

# White High-Intensity LED Lamp (3 mm, 45° Viewing Angle)

## OVLAW4CB6

- High luminous intensity
- Blue LED + yellow phosphor
- Through-hole type
- Water clear lens
- Available on tape and reel

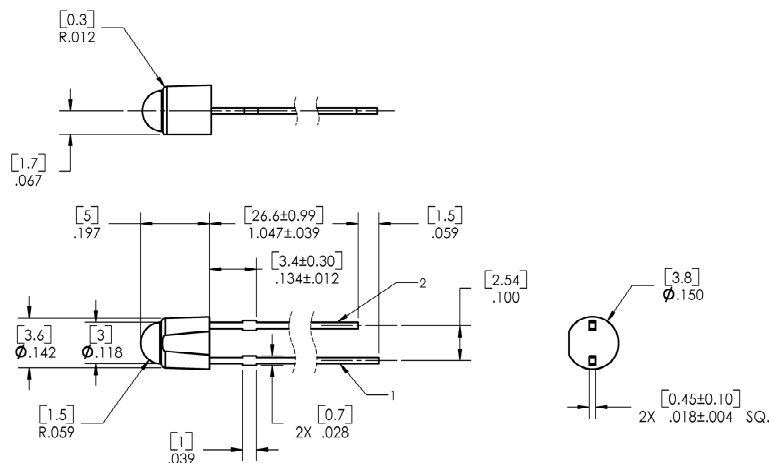


The **OVLAW4CB6** is a round 3 mm white high-intensity through-hole lamp with a 45° viewing angle. It is designed for wide-angle uniform light output.

## Applications

- Indicators for medical, industrial, consumer and office equipment
- Indicators for white goods and home appliances
- Interior and exterior architectural and accent lighting
- Signs and digital information displays, video screen non-color and RGB presentation
- Automotive backlighting and indicators

| Part Number | Material | Emitted Color | Intensity Typ. mcd | Lens Color  |
|-------------|----------|---------------|--------------------|-------------|
| OVLAW4CB6   | InGaN    | White         | 1000               | 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.

# White High-Intensity LED Lamp

## OVLAW4CB6



### Absolute Maximum Ratings

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

|  |               |
|--|---------------|
| Storage Temperature Range                      | -40 ~ +100° C |
| Operating Temperature Range                    | -30 ~ +85° C  |
| Reverse Voltage                                | 5 V           |
| DC Forward Current                             | 30 mA         |
| DC Forward Current Reduction <sup>1</sup>      | -0.50 mA/° C  |
| Power Dissipation                              | 120 mW        |
| Lead Soldering Temperature (5 seconds maximum) | 260° C        |

### Electrical Characteristics

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

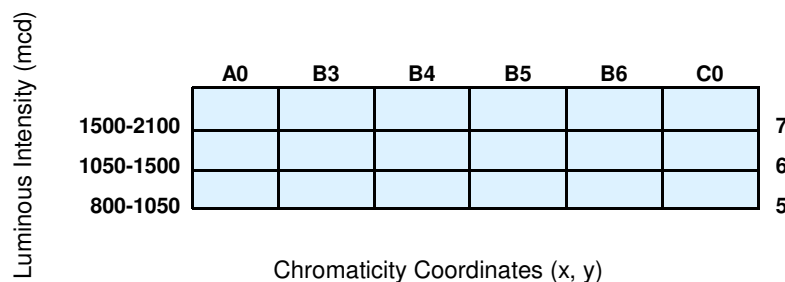
| SYMBOL          | PARAMETER  | MIN  | TYP  | MAX  | UNITS | CONDITIONS             |
|-----------------|--|------|------|------|-------|------------------------|
| I <sub>V</sub>  | Luminous Intensity <sup>2</sup><br>(Axial Direction) | ---- | 1000 | ---- | mcd   | I <sub>F</sub> = 20 mA |
| V <sub>FI</sub> | Forward Voltage                                      | 2.8  | 3.4  | 3.9  | V     | I <sub>F</sub> = 20 mA |
| I <sub>R</sub>  | Reverse Current                                      | ---- | ---- | 10   | μA    | V <sub>R</sub> = 5 V   |
| x               | Chromaticity   | ---- | 0.31 | ---- | ----  | I <sub>F</sub> = 20 mA |
| y               |  | ---- | 0.32 | ---- | ----  | I <sub>F</sub> = 20 mA |

Notes:

- Under this condition: T<sub>OPR</sub> = 40 ~ 85° C.
- Guaranteed value is 20% higher and/or lower than this value.

