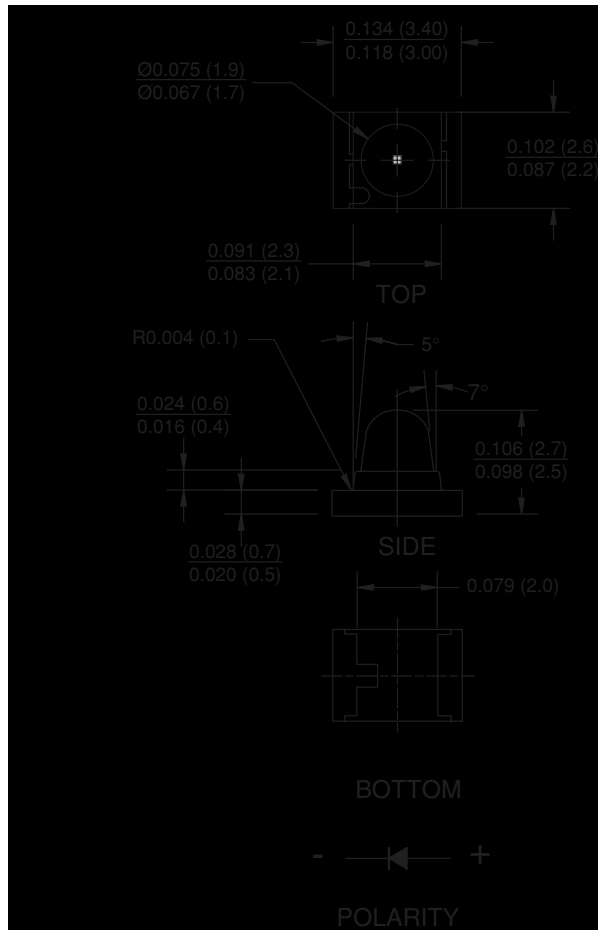


# QTLP660CIR 1.8mm DOME LENS EMITTING DIODE

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 ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter  | Symbol      | Rating         | Unit             |
|--|-------------|----------------|------------------|
| Operating Temperature  | $T_{OPR}$   | -40 to +85     | $^\circ\text{C}$ |
| Storage Temperature  | $T_{STG}$   | -40 to +90     | $^\circ\text{C}$ |
| Soldering Temperature (Iron) <sup>(1,2,3)</sup>                        | $T_{SOL-I}$ | 240 for 5 sec  | $^\circ\text{C}$ |
| Soldering Temperature (Flow) <sup>(1,2)</sup>                          | $T_{SOL-F}$ | 260 for 10 sec | $^\circ\text{C}$ |
| Continuous Forward Current   | $I_F$       | 65             | mA               |
| Reverse Voltage  | $V_R$       | 5              | V                |
| Power Dissipation <sup>(4)</sup>                                       | $P_D$       | 130            | mW               |
| Peak Forward Current (Pulse width = 100 $\mu\text{s}$ , 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 $^\circ\text{C}$  or below

