

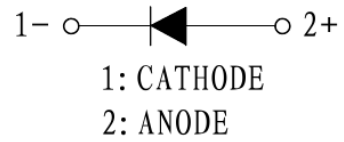
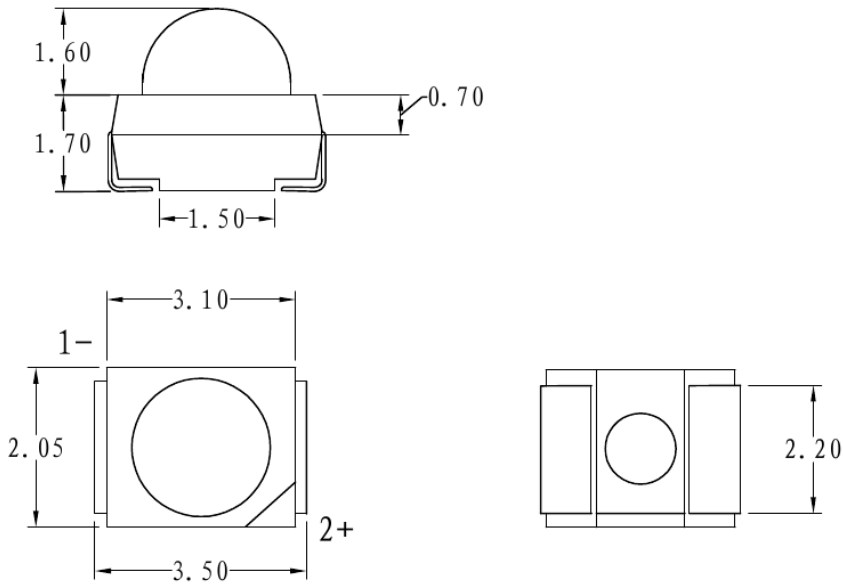


## APPROVAL SHEET

P/N: IE-3528WC-L-C  
REV: A/0  
EFFECTIVE TIME: 2015-5-5

Part Number: IE-3528WC-L-C

Package Dimensions And Materials



| Chip     |                | Lens Color  |
|----------|----------------|-------------|
| Material | Emitting Color |             |
| InGaN    | White          | Water Clear |

| (Units) | (Unless otherwise noted) | (Encapsulation tolerance) |
|---------|--------------------------|---------------------------|
| mm      | ± 0.1                    | ± 0.25                    |



■ Absolute Maximum Rating at TA=25° C

| Item                       | Symbol | Absolute Maximum Rating  | Unit |
|----------------------------|--------|--------------------------|------|
| Forward Current            | If     | 20                       | mA   |
| Peak Forward Current       | Ifp    | 100                      | mA   |
| Reverse Voltage            | VR     | 5                        | V    |
| Power Dissipation          | PD     | 70                       | mW   |
| Electrostatic discharge    | ESD    | 2000                     | V    |
| Operation Temperature      | Topr   | -30 -- +80               | ° C  |
| Storage Temperature        | Tstg   | -40 -- +80               | ° C  |
| Lead Soldering Temperature | Tsol   | Max. 240° C for 5sec Max |      |

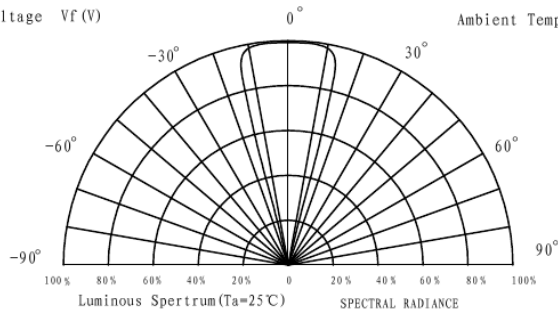
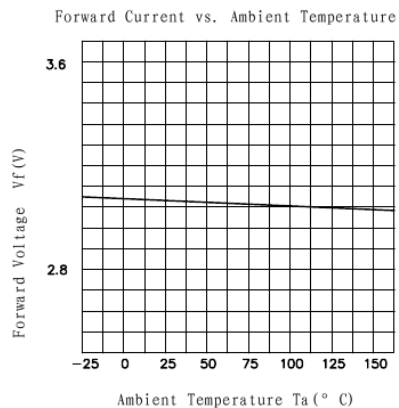
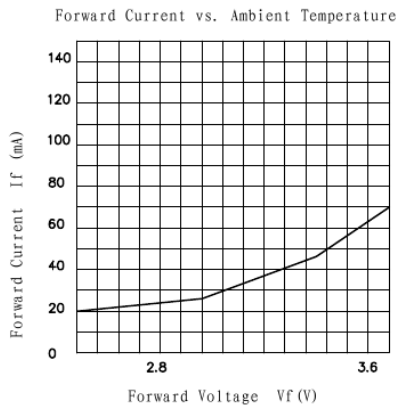
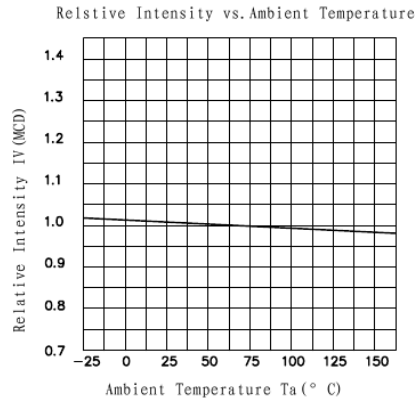
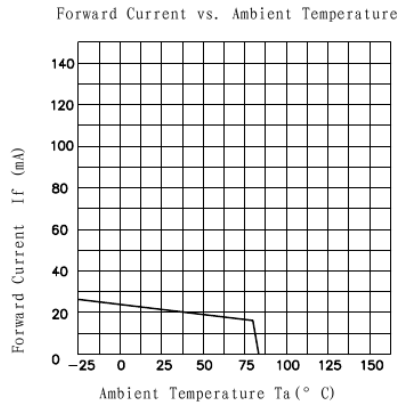
IFP Conditions: Pulse Width ≤ 10msec duty ≤ 1/10

