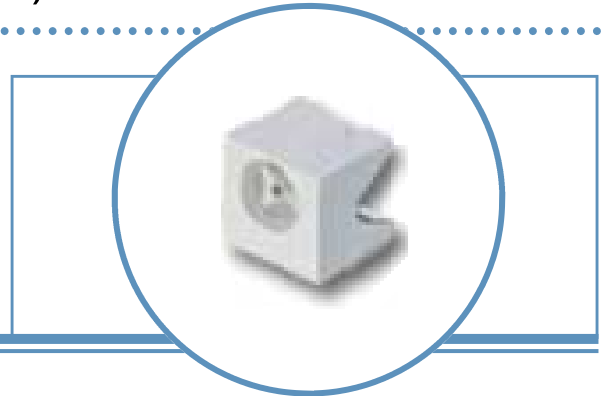


# Blue-Green Side-Emitting SMD LED (4 x 4 mm, 120° Viewing Angle)

## OVS9CBCR8

- 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
- Blue-green (505 nm) water clear lens

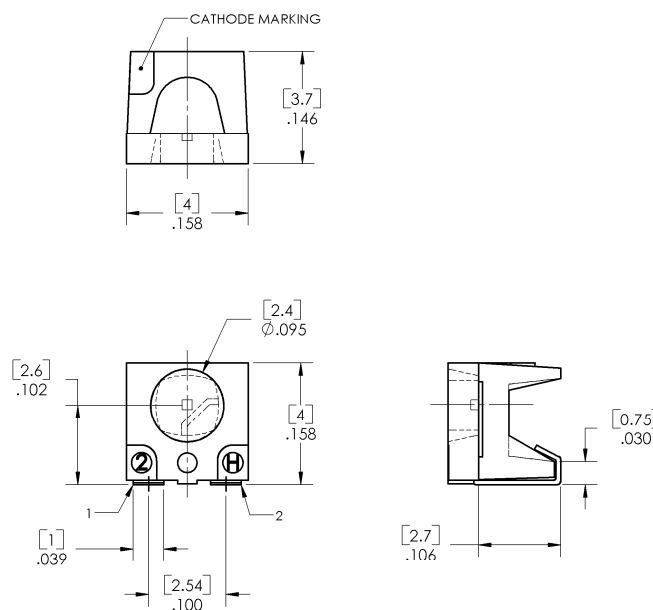


The **OVS9CBCR8** is a side-looking blue-green 4.0 mm x 4.0 mm 120° surface-mounted LED that can be used as a light source in many applications. Its compact size and thin profile offer maximum design flexibility coupled with a long life span that reduces maintenance cost.

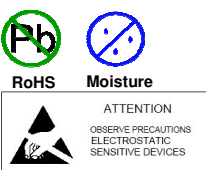
### Applications

- 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  |
|-------------|----------|---------------|--------------------|-------------|
| OVS9CBCR8   | InGaN    | Blue-Green    | 400                | Water Clear |



**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.

# Blue-Green Side-Emitting SMD LED

## OVSR9CBCR8



### Absolute Maximum Ratings

T<sub>A</sub> = 25° 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>                                     | 350° C/W      |
| Junction/Solder Point   | 250° C/W      |
| Reverse Voltage   | 5 V           |
| Continuous Forward Current  | 20 mA         |
| Peak Forward Current (10% Duty Cycle, PW ≤ 100 μsec) <sup>2</sup> | 100 mA        |
| Power Dissipation   | 85 mW         |

Notes:

