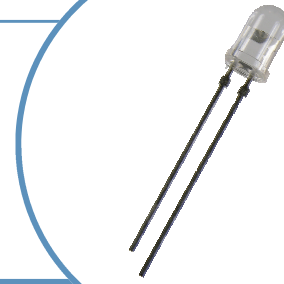


# White High-Intensity LED Lamp (5 mm, 50° Viewing Angle)



## OVLEW5CB6

- Wide beam angle
- High luminous intensity
- Blue LED + yellow phosphor
- ESD protected ( $\pm 1\text{kV}$ , 1 time, [200pF 0 $\Omega$ ])

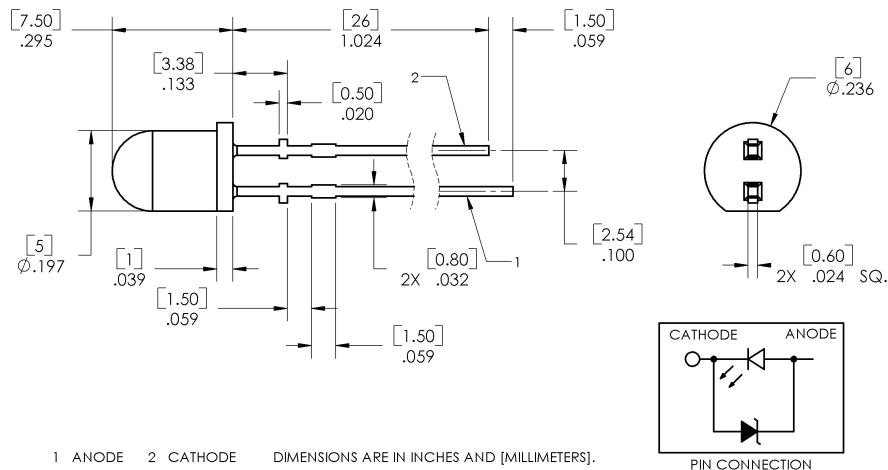


The **OVLEW5CB6** is a round 5 mm white high-intensity lamp with a 50° viewing angle and stand-offs. It is designed for applications that require high luminous intensity, such as indoor and outdoor displays, marker lights and optical indicators.

## Applications

- Indoor/outdoor displays and applications
- Message boards
- Store front signage
- Indicators

| Part Number | Material | Emitted Color | Intensity Typ. mcd | Lens Color  |
|-------------|----------|---------------|--------------------|-------------|
| OVLEW5CB6   | InGaN    | White         | 1600               | 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.

### Absolute Maximum Ratings

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

|                             |                     |
|-----------------------------|---------------------|
| Storage Temperature Range   | -40 ~ +100 °C       |
| Operating Temperature Range | -30 ~ +85 °C        |
| Reverse Current             | 100 mA <sup>Δ</sup> |
| Continuous Forward Current  | 30 mA               |
| Forward Current Reduction   | -0.50 mA/°C         |
| Power Dissipation           | 120 mW              |

Note:

1. <sup>Δ</sup> = Zener Diode Rating.

### Electrical Characteristics

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

| SYMBOL          | PARAMETER                | MIN  | TYP   | MAX  | UNITS | CONDITIONS           |
|-----------------|--------------------------|------|-------|------|-------|----------------------|
| $I_V$           | Luminous Intensity       | 900  | 1600  | 2600 | mcd   | $I_F = 20\text{ mA}$ |
| $V_F$           | Forward Voltage          | 2.8  | 3.4   | 3.9  | V     | $I_F = 20\text{ mA}$ |
| $V_R$           | Reverse Voltage          | ---- | ----  | 2.5  | V     | $I_R = 10\text{ mA}$ |
| $2\theta_{1/2}$ | 50% Power Angle          | ---- | 50    | ---- | deg   | $I_F = 20\text{ mA}$ |
| x               | Chromaticity Coordinates | ---- | 0.310 | ---- | ----  | $I_F = 20\text{ mA}$ |
| y               |                          | ---- | 0.320 | ---- | ----  | $I_F = 20\text{ mA}$ |

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

Lamps are sorted to luminous flux ( $\Phi_V$ ) and chromaticity coordinates (x, y) bins shown.  
Orders for OVLEW5CB6 may be filled with any or all bins contained as below.

|                          |           |    |    |    |    |    |   |
|--------------------------|-----------|----|----|----|----|----|---|
|                          | A0        | B3 | B4 | B5 | B6 | C0 |   |
| Luminous Intensity (mcd) | 1800-2600 |    |    |    |    |    | 6 |
|                          | 1300-1800 |    |    |    |    |    | 5 |
|                          | 900-1300  |    |    |    |    |    | 4 |

Luminous Intensity is at 4 bin or above.

