Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


## Contact us

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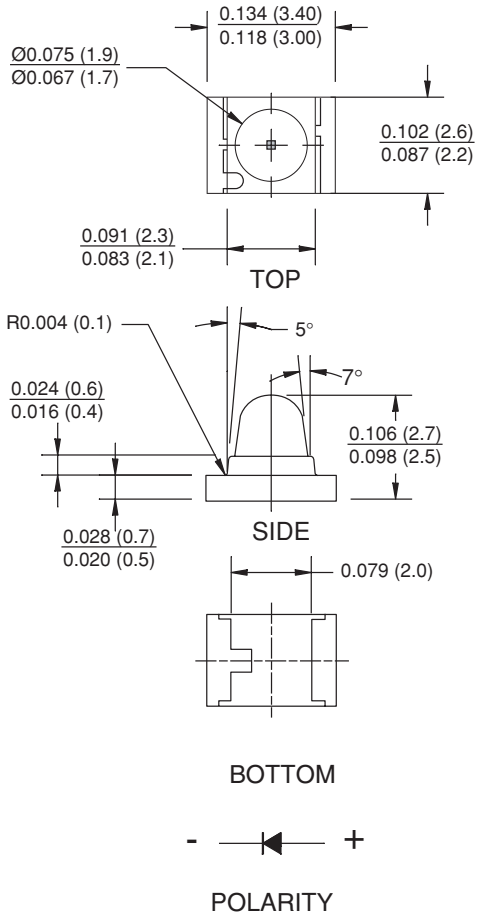
# QTLP660CIR
# 1.8mm DOME LENS EMITTING DIODE

## QTLP660CIR

### PACKAGE DIMENSIONS




NOTE:
Dimensions for all drawings are in inches (mm).

## FEATURES

- 1.8mm Dome Lens Package
- Available in 0.315” (8mm) width tape on 7” (178mm) diameter reel; 2,000 units per reel
- Narrow Emission Angle, 30°
- Wavelength = 940 nm, GaAs
- Water Clear Lens
- Matched Photosensor: QTLP660CPDF

# QTLP660CIR
# 1.8mm DOME LENS EMITTING DIODE

## QTLP660CIR

| **ABSOLUTE MAXIMUM RATINGS** ($T_A$ = 25°C unless otherwise specified) | | | |
|---|---|---|---|
| **Parameter** | **Symbol** | **Rating** | **Unit** |
| Operating Temperature | $T_{OPR}$ | -40 to +85 | °C |
| Storage Temperature | $T_{STG}$ | -40 to +90 | °C |
| Soldering Temperature (Iron)(1,2,3) | $T_{SOL-I}$ | 240 for 5 sec | °C |
| Soldering Temperature (Flow)(1,2) | $T_{SOL-F}$ | 260 for 10 sec | °C |
| Continuous Forward Current | $I_F$ | 65 | mA |
| Reverse Voltage | $V_R$ | 5 | V |
| Power Dissipation(4) | $P_D$ | 130 | mW |
| Peak Forward Current (Pulse width = 100µs, Duty Cycle=1%) | $I_{FD}$ | 1.0 | A |

Notes:
1. RMA flux is recommended.
2. Methanol or isopropyl alcohols are recommended as cleaning agents.
3. Soldering iron tip at 1/16" (1.6mm) from housing
4. At 25°C or below

| **ELECTRICAL / OPTICAL CHARACTERISTICS** ($T_A$ =25°C) | | | | | | |
|---|---|---|---|---|---|---|
| **PARAMETER** | **TEST CONDITIONS** | **SYMBOL** | **MIN.** | **TYP.** | **MAX.** | **UNITS** |
| Peak Emission Wavelength | $I_F$ = 20 mA | λP | — | 940 | — | nm |
| Emission Angle | $I_F$ = 20 mA | Θ | — | ±15 | — | Deg. |
| Forward Voltage | $I_F$ = 20 mA | $V_F$ | — | 1.2 | 1.5 | V |
| | $I_F$ = 100 mA, $t_P$ = 100 µs, Duty Cycle = 0.01 | | — | 1.4 | 1.85 | |
| | $I_F$ = 1 A, $t_P$ = 100 µs, Duty Cycle = 0.01 | | — | 2.6 | 4.0 | |
| Reverse Current | $V_R$ = 5 V | $I_R$ | — | — | 100 | µA |
| Radiant Intensity | $I_F$ = 20 mA | Ee | 1.0 | 3.0 | — | mW/sr |
| | $I_F$ = 100 mA, $t_P$ = 100 µs, Duty Cycle = 0.01 | | — | 14 | — | |
| | $I_F$ = 1 A, $t_P$ = 100 µs, Duty Cycle = 0.01 | | — | 140 | — | |
| Rise Time | $I_F$ = 100 mA, | $t_r$ | — | 1 | — | µs |
| Fall Time | $t_P$ = 20 ms | $t_f$ | — | 1 | — | µs |