1. Rth test condition: Mounted on PCBoard FR 4 (pad size ≥ 16 mm<sup>2</sup>).
2. Pulse width ≤ 0.1 msec, duty ≤ 1/10.

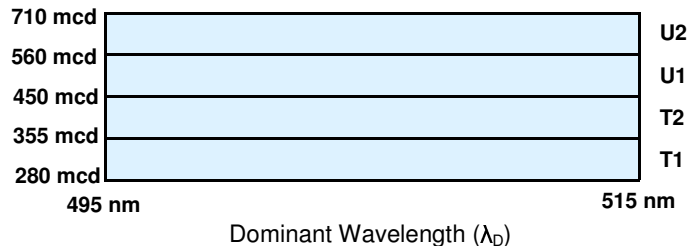
### Electrical Characteristics

T<sub>A</sub> = 25° C unless otherwise noted

| SYMBOL             | PARAMETER           | MIN | TYP | MAX | UNITS | CONDITIONS             |
|--------------------|---------------------|-----|-----|-----|-------|------------------------|
| I <sub>V</sub>     | Luminous Intensity  | 280 | 400 | --- | mcd   | I <sub>F</sub> = 20 mA |
| V <sub>F</sub>     | Forward Voltage     | --- | 3.6 | 4.2 | V     | I <sub>F</sub> = 20 mA |
| I <sub>R</sub>     | Reverse Current     | --- | --- | 10  | μA    | V <sub>R</sub> = 5 V   |
| λ <sub>D</sub>     | Dominant Wavelength | 495 | 505 | 515 | nm    | I <sub>F</sub> = 20 mA |
| 2 Θ <sub>1/2</sub> | 50% Power Angle     | --- | 120 | --- | deg   | I <sub>F</sub> = 20 mA |

### Standard Bins (I<sub>F</sub> = 20mA)

Lamps are sorted to luminous intensity (I<sub>V</sub>) and dominant wavelength (λ<sub>D</sub>) bins shown. Orders for OVSR9CBCR8 may be filled with any or all bins contained as below.



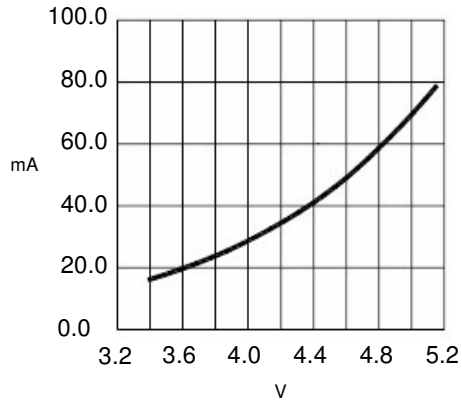
Luminous intensity is at T1 bin or above.

Notes:

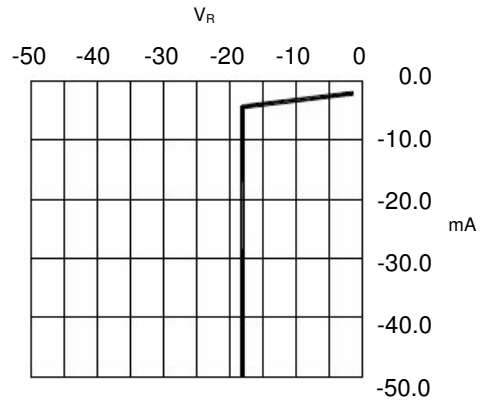
1. All ranks will be included per delivery. Rank ratio will be based on the chip distribution.
2. To designate luminous intensity ranks, please contact OPTEK.

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

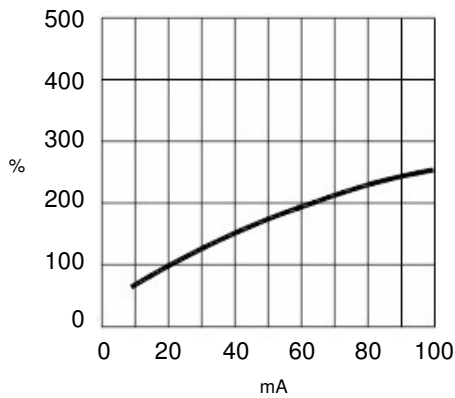
### Typical Electro-Optical Characteristics Curves



