# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DLE-300-002 REV: 4.0

PART NO : 30-01UYC ECN : Page: 1/4

## Benefits :



- Fewer LEDs Required
- Lowers Lighting System Cost

## Features :

- High Flux Output.
- Designed for High Current Operation.
- Low Thermal Resistance.
- Low Profile.
- Packaged in Tubes for Use with Automatic Insertion Equipment.
- Pb free.
- The product itself will remain within RoHS compliant version.

## Applications :

- Electronic Signs and Signals

## Descriptions :

This revolutionary package design allows the lighting designer to reduce the number of LEDs required and provide a more uniform and unique illuminated appearance than with other LED solutions.
This is possible through the efficient optical package design and high-current capabilities.
The low profile package can be easily coupled with reflectors or lenses to efficiently distribute light and provide the desired lit appearance.

This product family employs the world's brightest red-orange and amber LED materials,which allow designers to match the color of popular lighting applications,such as automotive tail,stop,and turn signal lamps,and electronic signs.

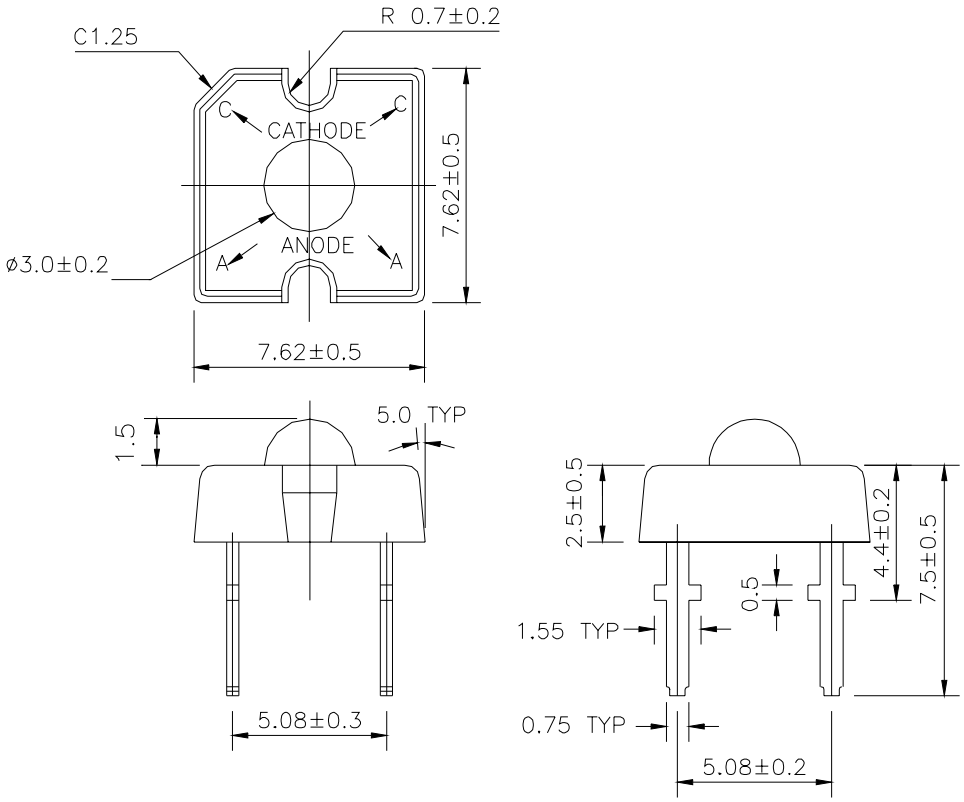
| PART NO. | Chip | | Lens Color |
|---|---|---|---|
| | Material | Emitted Color | |
| 30-01UYC | AlGaInP | Super Yellow | Water Clear |