## TYPICAL PERFORMANCE CURVES

**Fig. 1 Forward Current vs. Ambient Temperature**

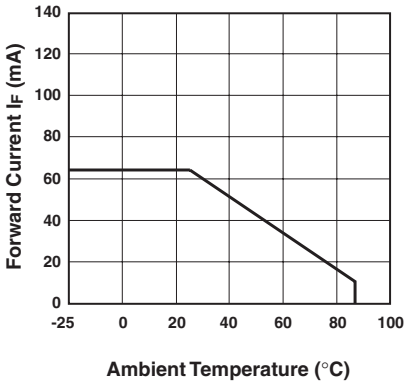



**Fig. 2 Relative Radiant Intensity vs. Wavelength**

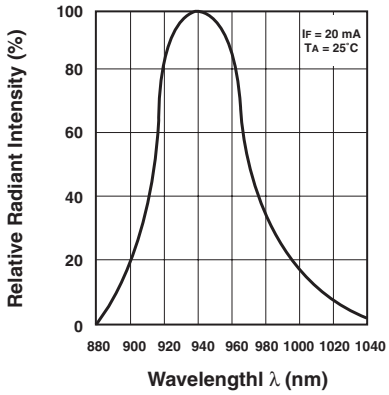



**Fig. 3 Peak Emission Wavelength vs. Ambient Temperature**

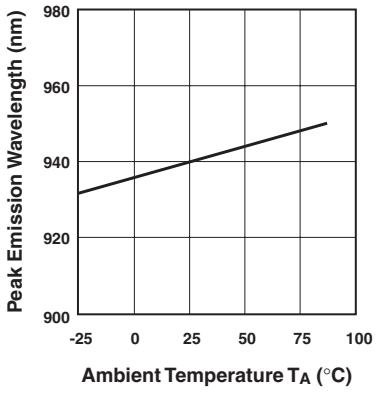



**Fig. 4 Forward Current vs. Forward Voltage**

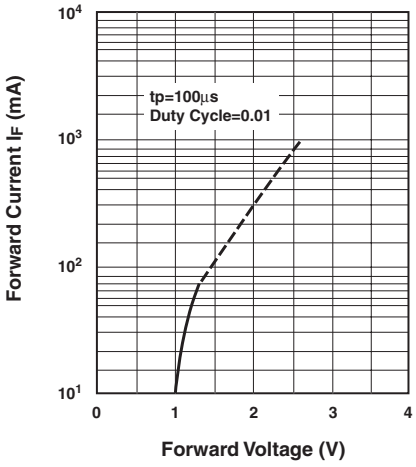



**Fig. 5 Relative Intensity vs. Ambient Temperature (°C)**

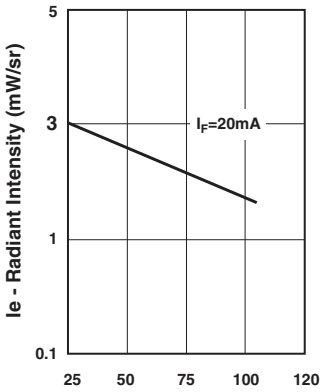
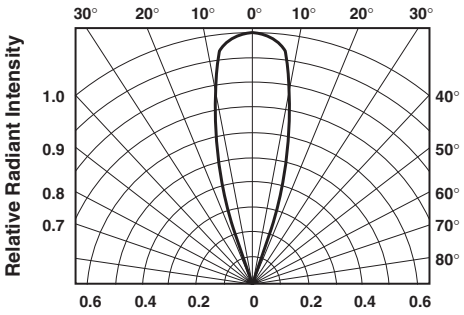
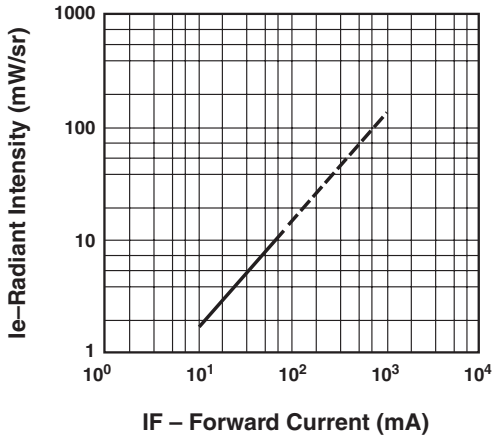