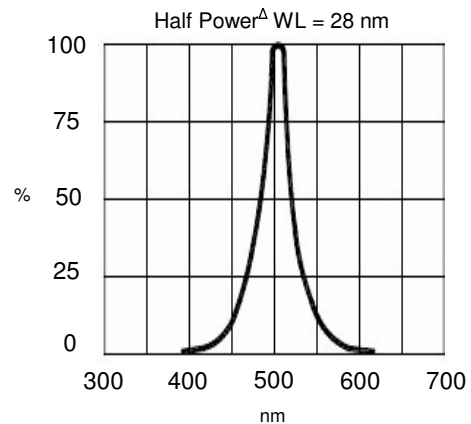
Forward Current vs Forward Voltage



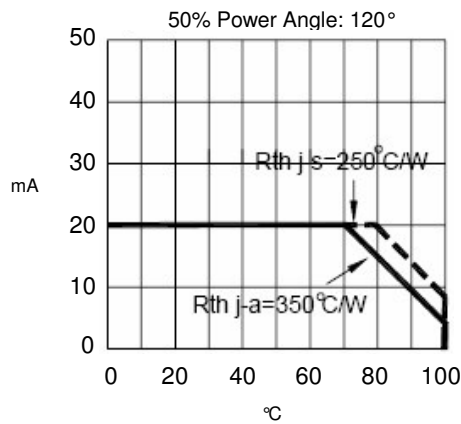
Reverse Current vs Reverse Voltage



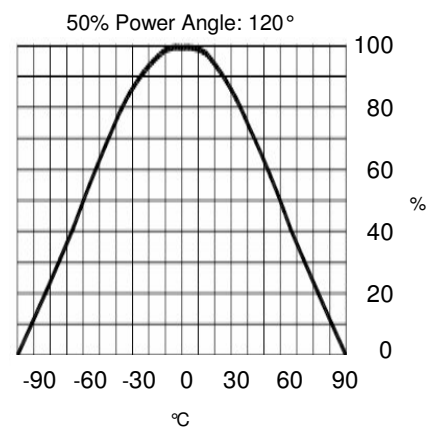
Relative Luminous Intensity vs Forward Current



Relative Luminous Intensity vs Wavelength



Maximum Forward Current vs Ambient Temperature

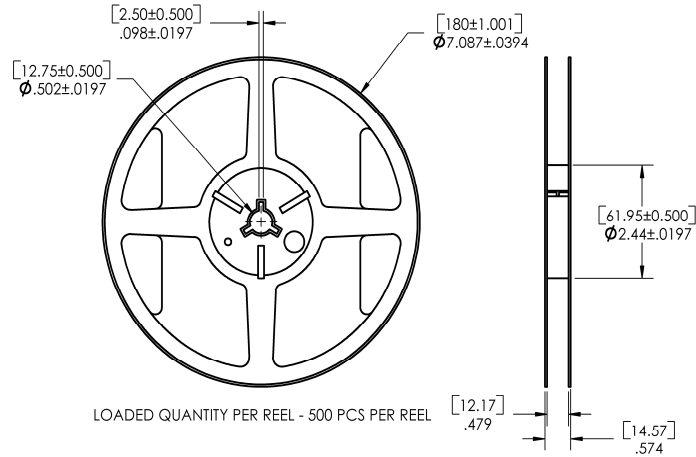


Far Field Pattern

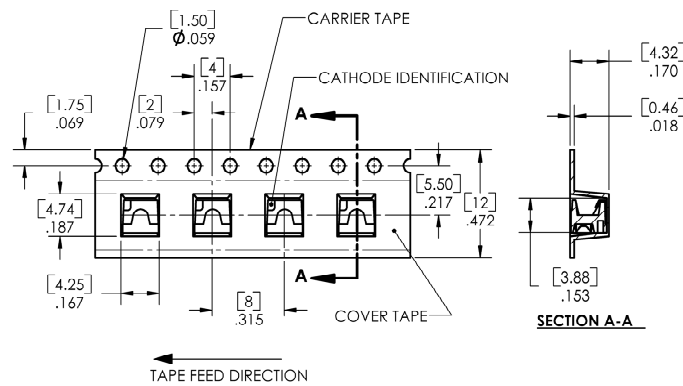
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# Blue-Green Side-Emitting SMD LED OVSR9CBCR8

Reel Dimensions: 7-inch reel

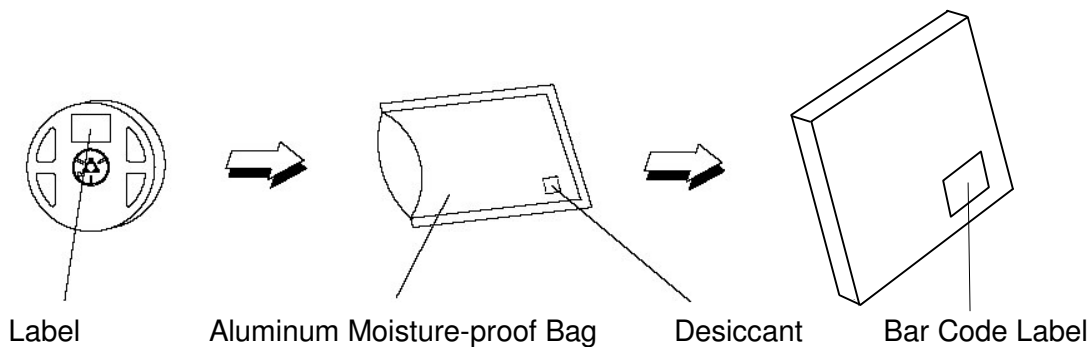


Carrier Tape Dimensions: Loaded quantity 500 pieces per reel



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

## Moisture Resistant Packaging



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