Chromaticity Coordinates (x, y)

| Rank                     |   | A0    |       |       |       | B3    |       |       |       | B4    |       |       |       |
|--------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Chromaticity Coordinates | x | 0.280 | 0.296 | 0.283 | 0.264 | 0.287 | 0.307 | 0.304 | 0.283 | 0.307 | 0.330 | 0.330 | 0.304 |
|                          | y | 0.248 | 0.276 | 0.305 | 0.267 | 0.295 | 0.315 | 0.330 | 0.305 | 0.315 | 0.339 | 0.360 | 0.330 |

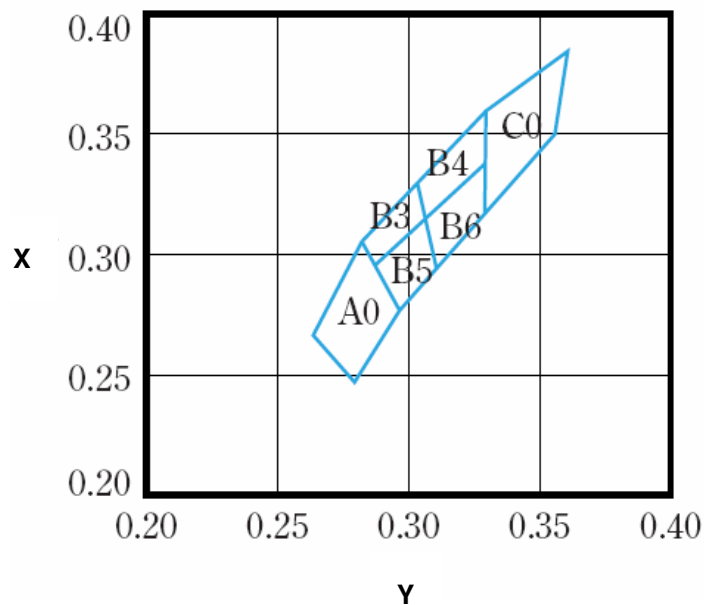
| Rank                     |   | B5    |       |       |       | B6    |       |       |       | C0    |       |       |       |
|--------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Chromaticity Coordinates | x | 0.296 | 0.311 | 0.307 | 0.287 | 0.311 | 0.330 | 0.330 | 0.307 | 0.330 | 0.356 | 0.361 | 0.330 |
|                          | y | 0.276 | 0.294 | 0.315 | 0.295 | 0.294 | 0.318 | 0.339 | 0.315 | 0.318 | 0.351 | 0.385 | 0.360 |

Notes:

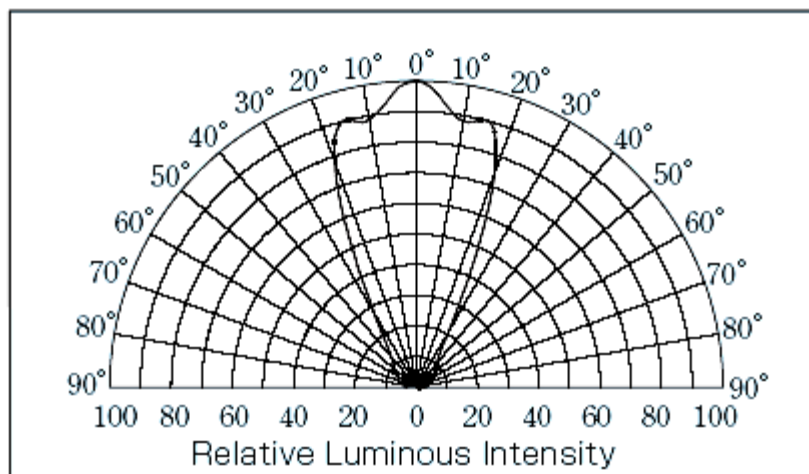
- All ranks will be included per delivery, rank ratio will be based on the chip distribution.
- Pb content <1000 PPM.
- To designate luminous intensity ranks, please contact OPTeK.