Tsol Conditions: 3mm from the base of the epoxy bulb

■ Typical Optical/Electrode Characteristic

| Item              | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------|--------|-----------|------|------|------|------|
| Forward Voltage   | Vf     | IF=20mA   | 2.8  | --   | 3.6  | V    |
| Reverse Current   | Ir     | Vr=5V     | --   | --   | 10   | uA   |
| 50% Power Angle   | 2θ 1/2 | IF=20mA   |      | 30   |      | deg  |
| Luminous Flux     | Flux   | IF=20mA   | 7    | --   | 8    | LM   |
| Color Temperature | TC     | IF=20mA   | 6000 | --   | 7000 | K    |

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 ■ Typical Optical//Electrode Characteristic Curves  
 (Ta=25°C Unless Otherwise Noted)



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Soldering Condition (Pb-Free)

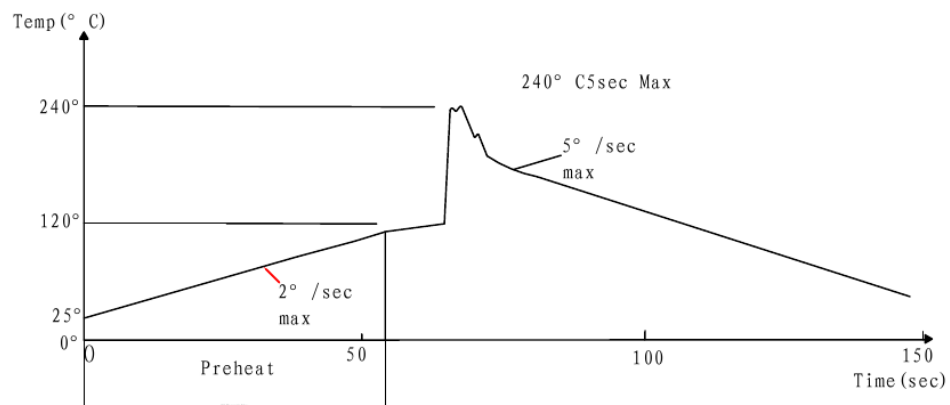
1. Iron:

Soldering Iron: 30W Max  
Temperature 350° C Max  
Soldering Time: 3 Seconds Max (One Time)  
Distance: 2mm Min (From solder joint to body)

2. Wave Soldering Profile

Dip Soldering

Preheat: 120° C Max  
Preheat time: 60seconds Max  
Ramp-up  
2° C/sec (max)  
Ramp-Down: -5° C/sec (max)  
Solder Bath: 240° C Max  
Dipping Time: 3 seconds Max  
Distance: 2mm Min (From solder joint to body)



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■ Reliability Persult

| Test Classification | Test Item                               | Test Condititons                                  | Test Duration | Sample Size | AC/RE |
|---------------------|---|---|---------------|-------------|-------|
| Life Test           | Room Temperatuer DC Operating Life Test | Ta=25°C ± 5°C, IF=20mA                            | 1000Hrs       | 5PCS        | 0/1   |
| Environment Test    | Thermal Shock Test                      | -10°C ± 5°C ← → +100°C ± 5°C<br>5min. 10sec. 5min | 50cycles      | 5PCS        | 0/1   |
|                     | Temperature Cycle Test                  | -55°C ± 5°C ← → +85°C ± 5°C<br>30min. 5min. 30min | 50cycles      | 5PCS        | 0/1   |
|                     | High Temperature High Humidity test     | Ta=85°C ± 5°C<br>RH=85% ± 0.5%RH                  | 1000Hrs       | 5PCS        | 0/1   |
|                     | High Temperature Storage                | Ta=100°C ± 5°C                                    | 1000Hrs       | 5PCS        | 0/1   |
|                     | Low Temperature Storage                 | Ta=-55°C ± 5°C                                    | 1000Hrs       | 5PCS        | 0/1   |
| Mechanical Test     | Resistance to Soldering Heat            | Ta=240°C ± 5°C                                    | 5sec          | 5PCS        | 0/1   |
|                     | Lead Integrity                          | Load 2.5N (0.25kgf)<br>0° - 90° - 0°              | 3times        | 5PCS        | 0/1   |

■ Criteria for Judging The Damage

| Item               | Symbol         | Test Conditions      | Criteria for Judgment |                |
|--------------------|----------------|----------------------|-----------------------|----------------|
|                    |                |                      | Min.                  | Max.           |
| Forward Voltage    | V <sub>F</sub> | I <sub>F</sub> =20mA |                       | U. S. L. *1. 2 |
| Reverse Current    | I <sub>R</sub> | V <sub>R</sub> =5V   |                       | U. S. L. *2. 2 |
| Luminous Intensity | I <sub>V</sub> | I <sub>F</sub> =20mA | L. S. L. ** × 0. 7    |                |

U. S. L. \* : Upper Standard Level

L. S. L. \*\* : Lower Standard Level