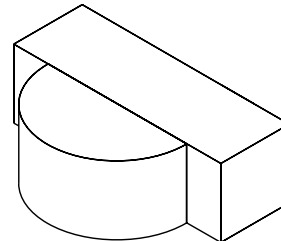
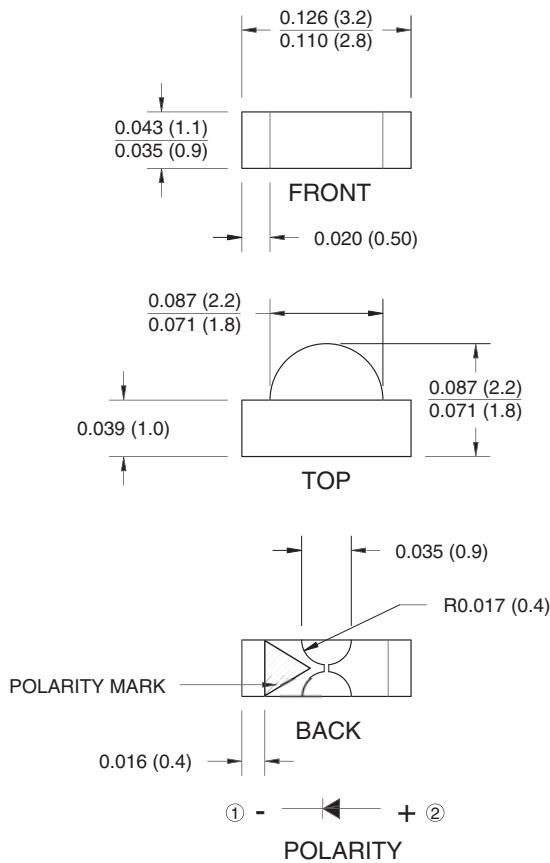


**PACKAGE DIMENSIONS**



**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

**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>	$P_D$	100	mW
Peak Forward Current (Pulse width = 100 $\mu\text{s}$ , Duty Cycle=1%)	$I_{FD}$	1.0	A

Notes:

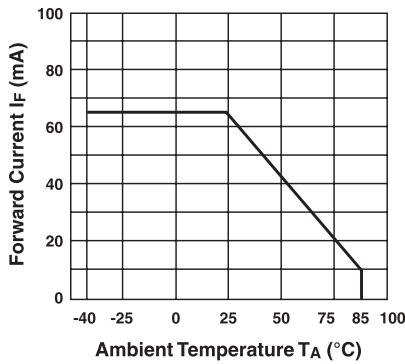
1. RMA flux is recommended.
2. Methanol or isopropyl alcohols are recommended as cleaning agents.
3. Soldering iron tip at 1/16" (1.6mm) from housing
4. At 25 $^\circ\text{C}$  or below

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

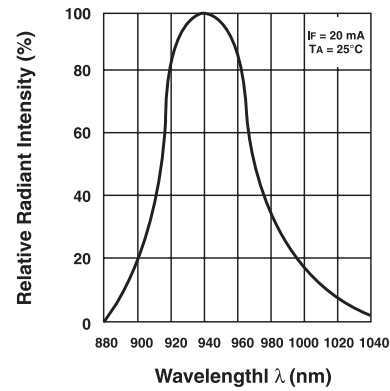
PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Peak Emission Wavelength	$I_F = 20 \text{ mA}$	$\lambda_P$	—	940	—	nm
Emission Angle	$I_F = 20 \text{ mA}$	$\Theta$	—	$\pm 80$	—	Deg.
Forward Voltage	$I_F = 20 \text{ mA}$	$V_F$	—	1.2	1.5	V
	$I_F = 100 \text{ mA}, t_p = 100 \mu\text{s}, \text{Duty Cycle} = 0.01$		—	1.4	1.85	
	$I_F = 1 \text{ A}, t_p = 100 \mu\text{s}, \text{Duty Cycle} = 0.01$		—	2.6	4.0	
Reverse Current	$V_R = 5 \text{ V}$	$I_R$	—	—	10	$\mu\text{A}$
Radiant Intensity	$I_F = 20 \text{ mA}$	Ee	0.5	0.8	—	mW/sr
	$I_F = 100 \text{ mA}, t_p = 100 \mu\text{s}, \text{Duty Cycle} = 0.01$		—	4.0	—	
	$I_F = 1 \text{ A}, t_p = 100 \mu\text{s}, \text{Duty Cycle} = 0.01$		—	40	—	
Rise Time	$I_F = 100 \text{ mA}$	$t_r$	—	1	—	$\mu\text{s}$
Fall Time	$t_p = 20 \text{ ms}$	$t_f$	—	1	—	$\mu\text{s}$

### TYPICAL PERFORMANCE CURVES

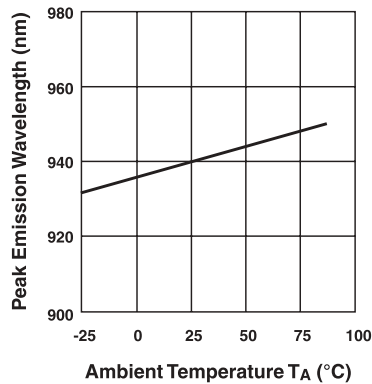
**Fig. 1 Forward Current vs. Ambient Temperature**