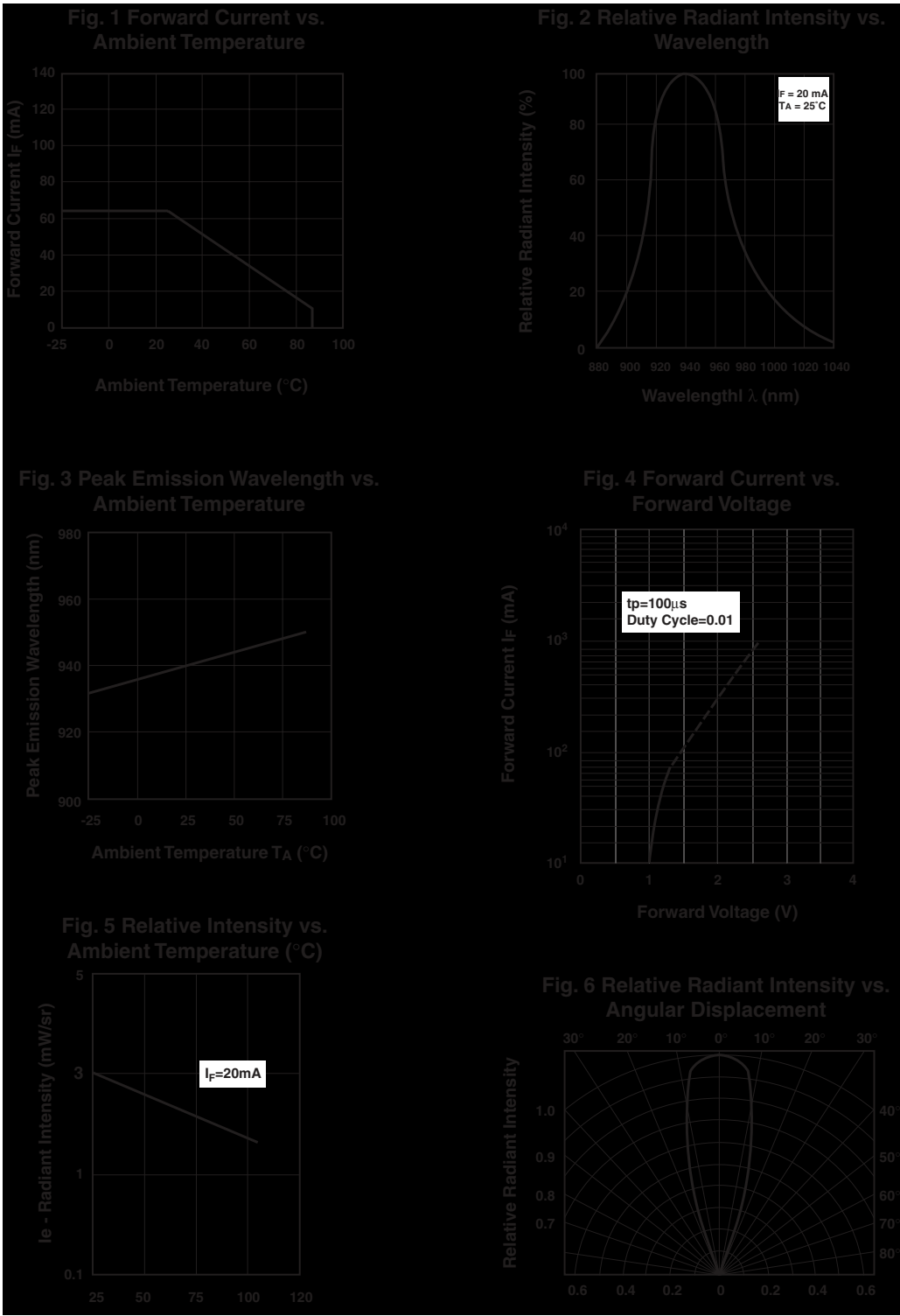
#### ELECTRICAL / OPTICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

