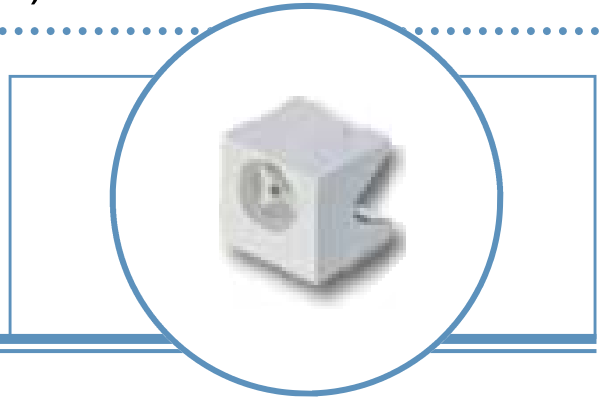


# Red Side-Emitting SMD LED (4 x 4 mm, 120° Viewing Angle)

## OVS9RBCR8

- Compact size allows use in space conscious devices
- Thin profile offers unlimited design flexibility
- Long life span reduces maintenance cost
- Suitable for all SMT assembly methods
- Red (624 nm)

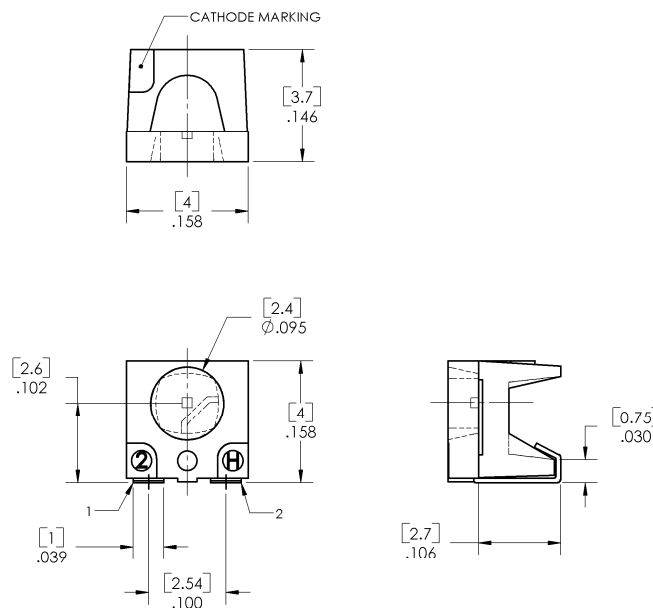


The **OVS9RBCR8** is a side-looking red 4.0 mm x 4.0 mm 120° angle surface-mounted LED that can be used as a light source in many applications. Its compact size and thin profile offer maximum design flexibility, while its long life span reduces maintenance cost.

## Applications

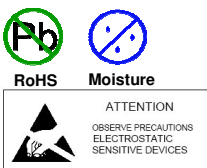
- Optical indicators
- Coupling into light guides
- Back lights (LCD switches, keys, displays, illuminated advertising, general lighting)
- Interior automotive lighting (dashboard backlighting, etc.)
- Automotive applications
- Marker lights (e.g., steps, exit ways, etc.)
- Signal and symbol luminaire

Part Number	Material	Emitted Color	Intensity Typ. mcd	Lens Color
OVS9RBCR8	AlGaInP	Red	400	Water Clear



1 CATHODE 2 ANODE  
DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

**DO NOT LOOK DIRECTLY AT LED WITH UNSHIELDED EYES OR DAMAGE TO RETINA MAY OCCUR.**



OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

# Red Side-Emitting SMD LED

## OVSR9RBCR8

### Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$  unless otherwise noted

Storage Temperature Range	-40 ~ +100°C
Operating Temperature Range	-40 ~ +100°C
Junction Temperature	110°C
Junction/Ambient <sup>1</sup>	500°C/W
Junction/Solder Point	350°C/W
Reverse Voltage	5 V
Continuous Forward Current	50 mA
Peak Forward Current (10% Duty Cycle, PW ≤ 100 μsec)	200 mA
Power Dissipation	130 mW

Note:

