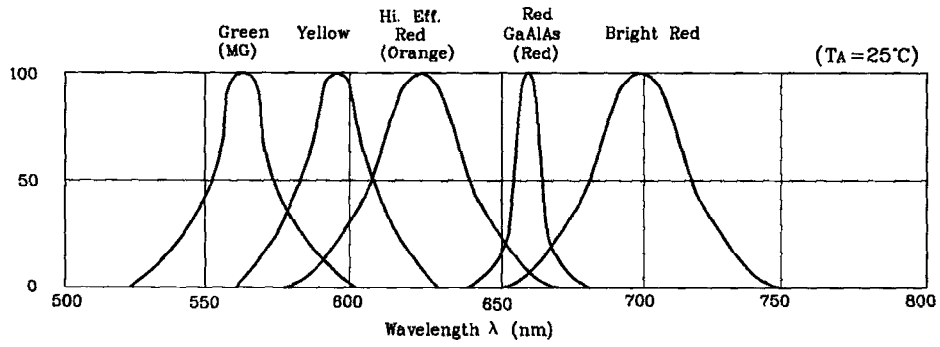
Sxx15x Series

❖ Absolute Maximum Ratings at T_A=25°C

Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Super Bright Red	Super Bright Green	Units
Power dissipation	120	105	105	105	105	100	105	mW
DC Forward Current	25	30	30	25	30	30	25	mA
Peak Forward Current [τ≤10us]	150	150	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C							
Lead Soldering Temperature [4mm below package base]	260°C For 5 Seconds							

❖ Electrical / Optical Characteristics at T_A=25°C

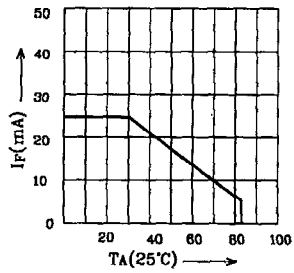
Parameter	Symbol	Dice	Typ.	Max.	Units	Test Conditions
Peak Wavelength	λ _{peak}	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	700 625 625 565 590 660 565		nm	IF=20mA
Spectral Line Halfwidth	Δλ _{1/2}	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	45 45 45 30 35 20 30		nm	IF=20mA
Capacitance	C	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	40 12 12 45 10 95 45		pF	V _F =0V;f=1MHz
Forward Voltage	V _F	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	2.0 2.0 2.0 2.2 2.1 1.85 2.2	2.5 2.5 2.5 2.5 2.5 2.5 2.5	V	IF=20mA
Reverse Current	I _R	All	10		uA	V _R = 5V



