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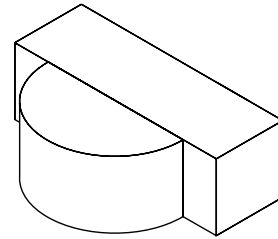
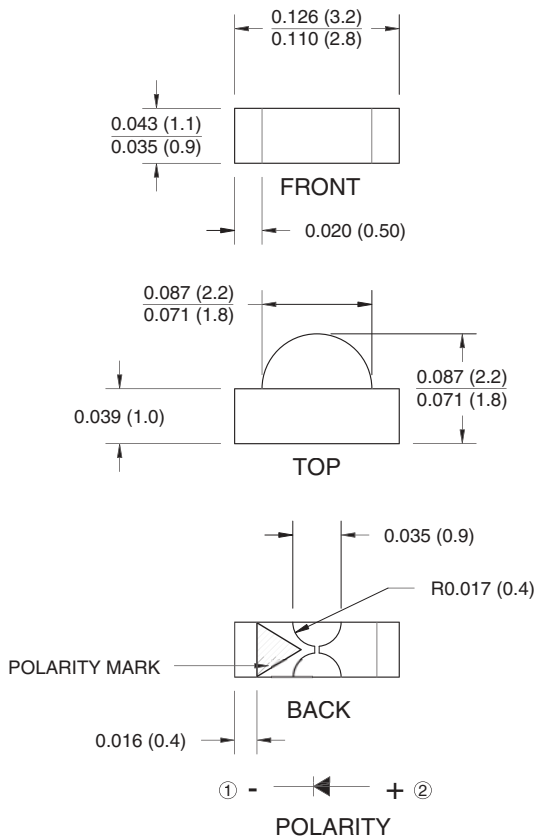
For any questions, you can email us directly:

sales@integrated-circuit.com

RIGHT ANGLE SURFACE MOUNT INFRARED EMITTING DIODE

QTLP610CIR

PACKAGE DIMENSIONS



FEATURES

- Right Angle Surface Mount Package
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel
- Wide Viewing Angle 160°
- Wavelength = 940 nm, GaAs
- Water Clear Lens
- Matched Photosensor: QTLP610CPD



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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) ^(1,2,3) | T_{SOL-I} | 240 for 5 sec | $^\circ\text{C}$ |
| Soldering Temperature (Flow) ^(1,2) | 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 ⁽⁴⁾ | P_D | 100 | mW |
| Peak Forward Current (Pulse width = 100 μs , 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 | $I_F = 20\text{ mA}$ | λ_P | — | 940 | — | nm |
| Emission Angle | $I_F = 20\text{ mA}$ | Θ | — | ± 80 | — | 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 | — | — | 10 | μA |
| Radiant Intensity | $I_F = 20\text{ mA}$ | Ee | 0.5 | 0.8 | — | mW/sr |
| | $I_F = 100\text{ mA}$, $t_p = 100\ \mu\text{s}$, Duty Cycle = 0.01 | | — | 4.0 | — | |
| | $I_F = 1\text{ A}$, $t_p = 100\ \mu\text{s}$, Duty Cycle = 0.01 | | — | 40 | — | |
| Rise Time | $I_F = 100\text{ mA}$ | t_r | — | 1 | — | μs |
| Fall Time | $t_p = 20\text{ ms}$ | t_f | — | 1 | — | μs |

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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current I_F vs. Ambient Temperature

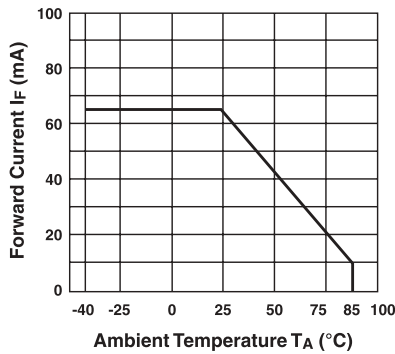


Fig. 2 Relative Radiant Intensity vs. Wavelength

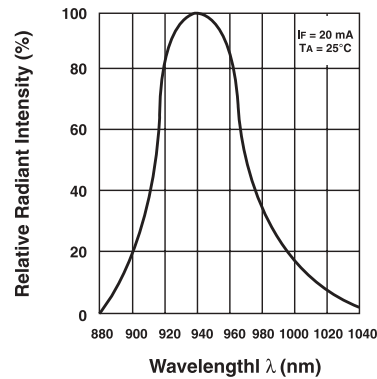


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

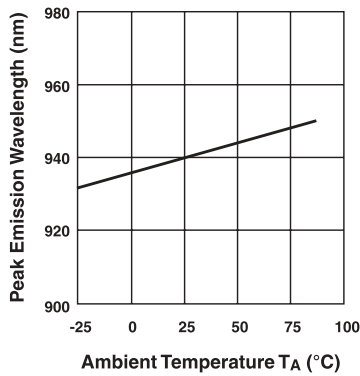


Fig. 4 Forward Current I_F vs. Forward Voltage

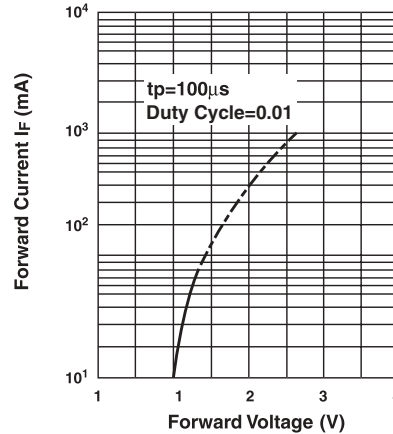


Fig. 5 Relative Intensity vs. Ambient Temperature (°C)

