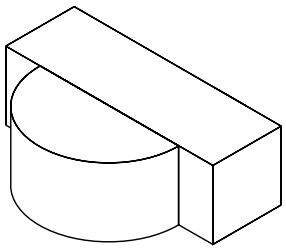
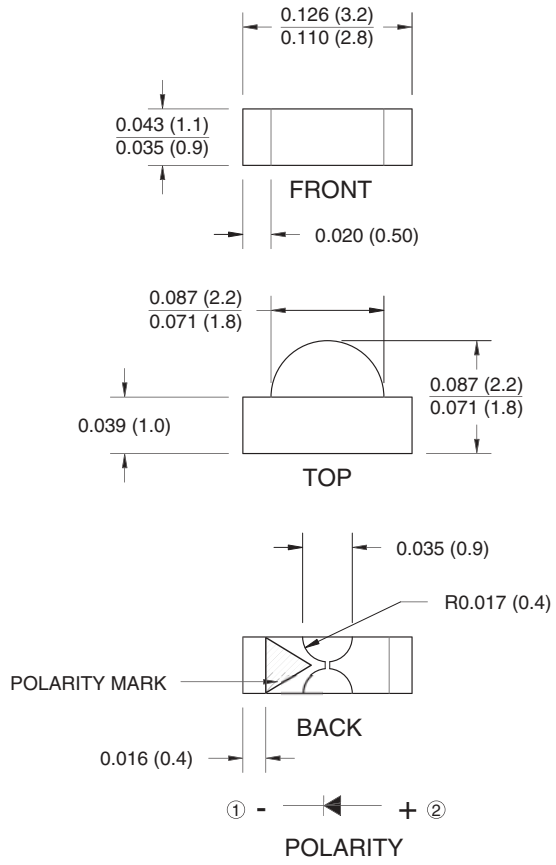
RIGHT ANGLE SURFACE MOUNT INFRARED EMITTING DIODE

QTLP610CIR



PACKAGE DIMENSIONS



NOTE:
1. Cathode
2. Anode
3. Dimensions for all drawings are in inches (mm).

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°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	100	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	—	±80	—	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	—	—	10	µA
Radiant Intensity	I_F = 20 mA	Ee	0.5	0.8	—	mW/sr
	I_F = 100 mA, t_P = 100 µs, Duty Cycle = 0.01		—	4.0	—	
	I_F = 1 A, t_P = 100 µs, Duty Cycle = 0.01		—	40	—	
Rise Time	I_F = 100 mA	t_r	—	1	—	µs
Fall Time	t_P = 20 ms	t_f	—	1	—	µs

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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Ambient Temperature

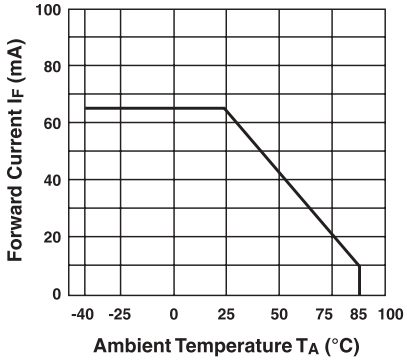


Fig. 2 Relative Radiant Intensity vs. Wavelength

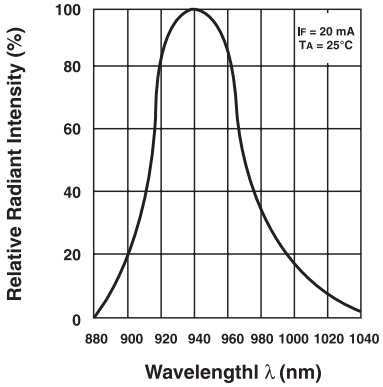


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

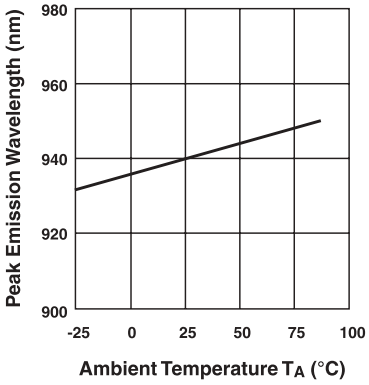


Fig. 4 Forward Current vs. Forward Voltage

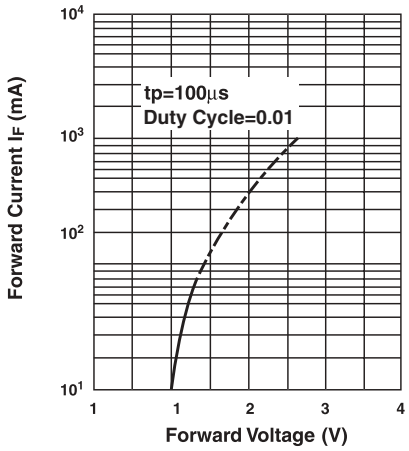


Fig. 5 Relative Intensity vs. Ambient Temperature (°C)