**Fig. 6 Relative Radiant Intensity vs. Angular Displacement**

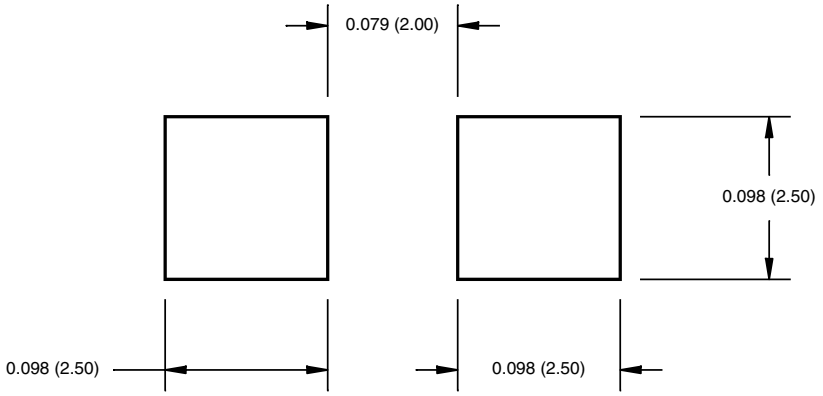


## TYPICAL PERFORMANCE CURVES

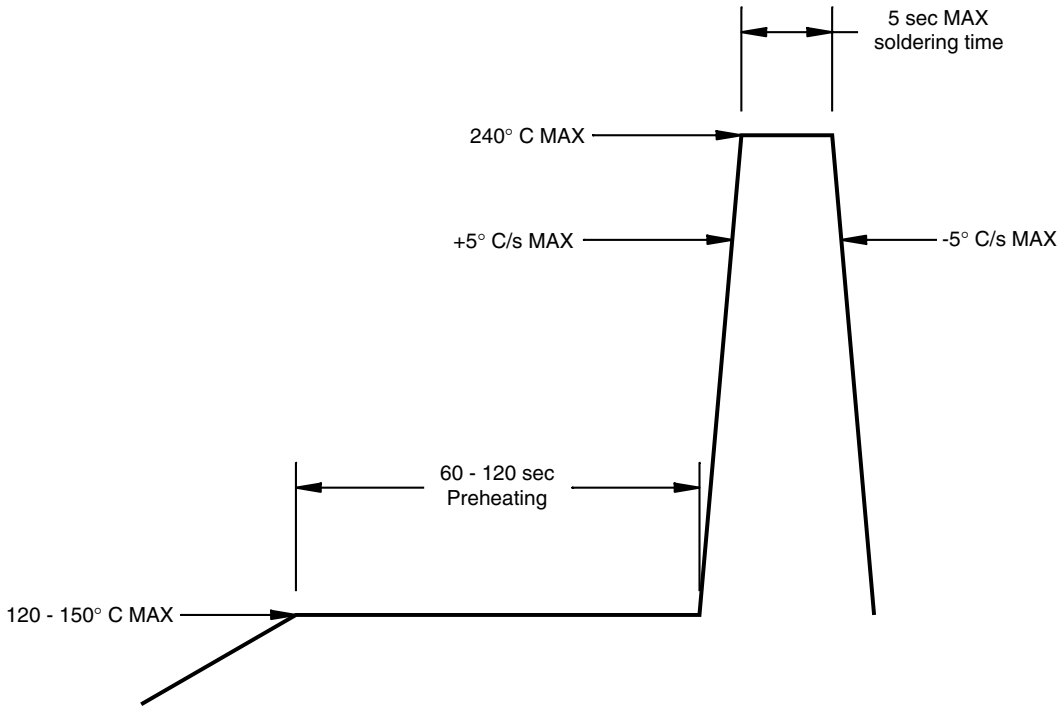
**Fig. 7 Relative Intensity vs. Forward Current**