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

Lamps are sorted to luminous intensity (I<sub>V</sub>) and chromaticity coordinates (x, y) bins shown. Orders for OVLAW4CB6 may be filled with any or all bins contained as below.



Luminous Intensity is at B5 bin or above.

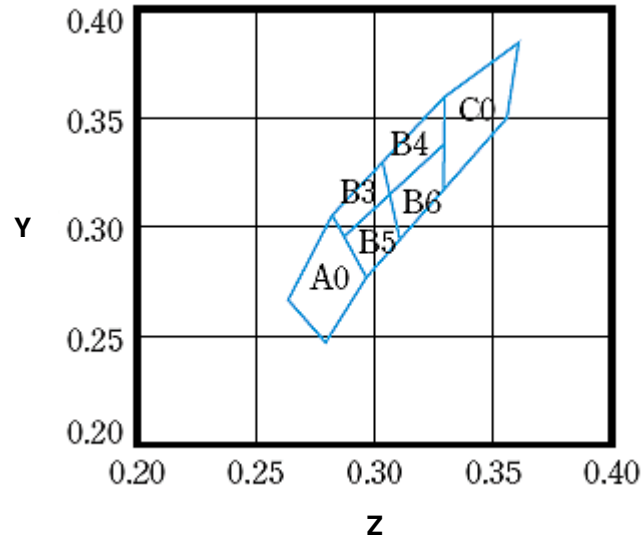
| Rank         |   | A0          | B3          | B4          | B5          | B6          | C0          |
|--------------|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Chromaticity | x | 0.280-0.264 | 0.287-0.283 | 0.307-0.304 | 0.296-0.287 | 0.311-0.307 | 0.330-0.330 |
| Coordinates  | y | 0.248-0.267 | 0.295-0.305 | 0.315-0.330 | 0.276-0.295 | 0.294-0.315 | 0.318-0.360 |

Notes:

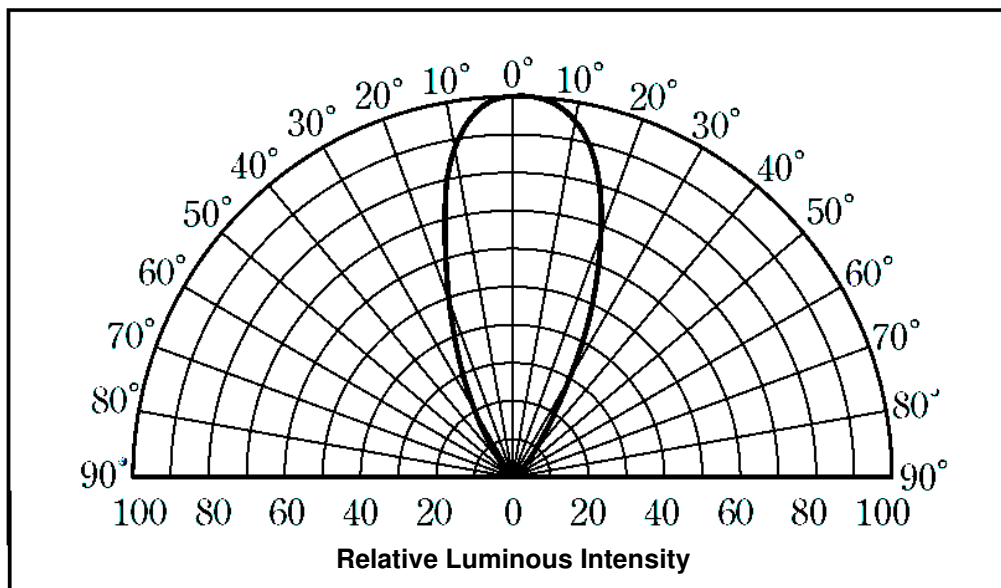
- All ranks will be included per delivery, rank ratio will be based on the chip distribution.
- To designate luminous intensity ranks, please contact OPTEK.
- Pb content <1000 PPM.