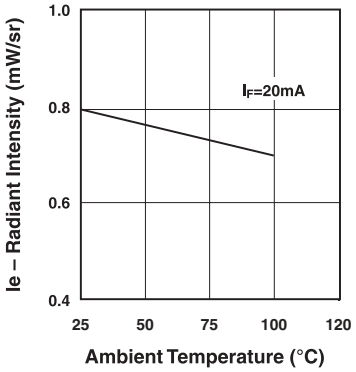
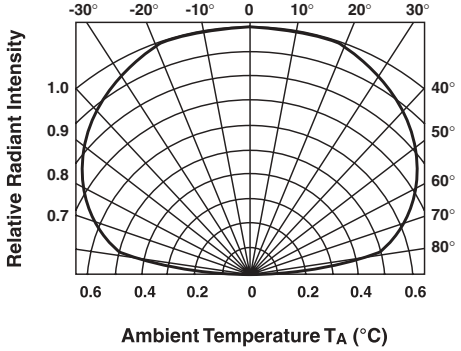


Fig. 6 Relative Radiant Intensity vs. Angular Displacement



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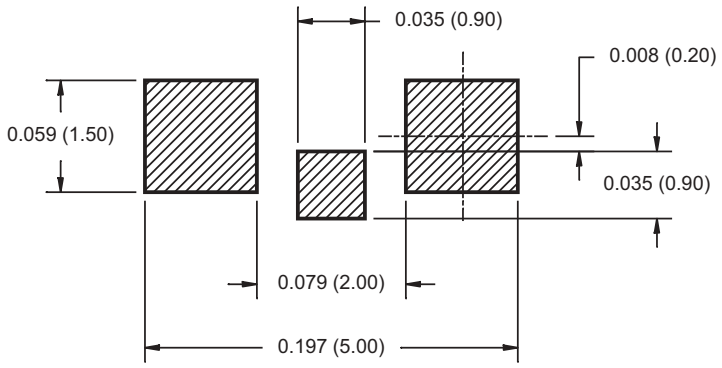
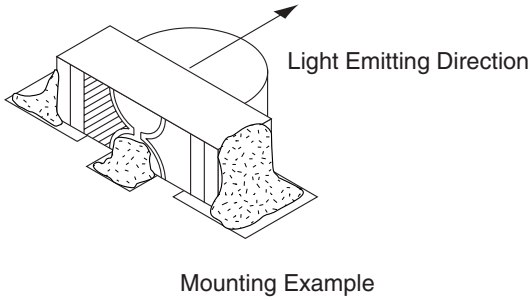
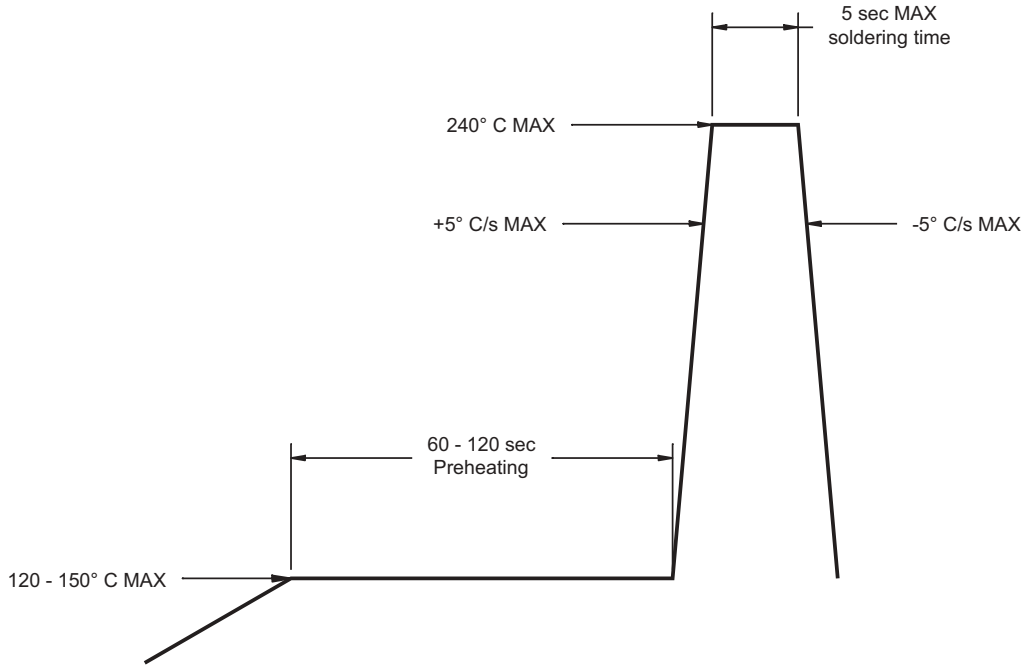
RECOMMENDED PRINTED CIRCUIT BOARD PATTERN





