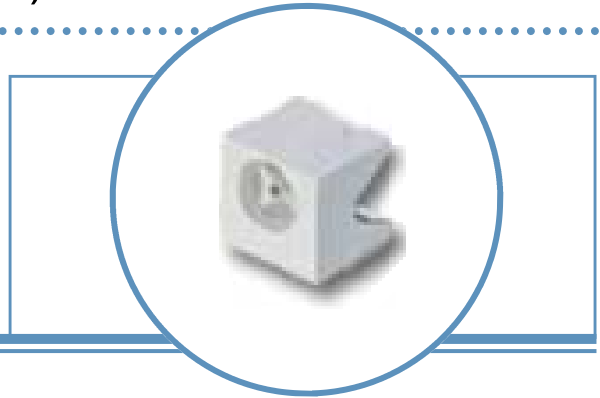


Red Side-Emitting SMD LED (4 x 4 mm, 120° Viewing Angle)

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)

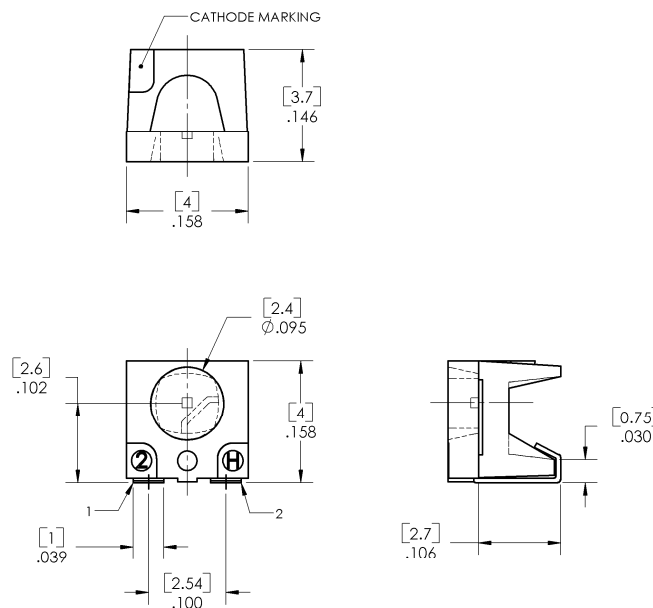


The **OVS9RBCR8** is a side-looking red 4.0 mm x 4.0 mm 120° angle surface-mounted LED that can be used as a light source in many applications. Its compact size and thin profile offer maximum design flexibility, while its long life span reduces maintenance cost.

Applications

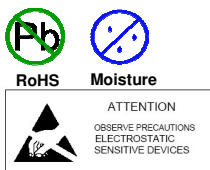
- Optical indicators
- Coupling into light guides
- Back lights (LCD switches, keys, displays, illuminated advertising, general lighting)
- Interior automotive lighting (dashboard backlighting, etc.)
- Automotive applications
- Marker lights (e.g., steps, exit ways, etc.)
- Signal and symbol luminaire

| 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 ¹ | 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 mm²).

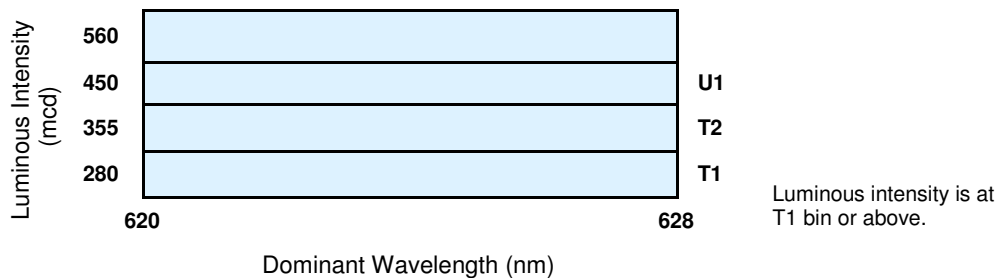
Electrical Characteristics

$T_A = 25^\circ\text{C}$ 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 | $V_R = 5\text{ V}$ |
| λ_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 (λ_D) bins shown. Orders for OVSR9RBCR8 may be filled with any or all bins contained as below.