| PARAMETER                | TEST CONDITIONS  | SYMBOL      | MIN. | TYP.     | MAX. | UNITS         |
|--------------------------|--|-------------|------|----------|------|---------------|
| Peak Emission Wavelength | $I_F = 20\text{ mA}$   | $\lambda_P$ | —    | 940      | —    | nm            |
| Emission Angle           | $I_F = 20\text{ mA}$   | $\Theta$    | —    | $\pm 15$ | —    | Deg.          |
| Forward Voltage          | $I_F = 20\text{ mA}$   | $V_F$       | —    | 1.2      | 1.5  | V             |
|                          | $I_F = 100\text{ mA}$ , $t_P = 100\ \mu\text{s}$ , Duty Cycle = 0.01 |             | —    | 1.4      | 1.85 |               |
|                          | $I_F = 1\text{ A}$ , $t_P = 100\ \mu\text{s}$ , Duty Cycle = 0.01    |             | —    | 2.6      | 4.0  |               |
| Reverse Current          | $V_R = 5\text{ V}$   | $I_R$       | —    | —        | 100  | $\mu\text{A}$ |
| Radiant Intensity        | $I_F = 20\text{ mA}$   | Ee          | 1.0  | 3.0      | —    | mW/sr         |
|                          | $I_F = 100\text{ mA}$ , $t_P = 100\ \mu\text{s}$ , Duty Cycle = 0.01 |             | —    | 14       | —    |               |
|                          | $I_F = 1\text{ A}$ , $t_P = 100\ \mu\text{s}$ , Duty Cycle = 0.01    |             | —    | 140      | —    |               |
| Rise Time                | $I_F = 100\text{ mA}$ ,  | $t_r$       | —    | 1        | —    | $\mu\text{s}$ |
| Fall Time                | $t_P = 20\text{ ms}$   | $t_f$       | —    | 1        | —    | $\mu\text{s}$ |

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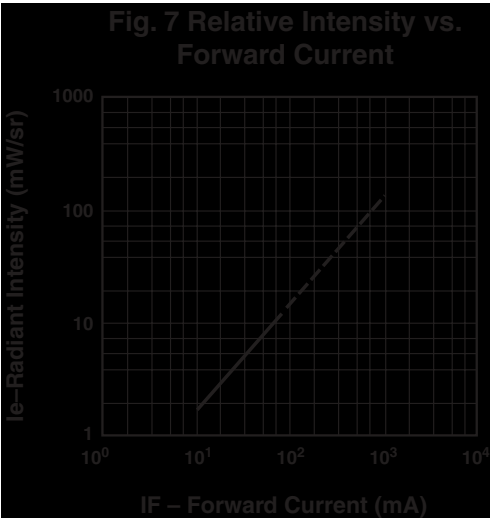
## TYPICAL PERFORMANCE CURVES



**QTLP660CIR**  
**1.8mm DOME LENS**  
**EMITTING DIODE**

**QTLP660CIR**

**TYPICAL PERFORMANCE CURVES**





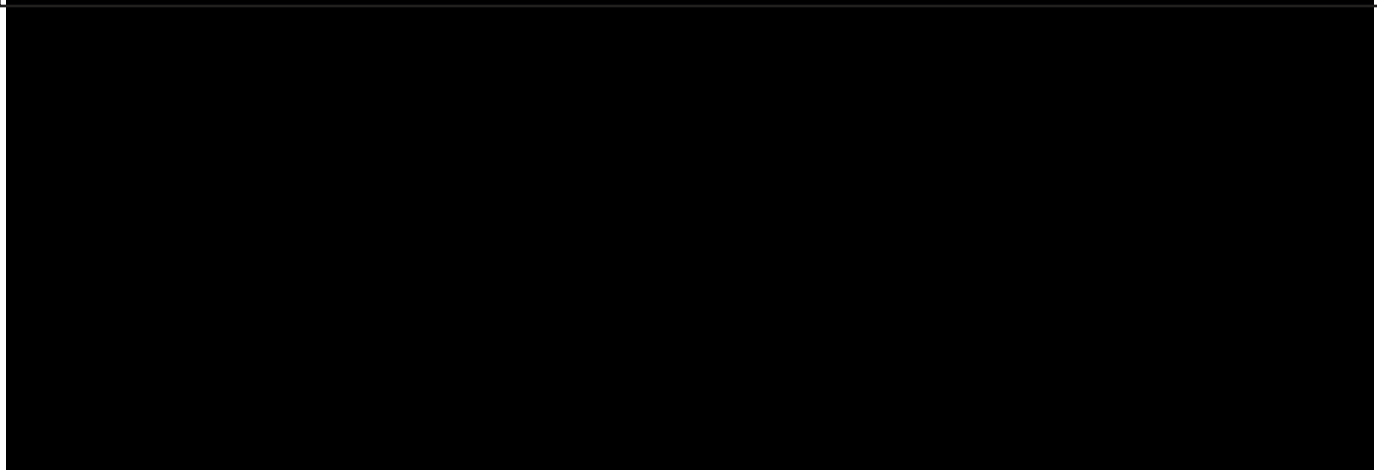
**QTLP660CIR**  
**1.8mm DOME LENS**  
**EMITTING DIODE**