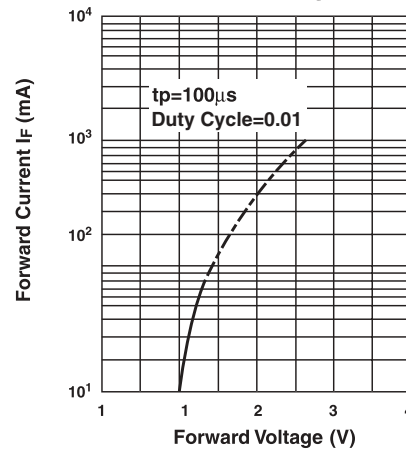
**Fig. 2 Relative Radiant Intensity vs. Wavelength**



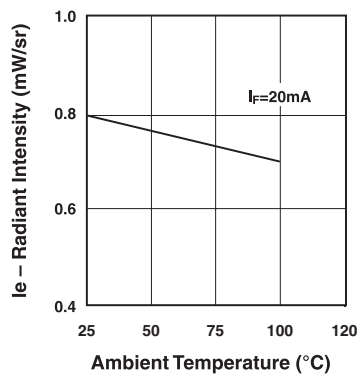
**Fig. 3 Peak Emission Wavelength vs. Ambient Temperature**



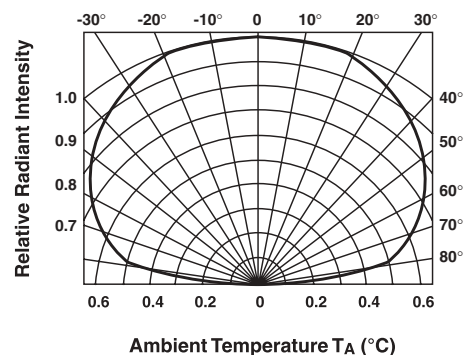
**Fig. 4 Forward Current vs. Forward Voltage**



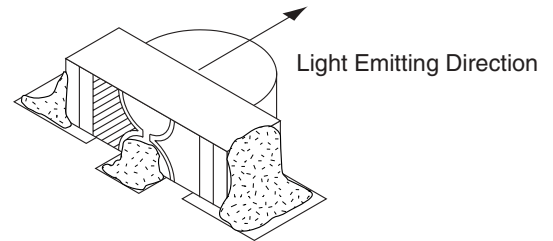
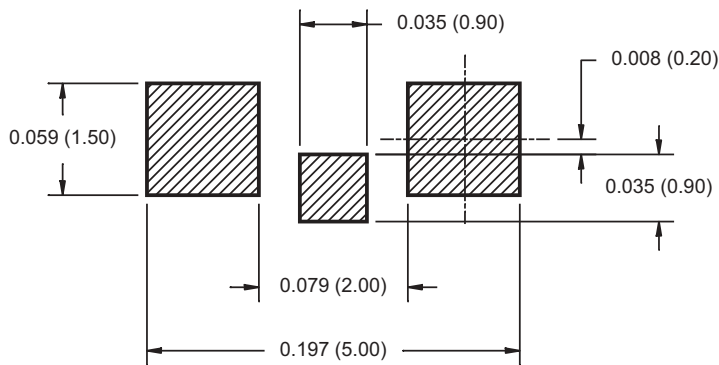
**Fig. 5 Relative Intensity vs. Ambient Temperature (°C)**



