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| Spec. No. | PS-LL-U508YL4-B0 |
| Rev. | A |

PRODUCT SPECIFICATION

Model No : CSLR-U508YL4-B0

| Descriptions: | |
|----------------------|---------------------|
| ■ LED Type | : Lighting LED Lamp |
| ■ LED Package | : Round LED Lamp |
| ■ Emitting Color | : Yellow |
| ■ Viewing Angle | : 45° |
| ■ No Stopper | |



| CUSTOMER APPROVED SIGNATURES | APPROVED BY | CHECKED BY | PREPARED BY |
|-------------------------------------|--------------------|-------------------|--------------------|
| | | | |

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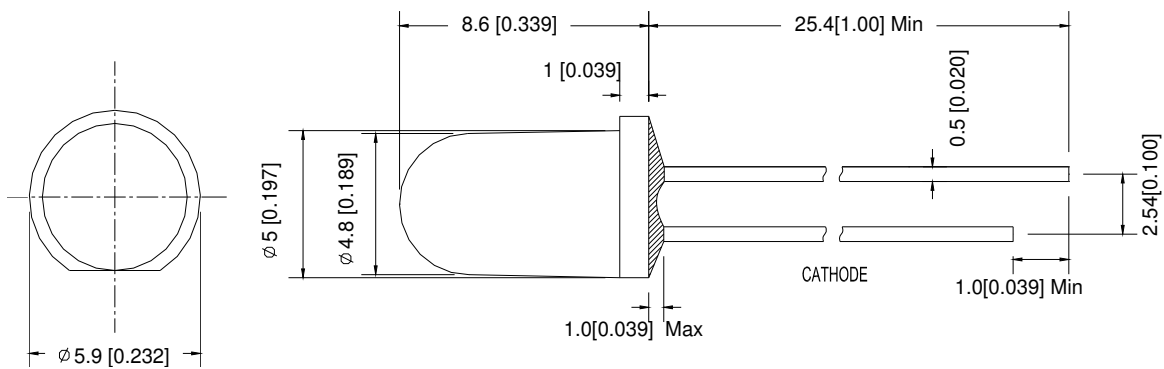
Features -

1. Low Power Consumption.
2. High Luminous Output
3. High Reliability and Solid Performance
4. Optimal Optical/Mechanical Design
5. Rohs Compliant

Device Selection Guide -

| Part No. | Chip | | LED Lens |
|-----------------|----------|---------------|-------------------|
| | Material | Emitted Color | |
| CSLR-U508YL4-B0 | AlInGaP | Yellow | Water Transparent |

Package Outline Dimensions -



* Tolerance : $\pm \frac{0.01}{0.25}$ Unit : $\pm \frac{\text{inch}}{\text{mm}}$



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■ Absolute Maximum Rating -

(Ta=25°C)

| Parameter | Symbol | Rating | Unit |
|----------------------------|--------|--------------------------------------------------------|------|
| Power Dissipation | Pd | 52 | mW |
| Forward Current (DC) | IF | 30 | mA |
| Peak Forward Current * | IFP | 100 | mA |
| Reverse Voltage | VR | 5 | V |
| Operating Temp. | Topr | -30 ~ +80 | °C |
| Storage Temp. | Tstg | -40 ~ +100 | °C |
| Lead Soldering Temperature | Tsol | Max. 260°C for 5 sec Max. (3mm from the epoxy body) | |

* Pulse width ≤ 0.1 msec. duty $\leq 1/10$

■ Electro-optical Characteristics

(Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|---------------------|----------------|-------|-------|-------|---------|-----------|
| Forward Voltage | VF | ----- | 2.1 | 2.6 | V | IF=20mA |
| Luminous Intensity | Iv | 2300 | 4300 | ----- | mcd | |
| Dominant Wavelength | λD | ----- | 590 | ----- | nm | |
| Viewing Angle | 2 θ 1/2 | ----- | 45 | ----- | deg | |
| Reverse Current | IR | ----- | ----- | 50 | μA | VR=5V |



Model No : CSLR-U508YL4-B0

■ Luminous Intensity Rank Limits ($I_f = 20\text{mA}$)

unit : mcd

| Part No. Code | CSLR-U508YL4-B0 | |
|------------------|-----------------|------|
| | min. | max. |
| R | 2300 | 3000 |
| S | 3000 | 3900 |
| T | 3900 | 5100 |
| U | 5100 | 6600 |
| V | 6600 | 8600 |

■ Dominant Wavelength Rank Limits ($I_f = 20\text{mA}$)

unit : nm

| Part No. Code | CSLR-U508YL4-B0 | |
|------------------|-----------------|-------|
| | min. | max. |
| Y3 | 589.5 | 592 |
| Y4 | 592 | 594.5 |
| Y5 | 594.5 | 597 |

■ Forward Voltage Rank Limits ($I_f = 20\text{mA}$)

unit : v

| Part No. Code | CSLR-U508YL4-B0 | |
|------------------|-----------------|------|
| | min. | max. |
| B | 1.6 | 1.8 |
| C | 1.8 | 2.0 |
| D | 2.0 | 2.2 |
| E | 2.2 | 2.4 |
| F | 2.4 | 2.6 |

Notes:

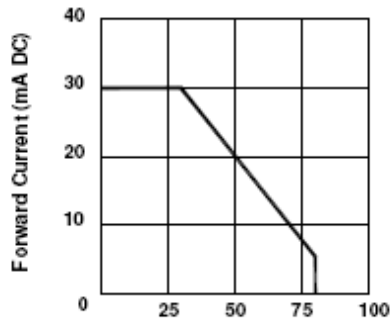
1. Tolerance of measurement of luminous intensity :±15%
2. Tolerance of measurement of Color Coordinates :±0.01
3. Tolerance of measurement of forward voltage :±0.05v
4. All data are measured by CSC's test equipment.
5. One delivery will include several color rank, VF rank and Iv ranks of the products.
6. The quantity-ratio of the ranks is decided by CSC.
7. Please confirm with CSC salesman,if your request different form standard specification.