Mounting Example

RECOMMENDED IR REFLOW SOLDERING PROFILE



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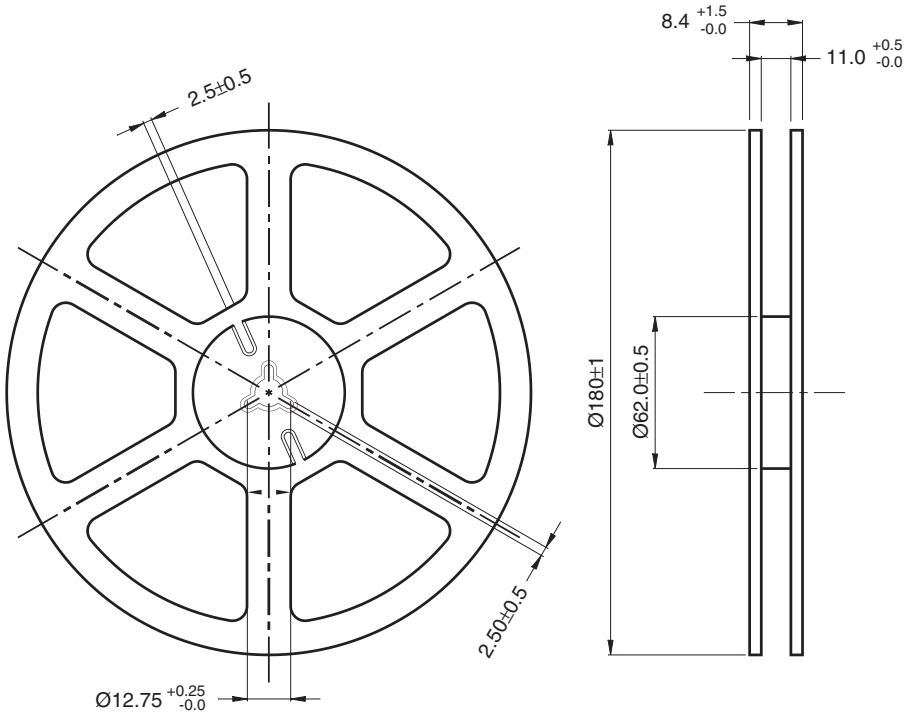
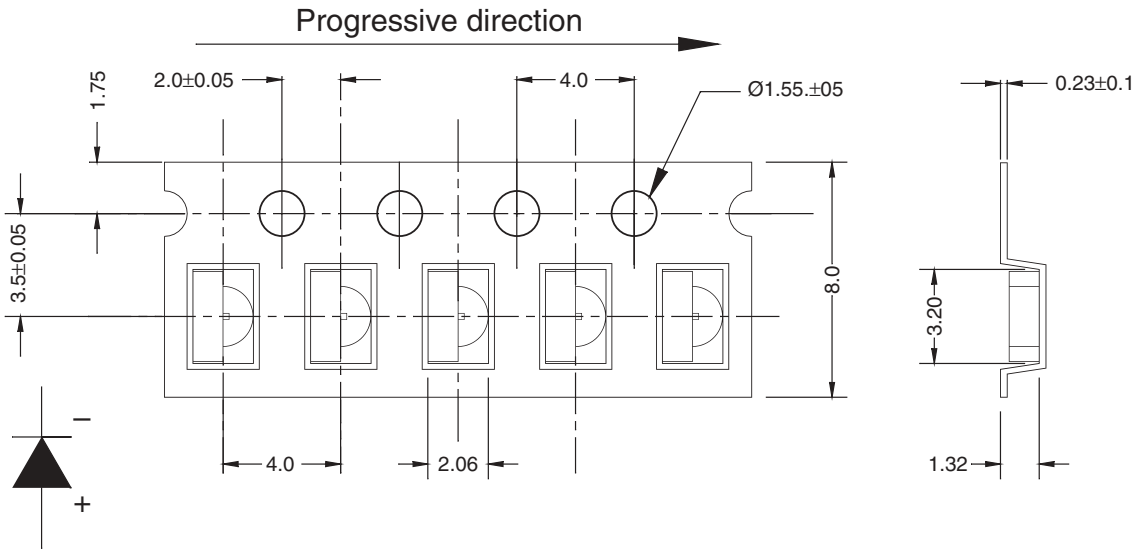
TAPE AND REEL DIMENSIONS





Polarity

Dimensional tolerance is ± 0.1mm unless otherwise specified

Angle: ± 0.5

Unit: mm

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