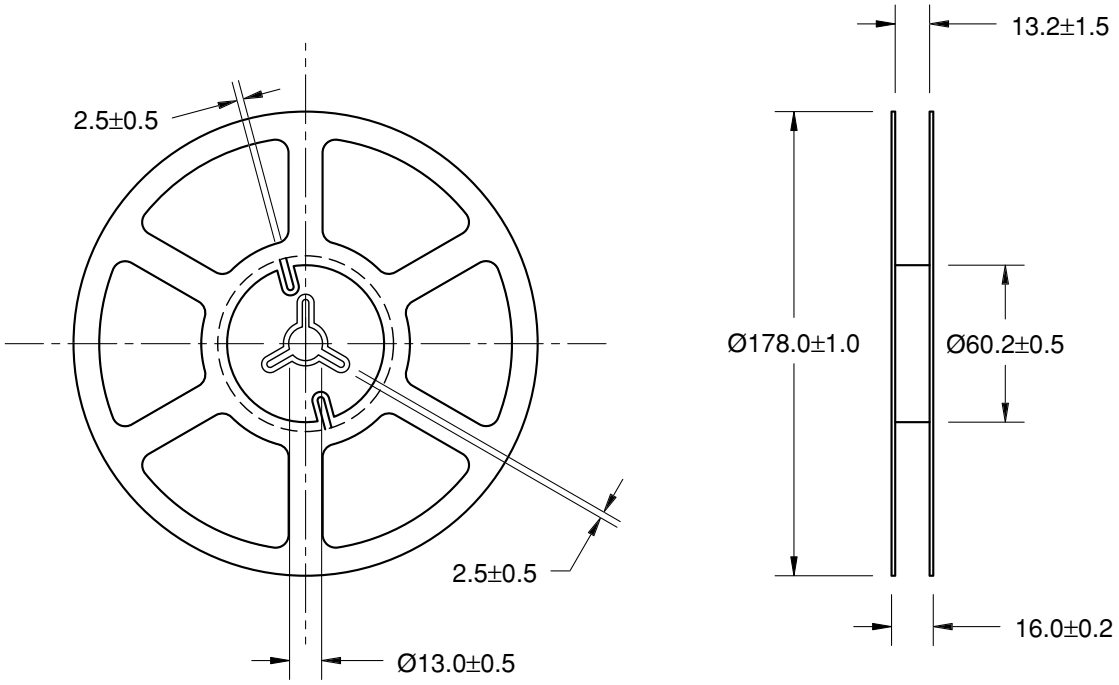
## RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

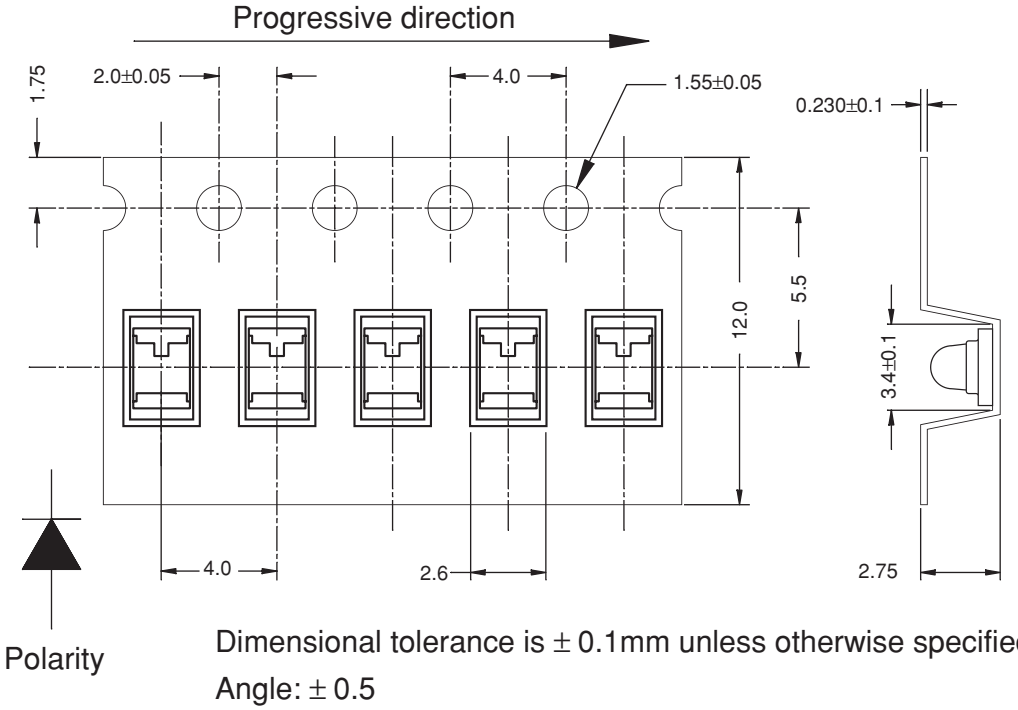



## RECOMMENDED IR REFLOW SOLDERING PROFILE



## TAPE AND REEL DIMENSIONS




Dimensional tolerance is ± 0.1mm unless otherwise specified

Angle: ± 0.5

Unit: mm

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