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CIE Chromaticity Diagram

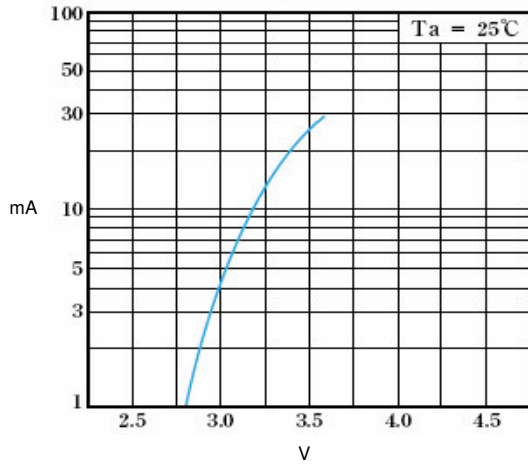


Beam Pattern

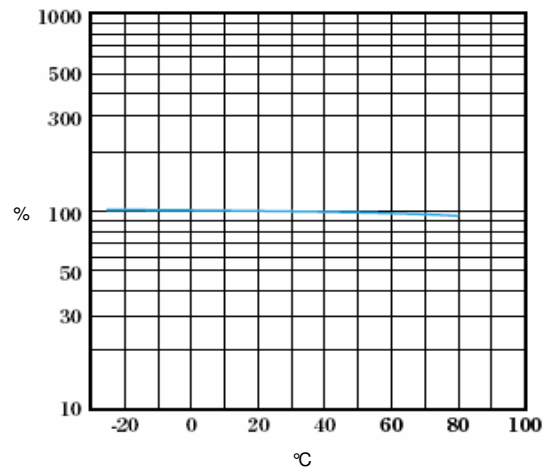


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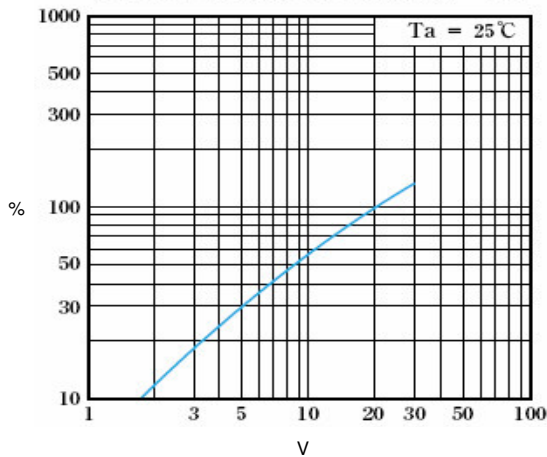
### Typical Electro-Optical Characteristics Curves



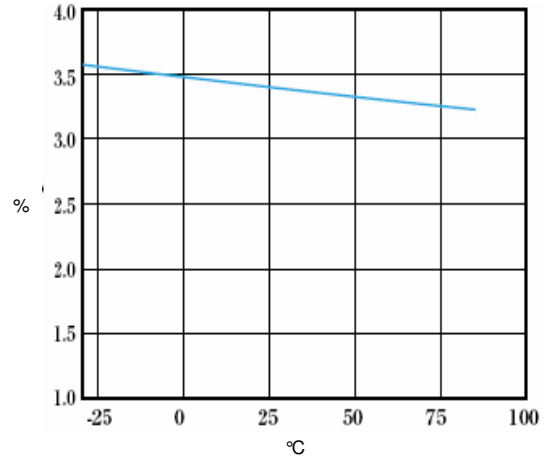
Forward Current vs Forward Voltage



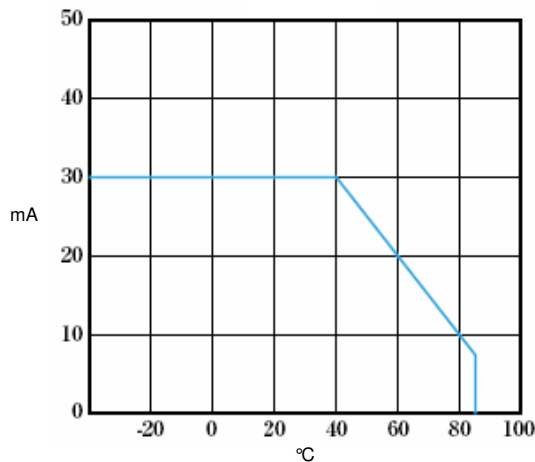
Relative Luminous Intensity vs Ambient Temperature