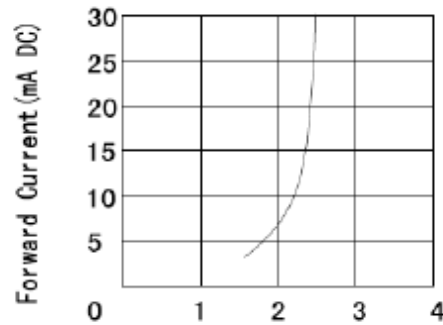
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■ Typical Electrical / Optical Characteristics Curves -

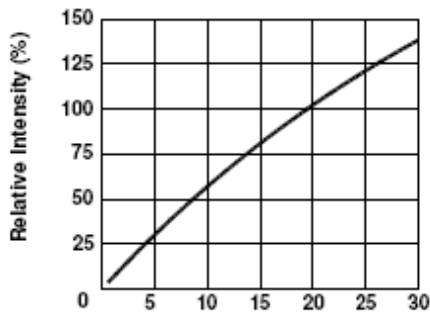
(Ta = 25°C Unless Otherwise Noted)



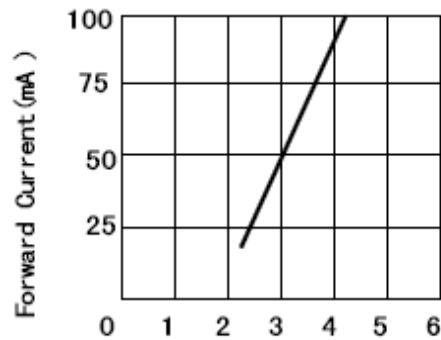
Ambient Temperature Ta (°C)
Fig 1. Forward Current
Vs. Ambient Temperature



Forward Voltage VF (V)
Fig. 2 Forward Current
Vs. Forward Voltage



Forward Current IF (mA DC)
Fig 3. Relative Intensity
Vs. Forward Current



Forward Voltage (V)
Fig. 4 Peak Forward Voltage
Vs. Forward Current
(100us test pulse, 1% duty cycle)

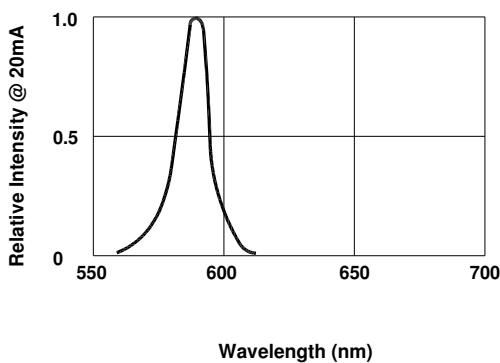


Fig 5. Relative Intensity Vs. Wavelength

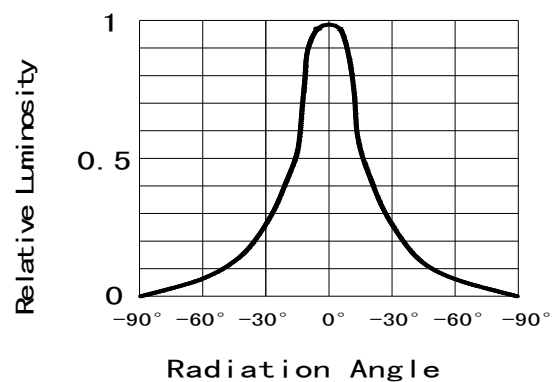


Fig 6. Relative Luminous Intensity vs. Radiation Angle

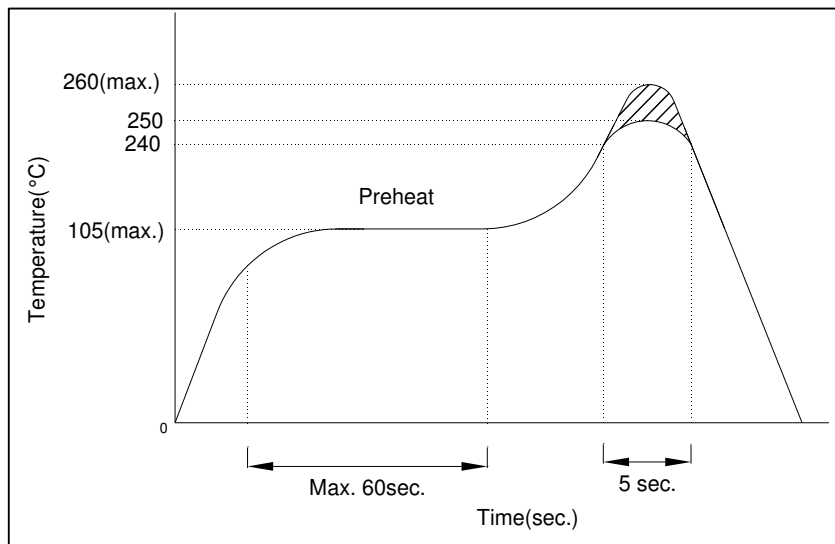


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■ Precautions For Use -

1. Recommended Soldering conditions

Wave Soldering



2. Soldering Iron

Basic SPEC. is ≤ 5 sec. When 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1$ sec.). Power dissipation of iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C .

3. Static Electricity

- Static electricity or surge voltage damages LEDs..
It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.
- All devices, equipment and machinery must be properly grounded. It is recommended that measures be taken against surge voltage to the equipment that mounts the LEDs.

Note: The specifications are subject to change without notice. Please contact us for updated information.