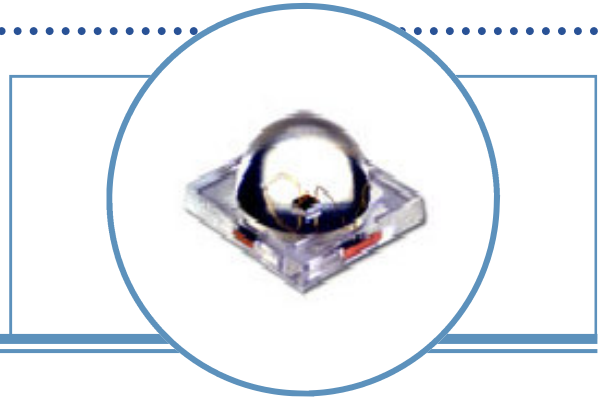


# 1-Watt SMD Red LED Lamp (7mm)

## OVSPRAC5R8

- High luminous flux output for illumination
- Exposed pad design for excellent heat transfer
- Designed for high current operation
- Reflow soldering applicable

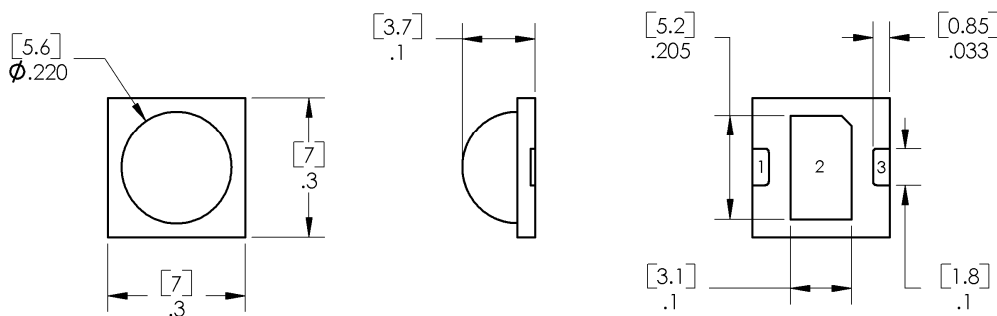


The OVSPRAC5R8 is designed to handle high current and heat and emits sufficient light for a variety of lighting and illumination applications. Small size and high power allow for compact and cost-effective lighting solutions.

### Applications

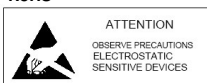
- Automotive: Exterior and Interior Lighting
- Backlighting LCD Displays: Televisions and Computer Monitors
- Entertainment: Studios, Theaters, Nightclubs, Restaurants
- Accent Lighting: Wall Wash, Landscape, Spotlight
- Bicycle and Pedestrian Safety Lights

Part Number	Material	Emitted Color	Flux Typ. lm	Lens Color
OVSPRAC5R8	AllnGaP	Red	32	Water Clear



1 ANODE 2 HEAT SINK 3 CATHODE

DIMENSIONS ARE IN INCHES AND [MILLIMETERS].



Data is subject to change without prior notice.

# 1-Watt SMD Red LED Lamp (7mm)

## OVSPRAC5R8

### Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$  (on metal core PCB<sup>1</sup>) unless otherwise noted

Storage Temperature Range	-30 ~ +85 °C
Operating Temperature Range	-30 ~ +85 °C
Reverse Voltage	5 V
Continuous Forward Current	450 mA
Peak Forward Current (10% Duty Cycle, 1KHz)	700 mA
Power Dissipation	1.00 W
Junction Temperature	+115°C
Junction-to-case <sup>2</sup>	20 °C/W

Notes:

1. Metal core PCB defined as good heat transmission substrate (thickness of 2.0mm Al-based PCB 20x20mm,  $\Theta_{JC} < 15^\circ\text{C/W}$  could do)
2. Rth test condition: mounted on 2.0mm Al-based PCB 20x20mm

### Electrical Characteristics

$T_A = 25^\circ\text{C}$  (on metal core PCB<sup>1</sup>) unless otherwise noted

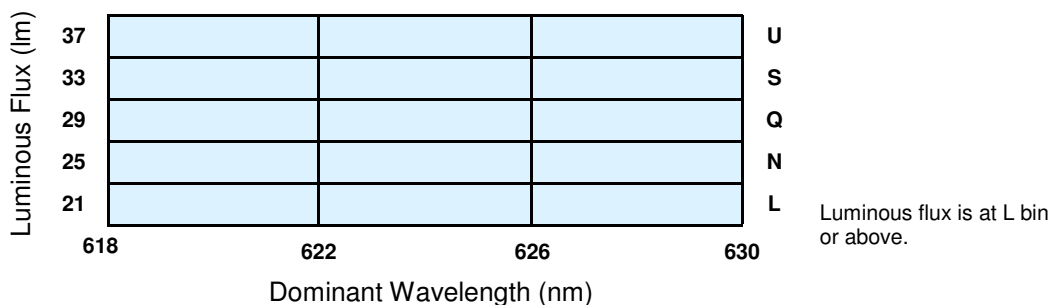
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
lumen	Luminous Flux	21	32	----	lm	$I_F = 450\text{mA}$
$V_F$	Forward Voltage	----	2.4	2.8	V	$I_F = 450\text{mA}$
$I_R$	Reverse Current	----	----	10	$\mu\text{A}$	$V_R = 5\text{V}$
$\lambda_D$	Dominant Wavelength	618	624	630	nm	$I_F = 450\text{mA}$
$2\ \Theta_{1/2}$	50% Power Angle	----	105	----	deg	$I_F = 450\text{mA}$

Note:

1. Metal core PCB defined as good heat transmission substrate (thickness of 2.0mm Al-based PCB 20x20mm,  $\Theta_{JC} < 15^\circ\text{C/W}$  could do)

### Standard Bins ( $I_F = 450\text{mA}$ )

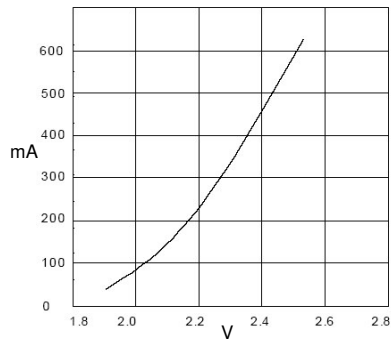
Lamps are sorted to luminous flux ( $\Phi_V$ ) and dominant wavelength ( $\lambda_D$ ) and ranked as shown. Orders for OVSPRAC5R8 may be filled with any or all bins contained as below.