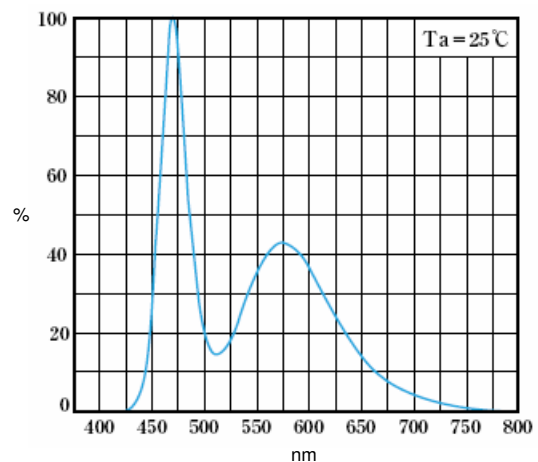
Relative Luminous Intensity vs Forward Current



Forward Voltage vs Ambient Temperature



Forward Current vs Ambient Temperature



Relative Luminous Intensity vs Wavelength

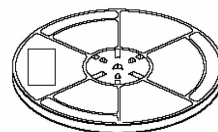
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Packing Information: Available in bulk or reel

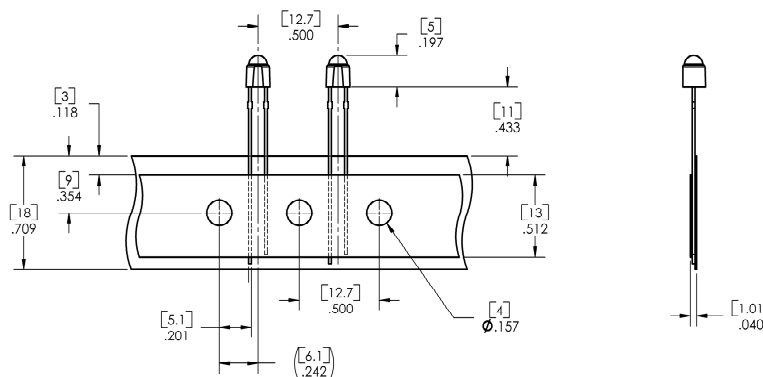


Bulk: 200 pcs/ESD protected bag



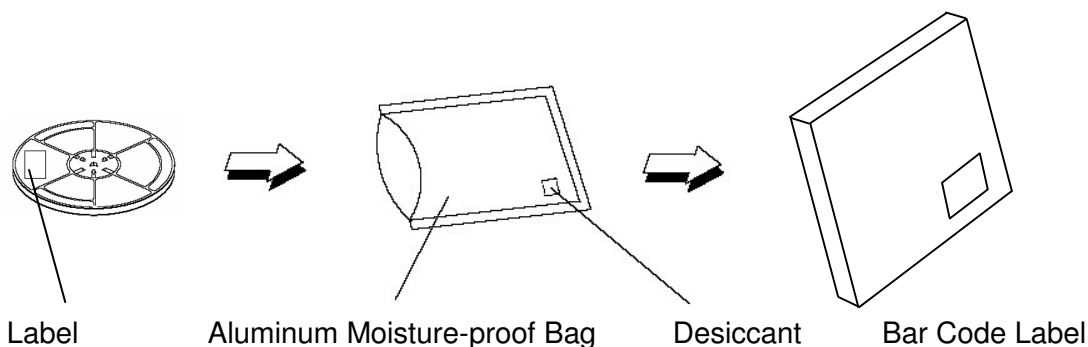
13-Inch Reel: 2000 pcs/reel

Carrier Tape Dimensions: Loaded quantity 2000 pieces per reel



DIMENSIONS ARE IN INCHES AND (MILLIMETERS).

## Moisture Resistant Packaging



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