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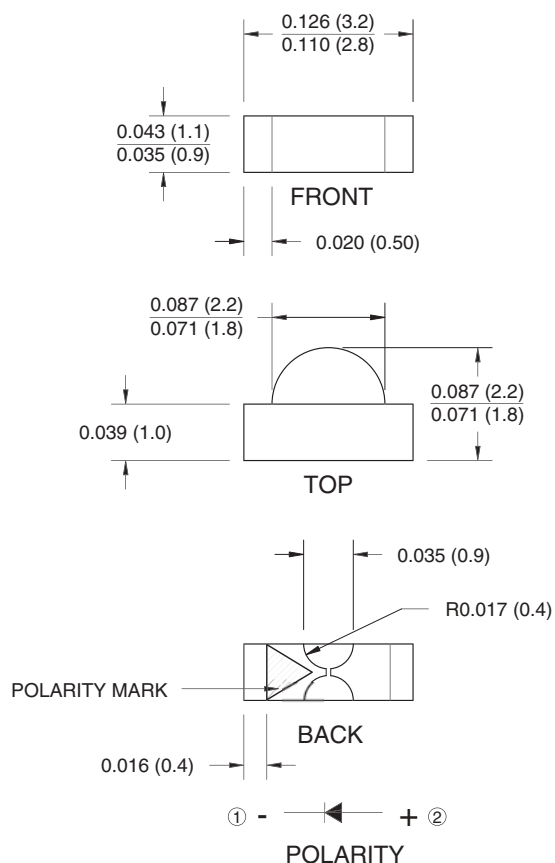


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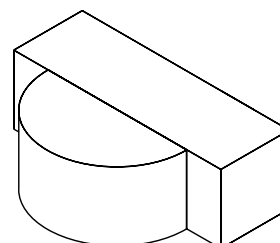
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### PACKAGE DIMENSIONS



**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

### 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:

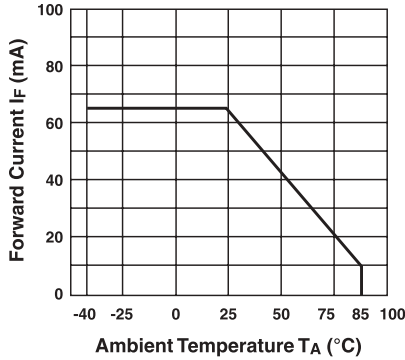
1. RMA flux is recommended.
2. Methanol or isopropyl alcohols are recommended as cleaning agents.
3. Soldering iron tip at 1/16" (1.6mm) from housing
4. At  $25^\circ\text{C}$  or below

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

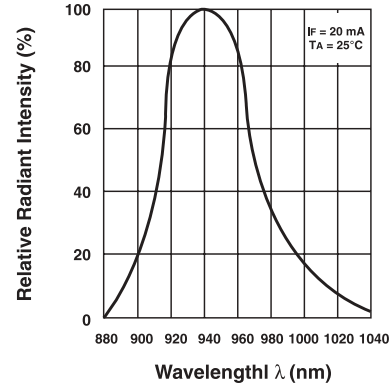
| PARAMETER                | TEST CONDITIONS                                                            | SYMBOL      | MIN. | TYP.     | MAX. | UNITS         |
|--------------------------|----------------------------------------------------------------------------|-------------|------|----------|------|---------------|
| 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             |
|                          | $I_F = 100\text{ mA}$ , $t_P = 100\text{ }\mu\text{s}$ , Duty Cycle = 0.01 |             | —    | 1.4      | 1.85 |               |
|                          | $I_F = 1\text{ A}$ , $t_P = 100\text{ }\mu\text{s}$ , Duty Cycle = 0.01    |             | —    | 2.6      | 4.0  |               |
| Reverse Current          | $V_R = 5\text{ V}$                                                         | $I_R$       | —    | —        | 10   | $\mu\text{A}$ |
| Radiant Intensity        | $I_F = 20\text{ mA}$                                                       | $E_e$       | 0.5  | 0.8      | —    | mW/sr         |
|                          | $I_F = 100\text{ mA}$ , $t_P = 100\text{ }\mu\text{s}$ , Duty Cycle = 0.01 |             | —    | 4.0      | —    |               |
|                          | $I_F = 1\text{ A}$ , $t_P = 100\text{ }\mu\text{s}$ , 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

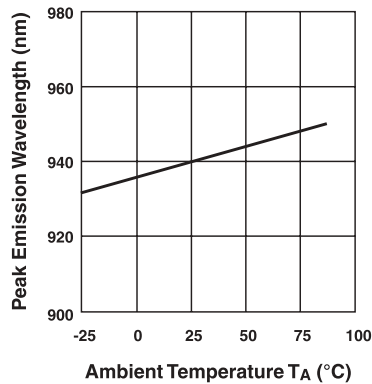
**Fig. 1 Forward Current vs. Ambient Temperature**