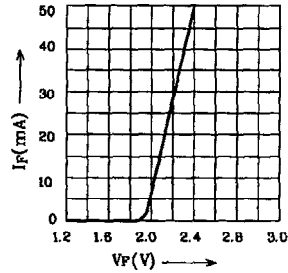
SHR15x Series

◆ Bright Red

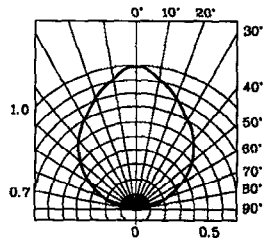
Forward current derating curve



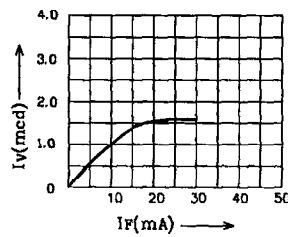
Forward current Vs. Forward voltage



Radiation Characteristics



Luminous Intensity Vs. Forward Current

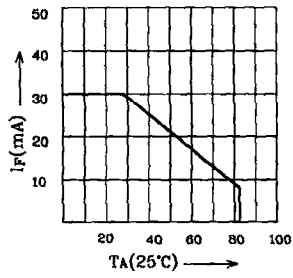


SUR15x / SUO15x / SUG15x Series

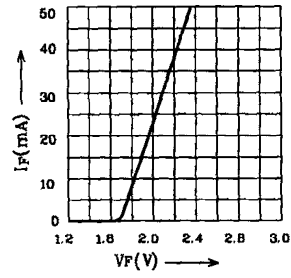
❖ **High Efficiency**

❖ **Orange**

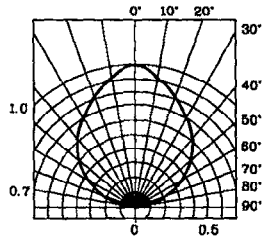
Forward current derating curve



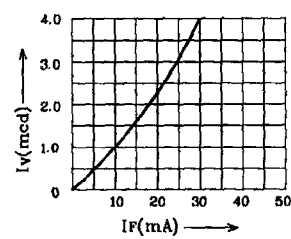
Forward current Vs. Forward voltage



Radiation Characteristics

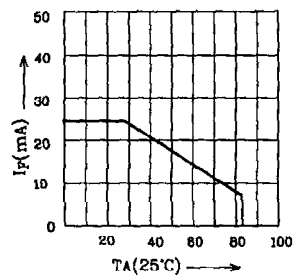


Luminous Intensity Vs. Forward Current

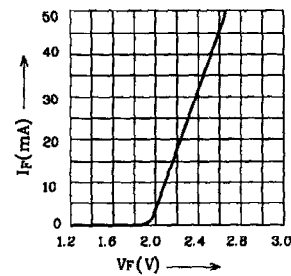


❖ **Green**

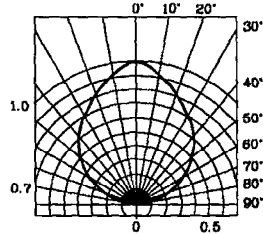
Forward current derating curve



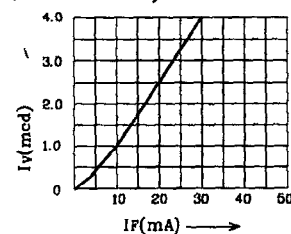
Forward current Vs. Forward voltage



Radiation Characteristics



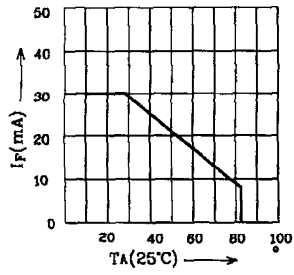
Luminous intensity Vs. Forward Current



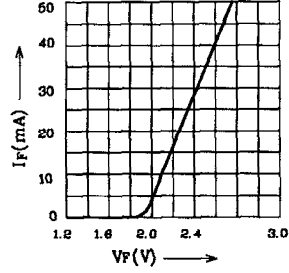
SUY15x / SMGR15x Series

❖ Yellow

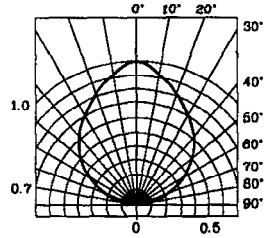
Forward current derating curve



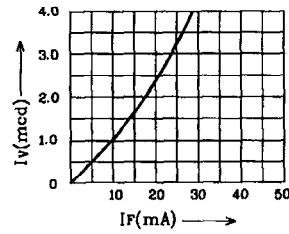
Forward current Vs. Forward voltage



Radiation Characteristics

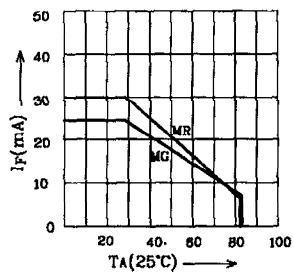


Luminous Intensity Vs. Forward Current

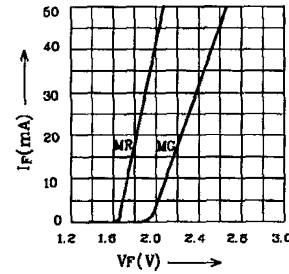


❖ Super Bright Red / Super Bright Green

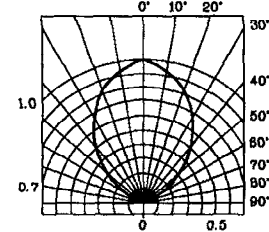
Forward current derating curve



Forward current Vs. Forward voltage



Radiation Characteristics



Luminous Intensity Vs. Forward Current