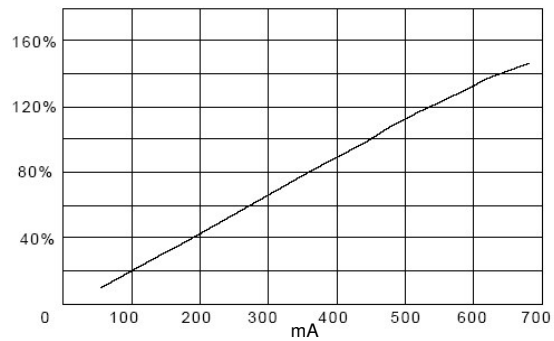
### Important Notes:

1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
2. Pb content <1000PPM.
3. To designate luminous intensity ranks, please contact OPTEK.

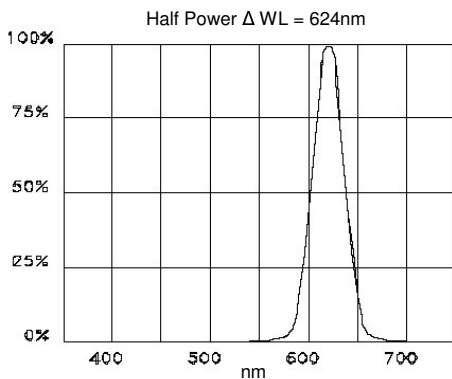
### Typical Electro-Optical Characteristics Curves



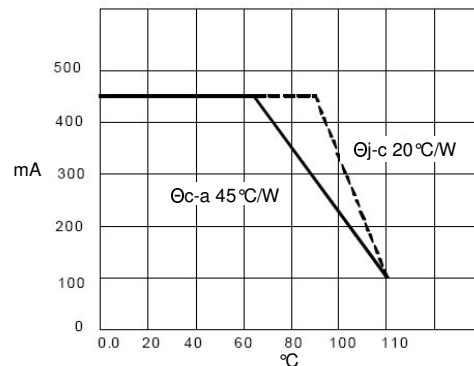
Forward Current vs. Forward Voltage



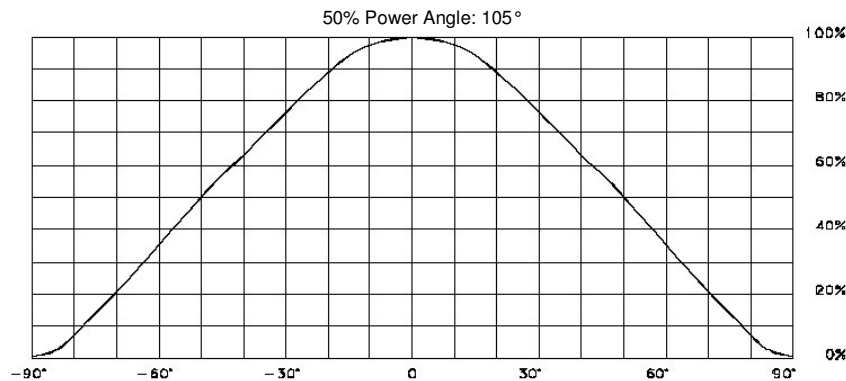
Relative Luminous Flux vs. Forward Current



Relative Luminous Intensity vs. Wavelength



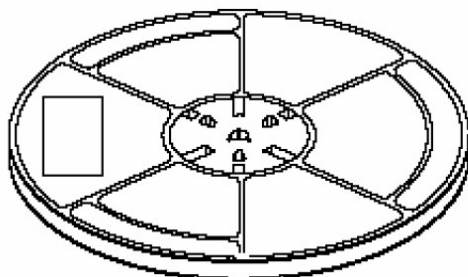
Maximum Forward DC Current vs. Ambient Temperature



Far Field Pattern

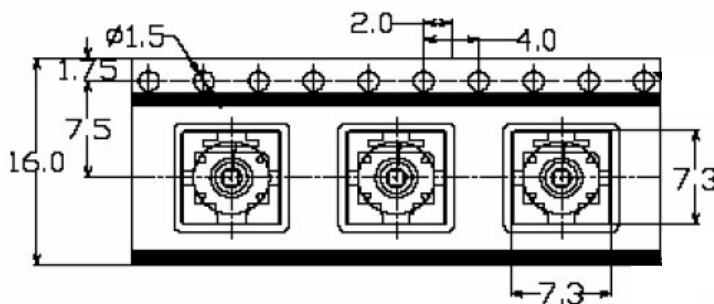
# 1-Watt SMD Red LED Lamp (7mm) OVSPRAC5R8

## Reel Dimensions (13 Inch)



REEL  
(506-DORREE-00)  
( $\varnothing$ 330x16mm)

## Carrier Tape Dimensions: Loaded Quantity 1400 PCS per Reel



## Moisture Resistant Packaging