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## ■ Absolute Maximum Ratings at $T_A$ = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Forward Current | $I_F$(Peak) | 70 | mA |
| Operating Temperature | Topr | -40 to +85 | ℃ |
| Storage Temperature | Topr | -40 to +100 | ℃ |
| Soldering Temperature | Tsol | 260 ± 5 | ℃ |
| Electrostatic Discharge | ESD | 2000 | V |
| Power Dissipation | Pd | 203 | mW |
| Peak Forward Current(Duty 1/10 @ 1KHZ) | $I_F$(Peak) | 160 | mA |
| Reverse Voltage | $V_R$ | 5 | V |

## ■ Package Dimension:




NOTES :

1.All dimensions are millimeter.(inch)

2.An epoxy meniscus may extend about 1.5mm(0.059") down the lead.

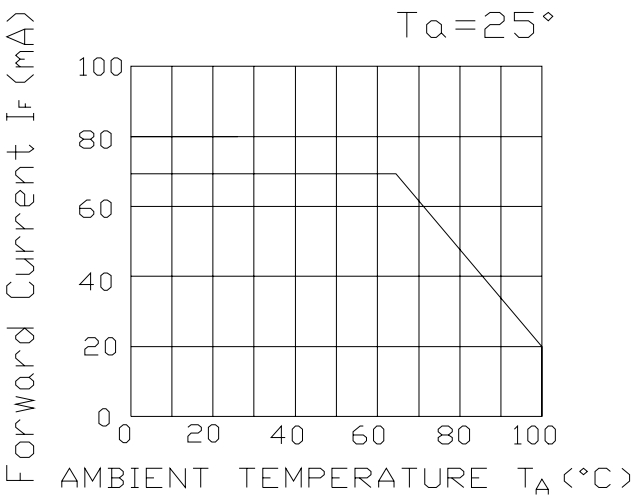
## ■ Electro-Optical Characteristics :

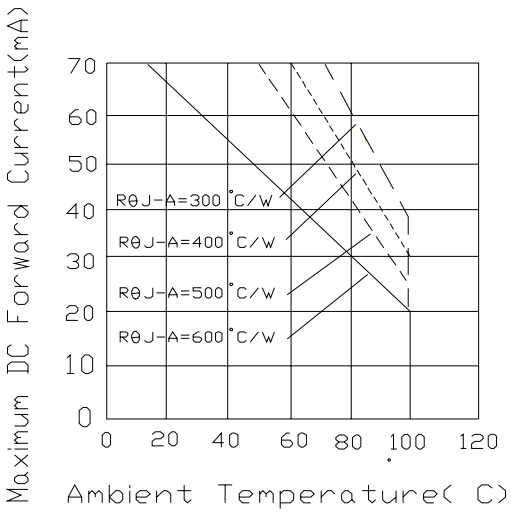
| Parameter | Symbol | Min. | Typ. | Max. | Condition | Unit |
|---|---|---|---|---|---|---|
| Total Flux | Φv | 500 | 1310 | ---- | IF=70mA | mlm |
| Viewing Angle | 2θ 1/2 | ---- | 70 | ---- | IF=20mA | deg |
| Peak Wavelength | λp | ---- | 589 | ---- | IF=20mA | nm |
| Dominant Wavelength | λd | ---- | 591 | ---- | IF=20mA | nm |
| Spectrum Radiation Bandwidth | △λ | ---- | 15 | ---- | IF=20mA | nm |
| Forward Voltage | VF | 1.71 | 2.3 | 2.91 | IF=20mA | V |
| Reverse Current | IR | ---- | ---- | 10 | VR=5V | μA |
| Recommened Operating Current | IF (Rec) | 20 | ---- | 70 | | mA |
| DC Forward Current | IF (mA) | ---- | ---- | 70 | | mA |