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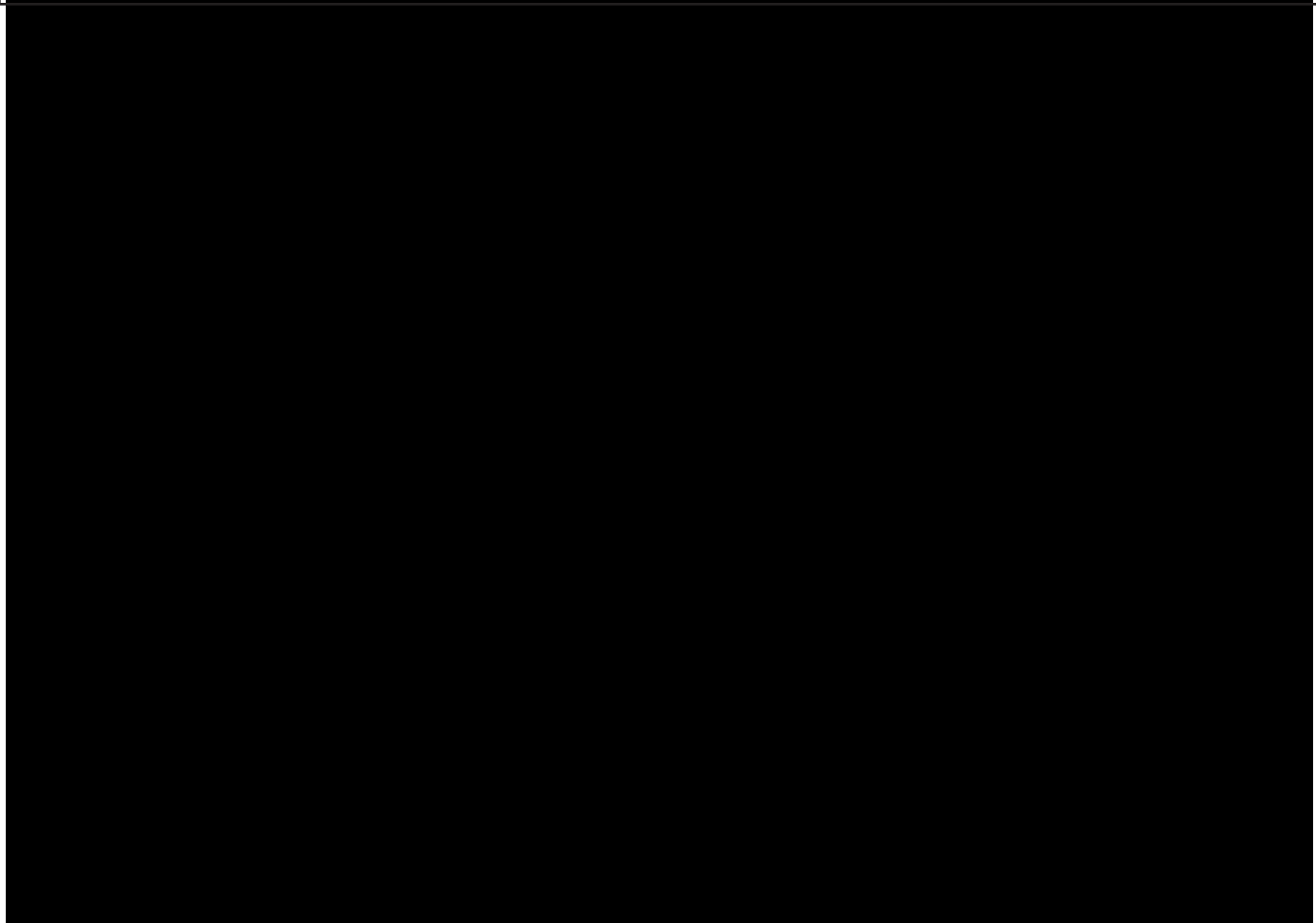
**QTLP660CIR**