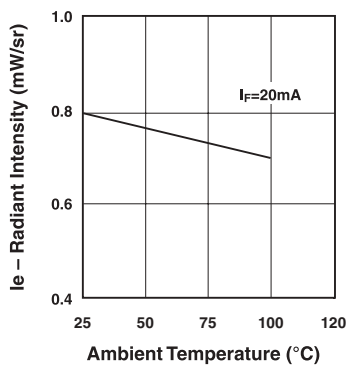
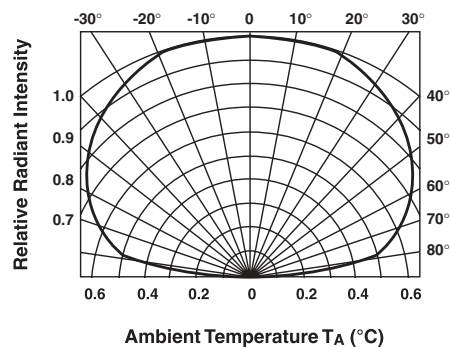


Fig. 6 Relative Radiant Intensity vs. Angular Displacement

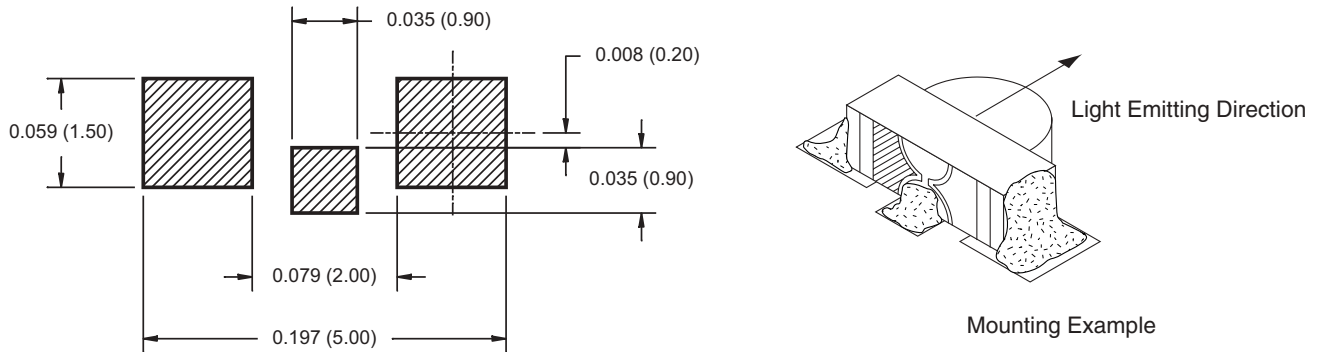


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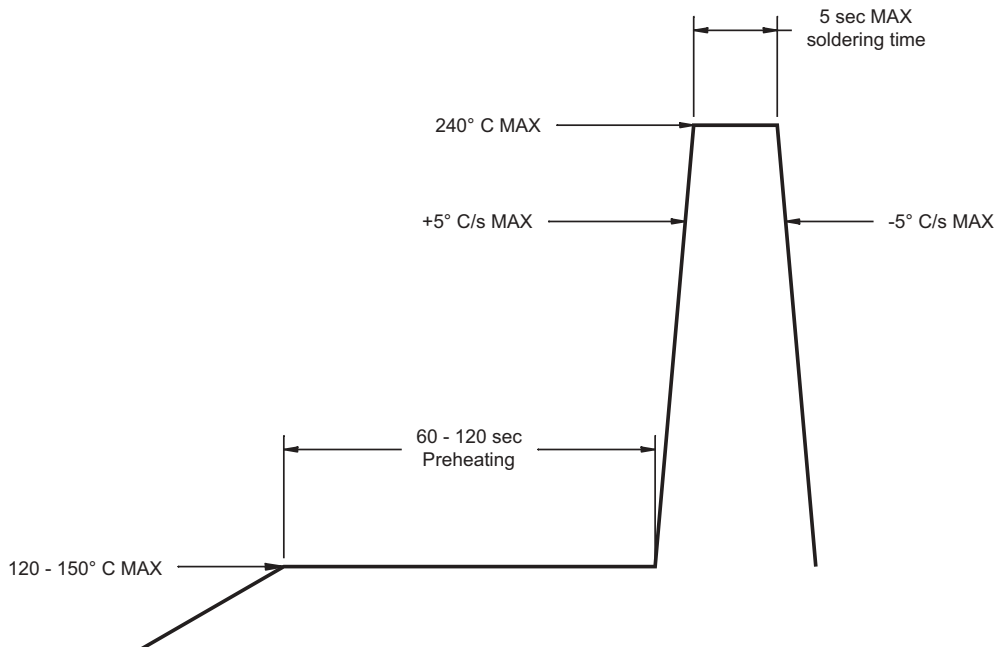
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RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE





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