

# LD120CWO3KF

Super Orange

3mm, Dome, 4.1mm Height

50° viewing angle

DWG BY:

BL/ GP

08-20-07

CHK BY:

PL

08-20-07

QA:

\_\_\_\_\_  
\_\_-\_\_-\_\_

MFG:

\_\_\_\_\_  
\_\_-\_\_-\_\_

REVISION LTR: -

08-20-07

Part No.

LD120CWO3KF

DWG NO.

DSDC0606

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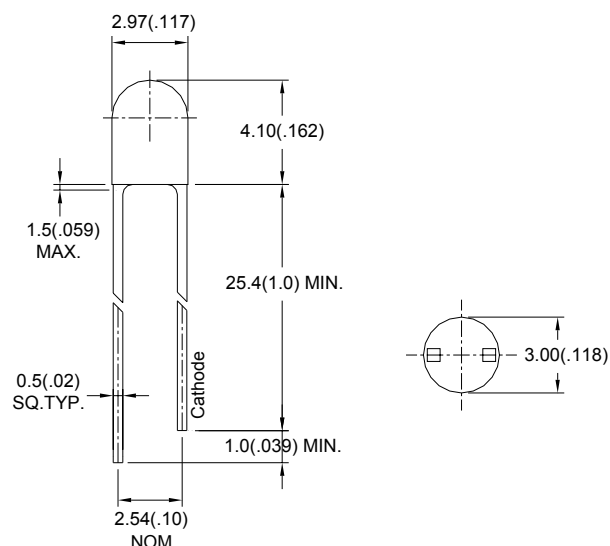
## ● Features:

1. Chip material: AlGaInP/GaAs
2. Emitted color : Super Orange
3. Lens Appearance : Water Clear
4. Low power consumption.
5. High efficiency.
6. Versatile mounting on P.C. Board or panel.
7. Low current requirement.
8. 3mm diameter package
9. This product is RoHS compliant.

## ● Applications:

1. TV set
2. Monitor
3. Telephone
4. Computer
5. Circuit board

## ● Package dimensions



### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25\text{mm}$  (0.01") unless otherwise specified.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

## ● Absolute Maximum Ratings(Ta=25°C)

| Parameter                          | Symbol          | Rating                | Unit |
|------------------------------------|-----------------|-----------------------|------|
| Power Dissipation                  | Pd              | 80                    | mW   |
| Forward Current                    | I <sub>F</sub>  | 30                    | mA   |
| Peak Forward Current <sup>*1</sup> | I <sub>FP</sub> | 150                   | mA   |
| Reverse Voltage                    | V <sub>R</sub>  | 5                     | V    |
| Operating Temperature              | Topr            | -40°C~80°C            |      |
| Storage Temperature                | Tstg            | -40°C~85°C            |      |
| Soldering Temperature              | Tsol            | 260°C (for 5 seconds) |      |

<sup>\*1</sup>Condition for I<sub>FP</sub> is pulse of 1/10 duty and 0.1msec width.

● **Electrical and optical characteristics(Ta=25°C)**

| Parameter                | Symbol          | Condition         | Min. | Typ. | Max. | Unit             |
|--------------------------|-----------------|-------------------|------|------|------|------------------|
| Forward Voltage          | $V_F$           | $I_F=20\text{mA}$ | -    | 2.0  | 2.6  | V                |
| Luminous Intensity       | $I_v$           | $I_F=20\text{mA}$ | -    | 800  | -    | mcd              |
| Reverse Current          | $I_R$           | $V_R=5\text{V}$   | -    | -    | 100  | $\mu\text{A}$    |
| Peak Wave Length         | $\lambda_p$     | $I_F=20\text{mA}$ | -    | 610  | -    | nm               |
| Dominant Wave Length     | $\lambda_d$     | $I_F=20\text{mA}$ | 600  | 604  | 610  | nm               |
| Spectral Line Half-width | $\Delta\lambda$ | $I_F=20\text{mA}$ | -    | 18   | -    | nm               |
| Viewing Angle            | $2\theta_{1/2}$ | $I_F=20\text{mA}$ | -    | 50   | -    | deg              |
| Radiant Intensity        |                 | $I_F=20\text{mA}$ | -    | 2000 | -    | $\mu\text{W/sr}$ |
| Chromaticity Coordinates | X               | $I_F=20\text{mA}$ | -    | 0.64 | -    |                  |
|                          | Y               |                   | -    | 0.35 | -    |                  |