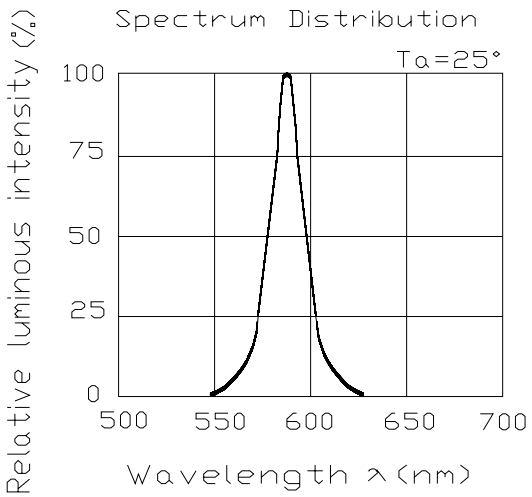
## ■ Reliability test items and conditions

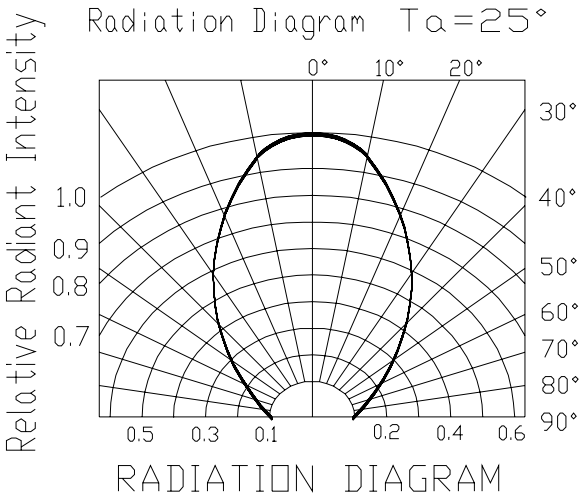
| NO | Item | Test Conditions | Test Hours/Cycle | Sample Size | Ac/Re |
|---|---|---|---|---|---|
| 1 | Solder Heat | TEMP:260℃ ± 5 ℃ | 10±1 SEC | 76 Pcs | 0/1 |
| 2 | Solderability | TEMP:230℃ ± 5 ℃ | 5±1 SEC | 76 Pcs | 0/1 |
| 3 | Temperature Cycle | H : +85℃ 30min<br>∫ 5 min<br>L : -55℃ 30min | 50 CYCLES | 76 Pcs | 0/1 |
| 4 | Thermal Shock | H : +100℃ 5min<br>∫ 10 sec<br>L : -10℃ 5min | 50 CYCLES | 76 Pcs | 0/1 |
| 5 | High Temperature Storage | TEMP : 100℃ | 1000 HRS | 76 Pcs | 0/1 |
| 6 | Low Temperature Storage | TEMP : -55℃ | 1000 HRS | 76 Pcs | 0/1 |
| 7 | DC Operating Life | If(max) mA | 1000 HRS | 76 Pcs | 0/1 |
| 8 | High Temperature / High Humidity | 85℃/85% RH | 1000 HRS | 76 Pcs | 0/1 |

## ■ Typical Electro-Optical Characteristic Curves




## ■ Specifications for Bin Grading

30－01UYC－ □ □ □

① ② ③

| ① VF(v) | | | ② λd(nm) | | | ③ Φv(mlm) | | |
|---|---|---|---|---|---|---|---|---|
| Bin | Min | Max | Bin | Min | Max | Bin | Min | Max |
| 1 | 1.71 | 1.95 | A | 585 | 591 | U | 500 | 830 |
| 2 | 1.83 | 2.07 | B | 589 | 594 | V | 680 | 1310 |
| 3 | 1.95 | 2.19 | C | 592 | 597 | W | 990 | 1760 |
| 4 | 2.07 | 2.31 | | | | X | 1440 | 2750 |
| 5 | 2.19 | 2.43 | | | | Y | 2250 | 4100 |
| 6 | 2.31 | 2.55 | | | | | | |
| 7 | 2.43 | 2.67 | | | | | | |
| 8 | 2.55 | 2.79 | | | | | | |
| 9 | 2.67 | 2.91 | | | | | | |