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## CIE Chromaticity Diagram

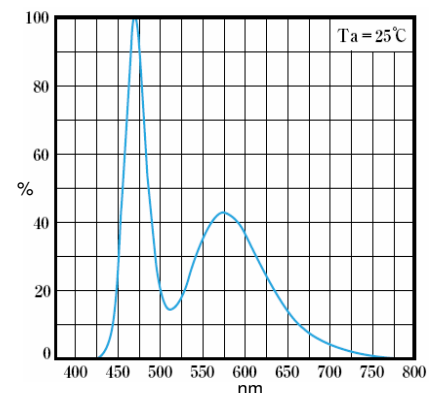
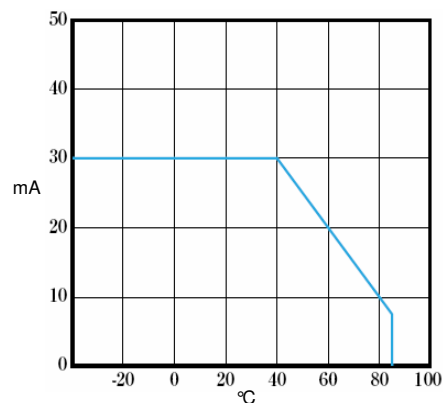
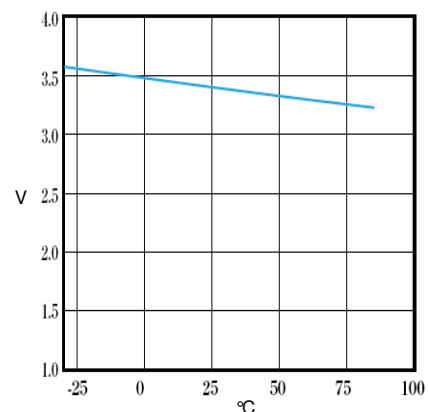
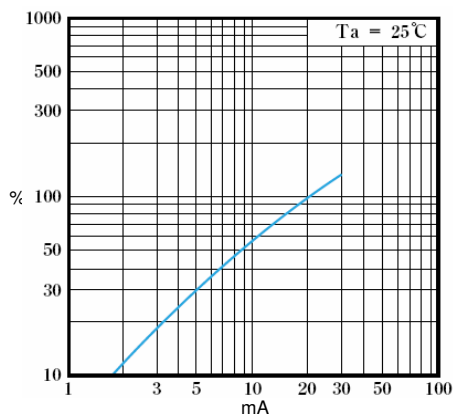
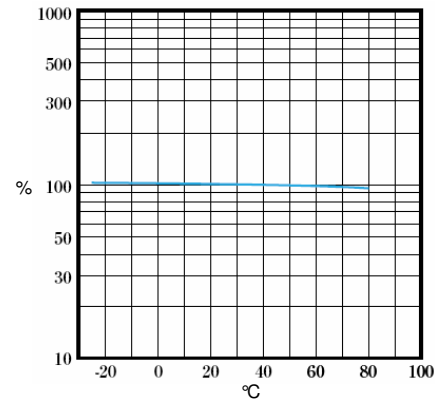
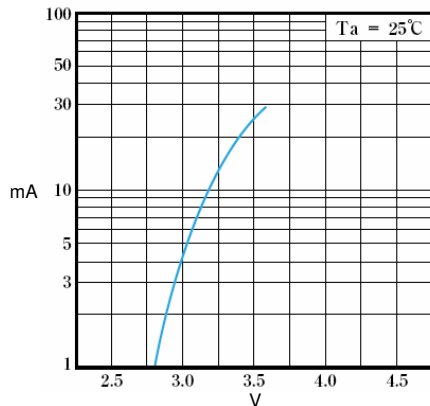


## Beam Pattern



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### Typical Electro-Optical Characteristics Curves



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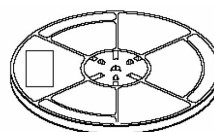
# White High-Intensity LED Lamp

## OVLEW5CB6

Packing Information: Available in bulk or reel

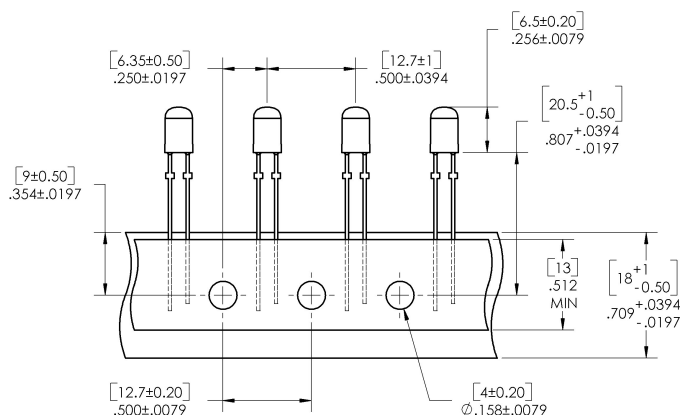


Bulk: 200 pcs/  
ESD-protected bag

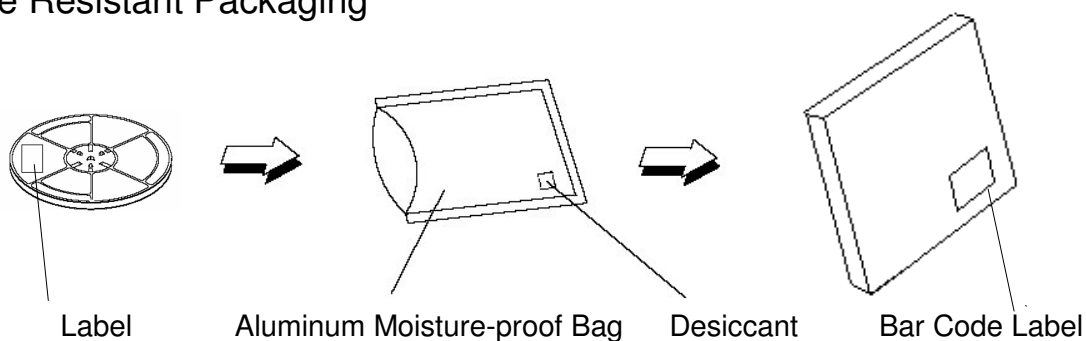


13-inch reel: 2000 pcs/reel

Carrier Tape Dimensions: Loaded quantity 2000 pieces per reel



## Moisture Resistant Packaging



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