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**RECOMMENDED PRINTED CIRCUIT BOARD PATTERN**



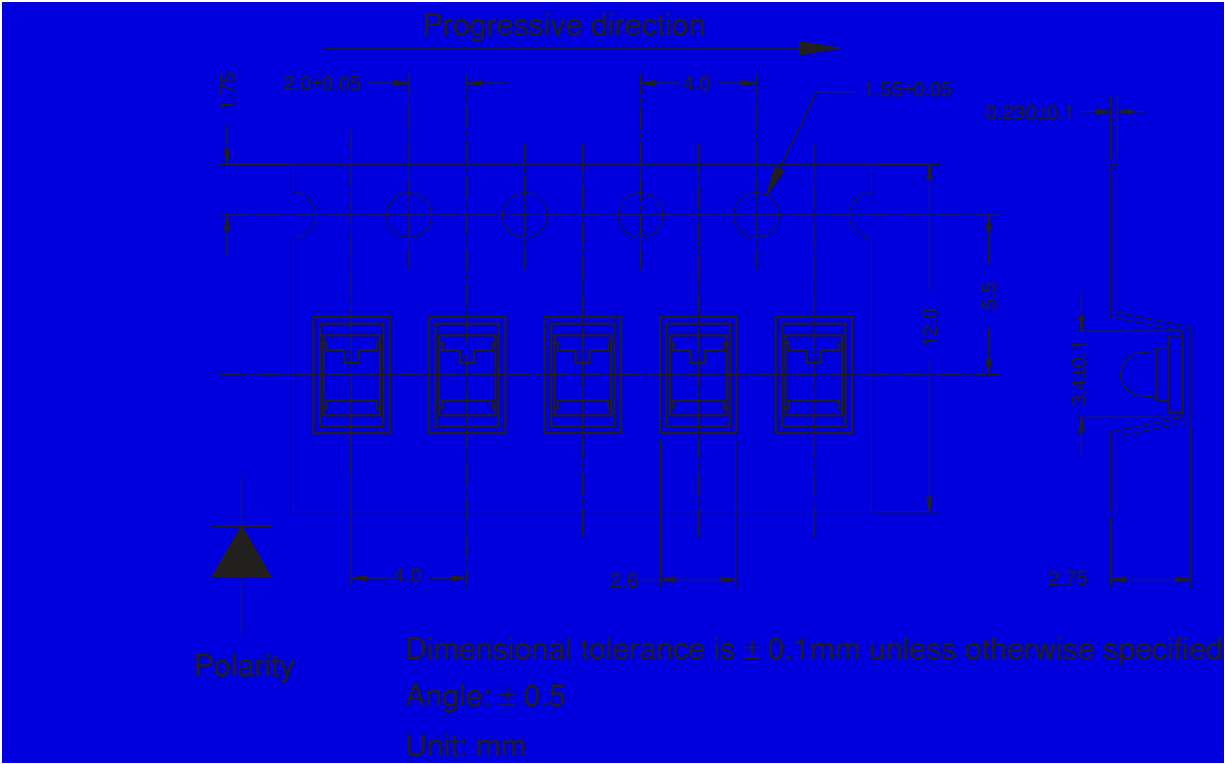
**RECOMMENDED IR REFLOW SOLDERING PROFILE**



# QTLP660CIR 1.8mm DOME LENS EMITTING DIODE

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## TAPE AND REEL DIMENSIONS





# QTLP660CIR 1.8mm DOME LENS EMITTING DIODE

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## QTLP660CIR

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