1. Rth test condition: Mounted on PC board FR 4 (pad size ≥ 16 mm<sup>2</sup>).

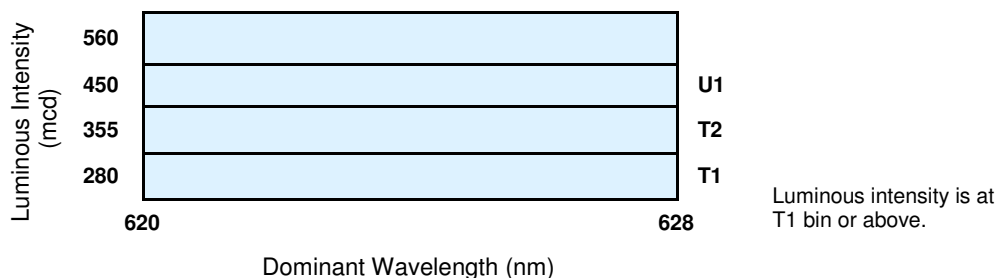
### Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
$I_V$	Luminous Intensity	280	400	----	mcd	$I_F = 20\text{ mA}$
$V_F$	Forward Voltage	----	2.3	2.6	V	$I_F = 20\text{ mA}$
$I_R$	Reverse Current	----	----	10	μA	$V_R = 5\text{ V}$
$\lambda_D$	Dominant Wavelength	620	628	635	nm	$I_F = 20\text{ mA}$
$2\theta_{1/2}$	50% Power Angle	----	120	----	deg	$I_F = 20\text{ mA}$

### Standard Bins ( $I_F = 20\text{ mA}$ )

Lamps are sorted to luminous intensity ( $I_V$ ) and dominant wavelength ( $\lambda_D$ ) bins shown. Orders for OVSR9RBCR8 may be filled with any or all bins contained as below.



Notes:

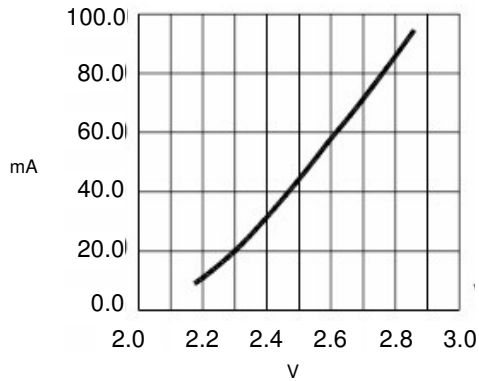
1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
2. To designate luminous intensity ranks, please contact OPTEK.

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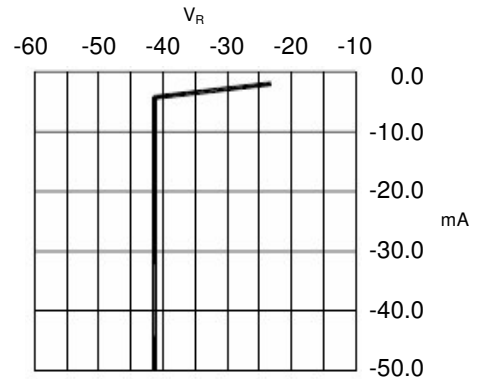
# Red Side-Emitting SMD LED

## OVSR9RBCR8

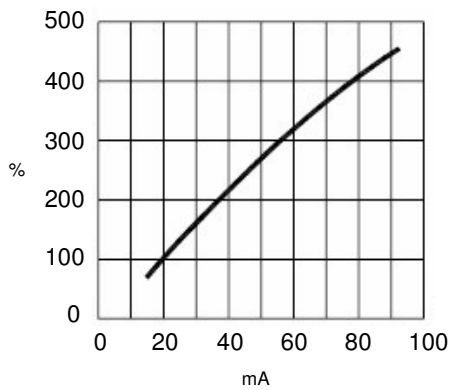
### Typical Electro-Optical Characteristics Curves