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

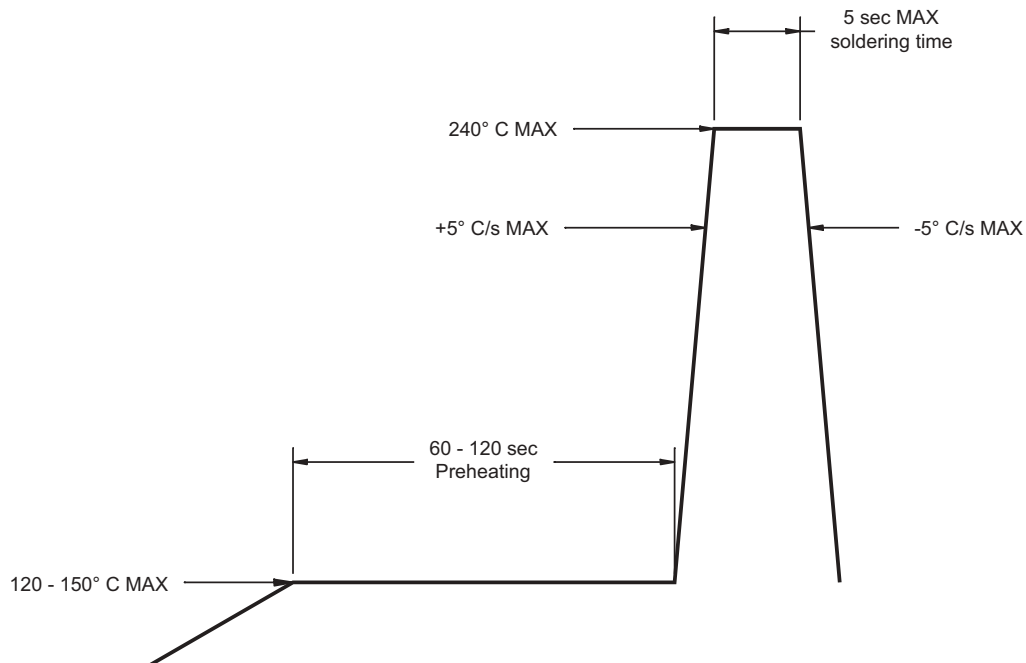


### RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

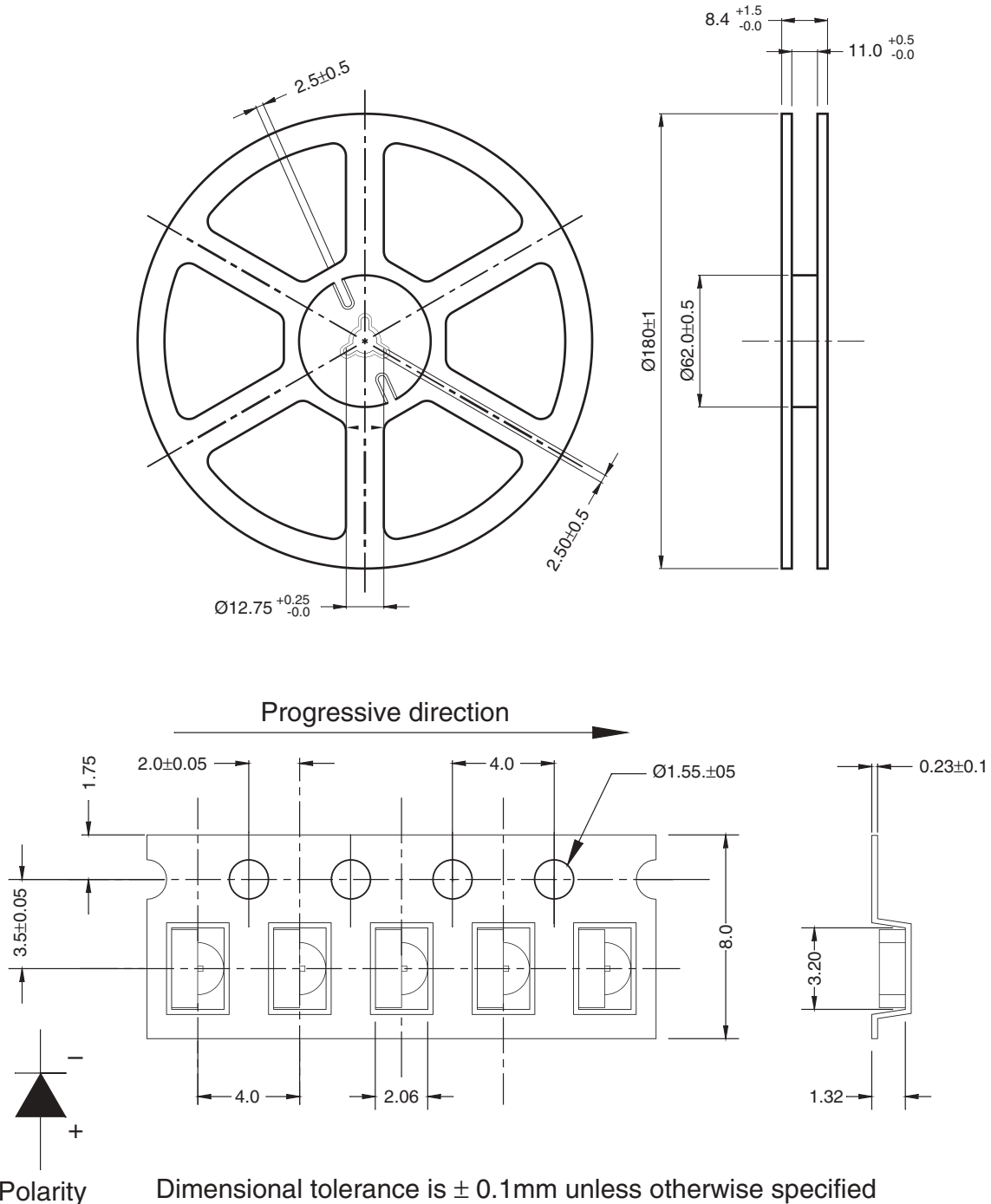


Mounting Example

### RECOMMENDED IR REFLOW SOLDERING PROFILE



**TAPE AND REEL DIMENSIONS**



Dimensional tolerance is  $\pm 0.1\text{mm}$  unless otherwise specified  
 Angle:  $\pm 0.5$   
 Unit: mm

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.