Notes:

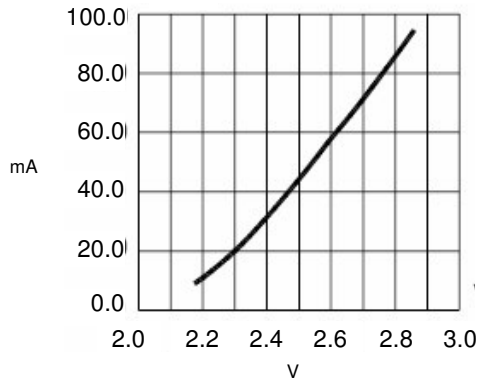
1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
2. To designate luminous intensity ranks, please contact OPTEK.

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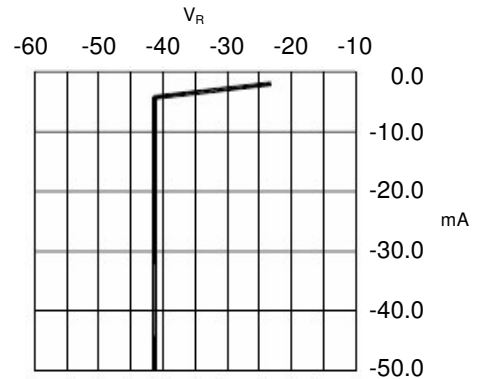
Red Side-Emitting SMD LED

OVSR9RBCR8

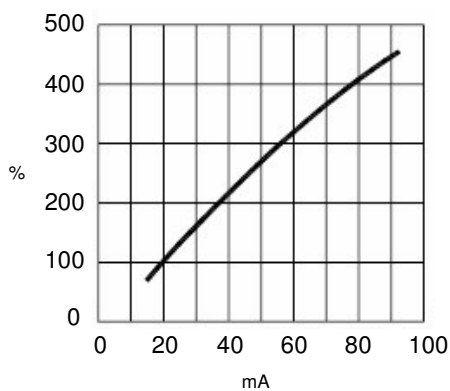
Typical Electro-Optical Characteristics Curves



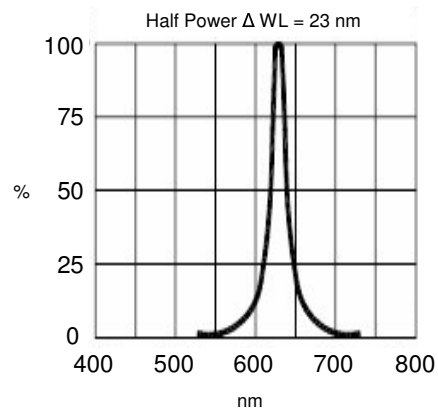
Forward Current vs Forward Voltage



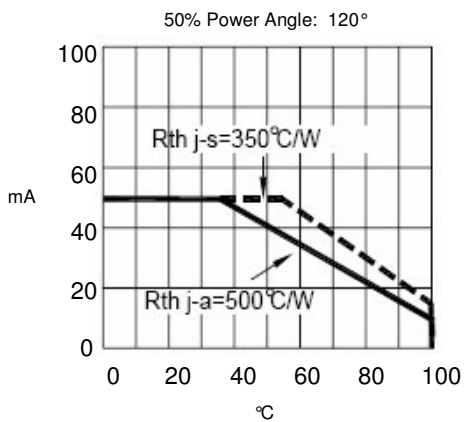
Reverse Current vs Reverse Voltage



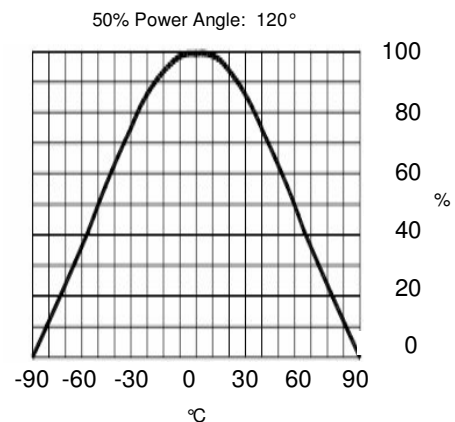
Relative Luminous Intensity vs Forward Current