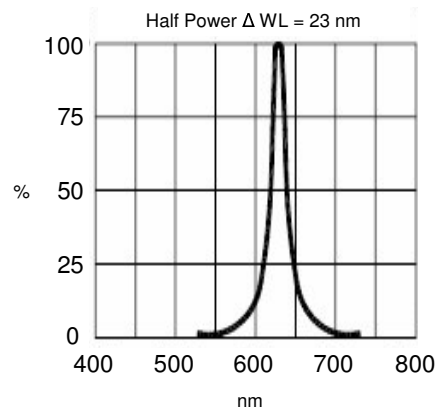
Forward Current vs Forward Voltage



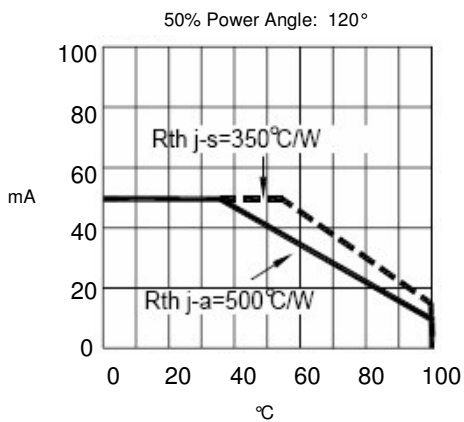
Reverse Current vs Reverse Voltage



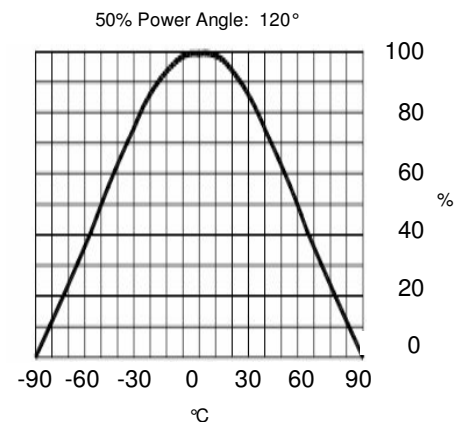
Relative Luminous Intensity vs Forward Current



Relative Luminous Intensity vs Wavelength



Maximum Forward Current vs Ambient Temperature



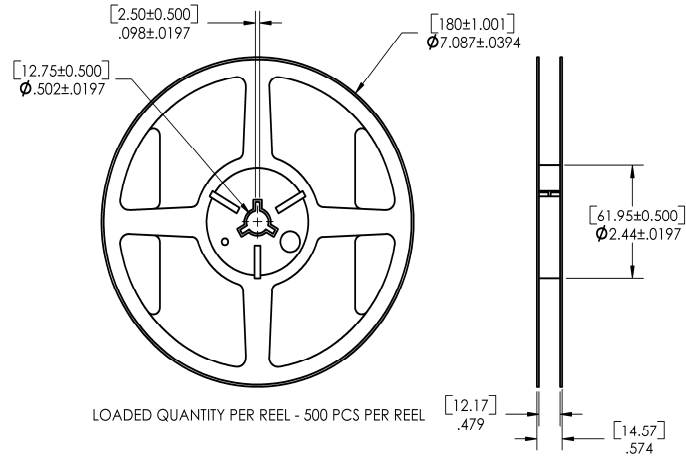
Far Field Pattern

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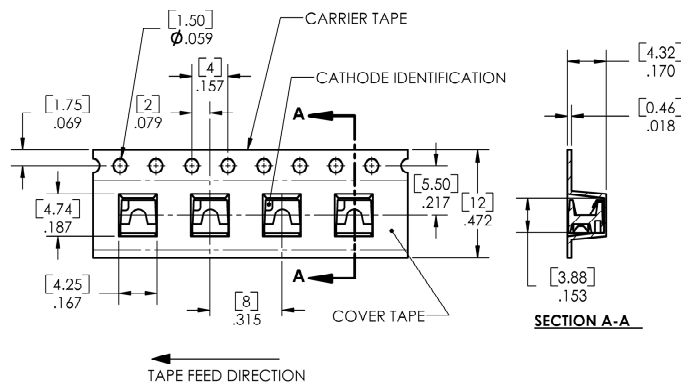
# Red Side-Emitting SMD LED

## OVSR9RBCR8

### Reel Dimensions: 7-inch reel

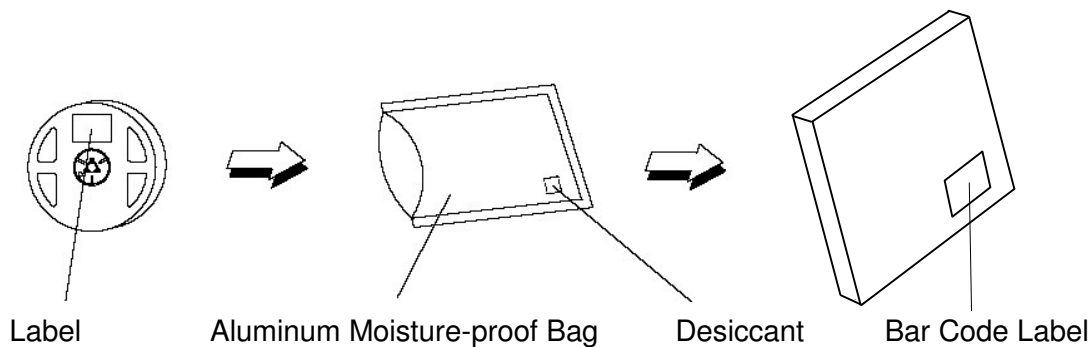


### Carrier Tape Dimensions: Loaded quantity 500 pieces per reel



DIMENSIONS ARE IN INCHES AND [MILLIMETERS].  
TOLERANCES ARE ±.0039 [0.1] UNLESS OTHERWISE SPECIFIED.

### Moisture Resistant Packaging



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