● **Typical Electro-Optical Characteristics Curves**

Fig.1 Relative intensity vs. Wavelength

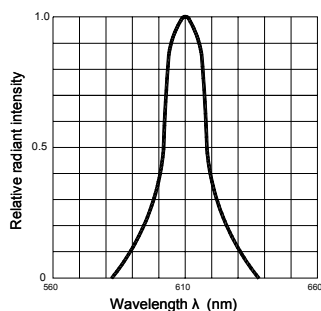


Fig.2 Forward current derating curve vs. Ambient temperature

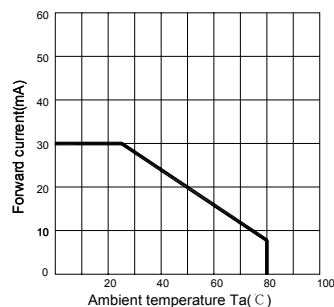


Fig.3 Forward current vs. Forward voltage

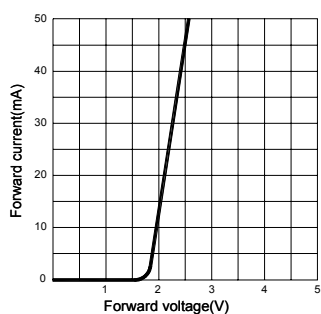


Fig.4 Relative luminous intensity vs. Ambient temperature

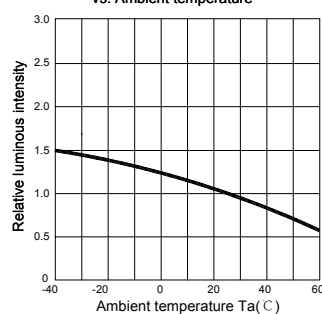


Fig.5 Relative luminous intensity vs. Forward current

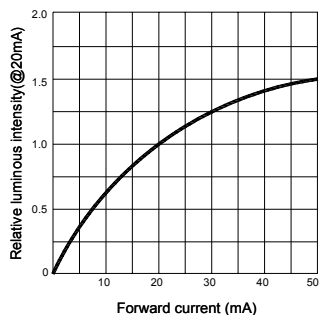
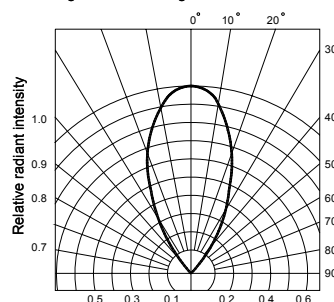


Fig.6 Radiation diagram



- **Bin Limits**

1. Intensity bin limits (At  $I_F = 20\text{mA}$ )

| Bin Code | Min. (mcd) | Max. (mcd) |
|----------|------------|------------|
| :        | :          | :          |
| U        | 410        | 820        |
| V        | 620        | 1230       |
| W        | 930        | 1840       |
| X        | 1390       | 2760       |
| Y        | 2090       | 4260       |
| :        | :          | :          |

2. Color Bin Limits (At  $I_F = 20\text{mA}$ ) : Dominant Wave Length  $\lambda_d(\text{nm})$

| Bin Code | Min. (nm) | Max. (nm) |
|----------|-----------|-----------|
| 1        | 599       | 605       |
| 2        | 603       | 609       |
| 3        | 607       | 613       |

- Bin: x x