Relative Luminous Intensity vs Wavelength



Maximum Forward Current vs Ambient Temperature



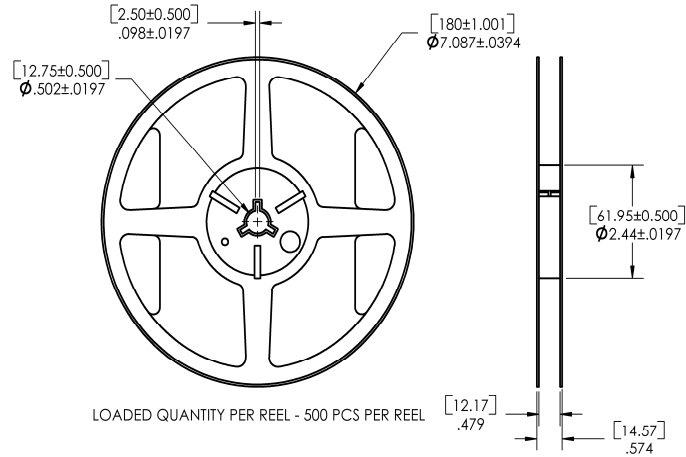
Far Field Pattern

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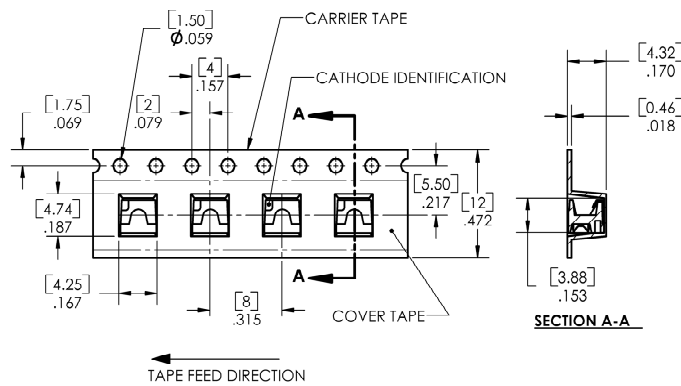
Red Side-Emitting SMD LED

OVSR9RBCR8

Reel Dimensions: 7-inch reel

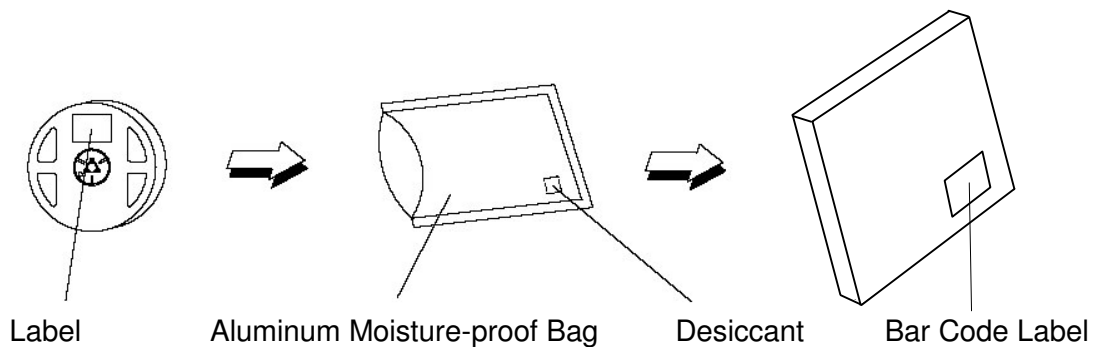


Carrier Tape Dimensions: Loaded quantity 500 pieces per reel



DIMENSIONS ARE IN INCHES AND [MILLIMETERS].
TOLERANCES ARE $\pm .0039$ [0.1] UNLESS OTHERWISE SPECIFIED.

Moisture Resistant Packaging



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