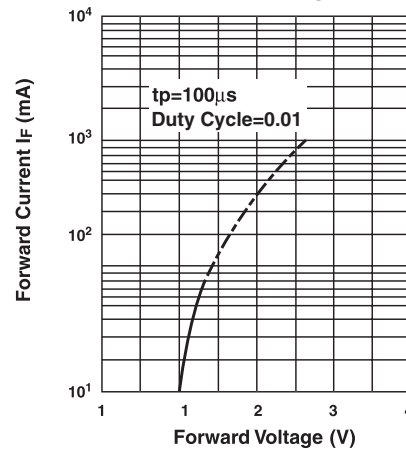
**Fig. 2 Relative Radiant Intensity vs. Wavelength**



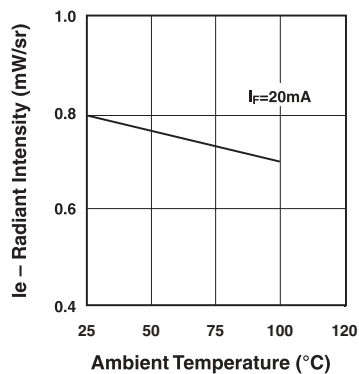
**Fig. 3 Peak Emission Wavelength vs. Ambient Temperature**



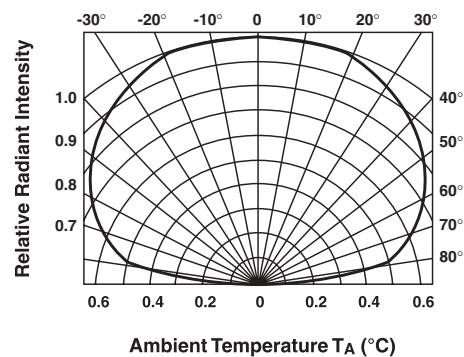
**Fig. 4 Forward Current vs. Forward Voltage**



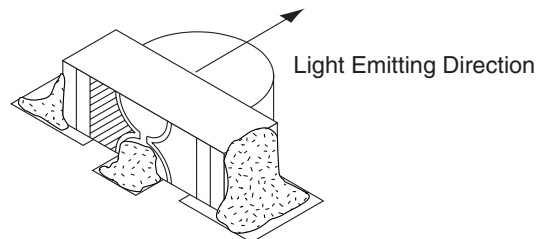
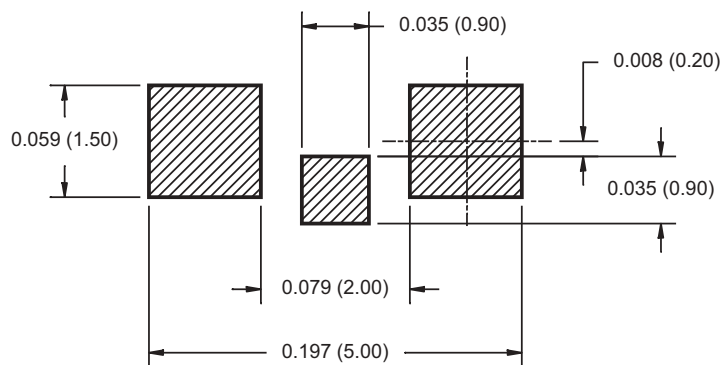
**Fig. 5 Relative Intensity vs. Ambient Temperature (°C)**



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

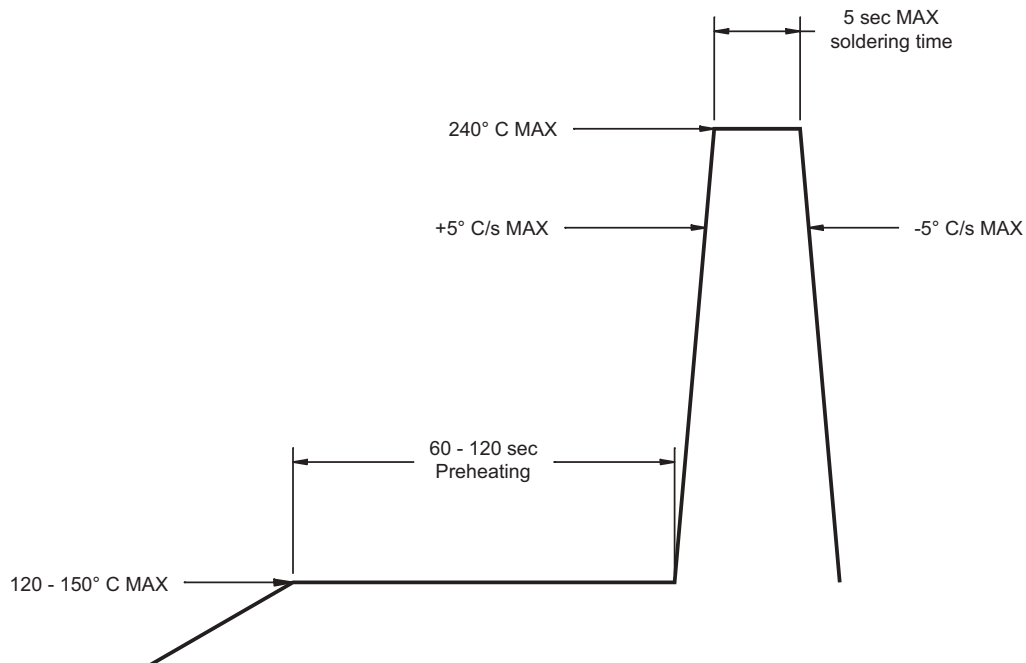


### RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

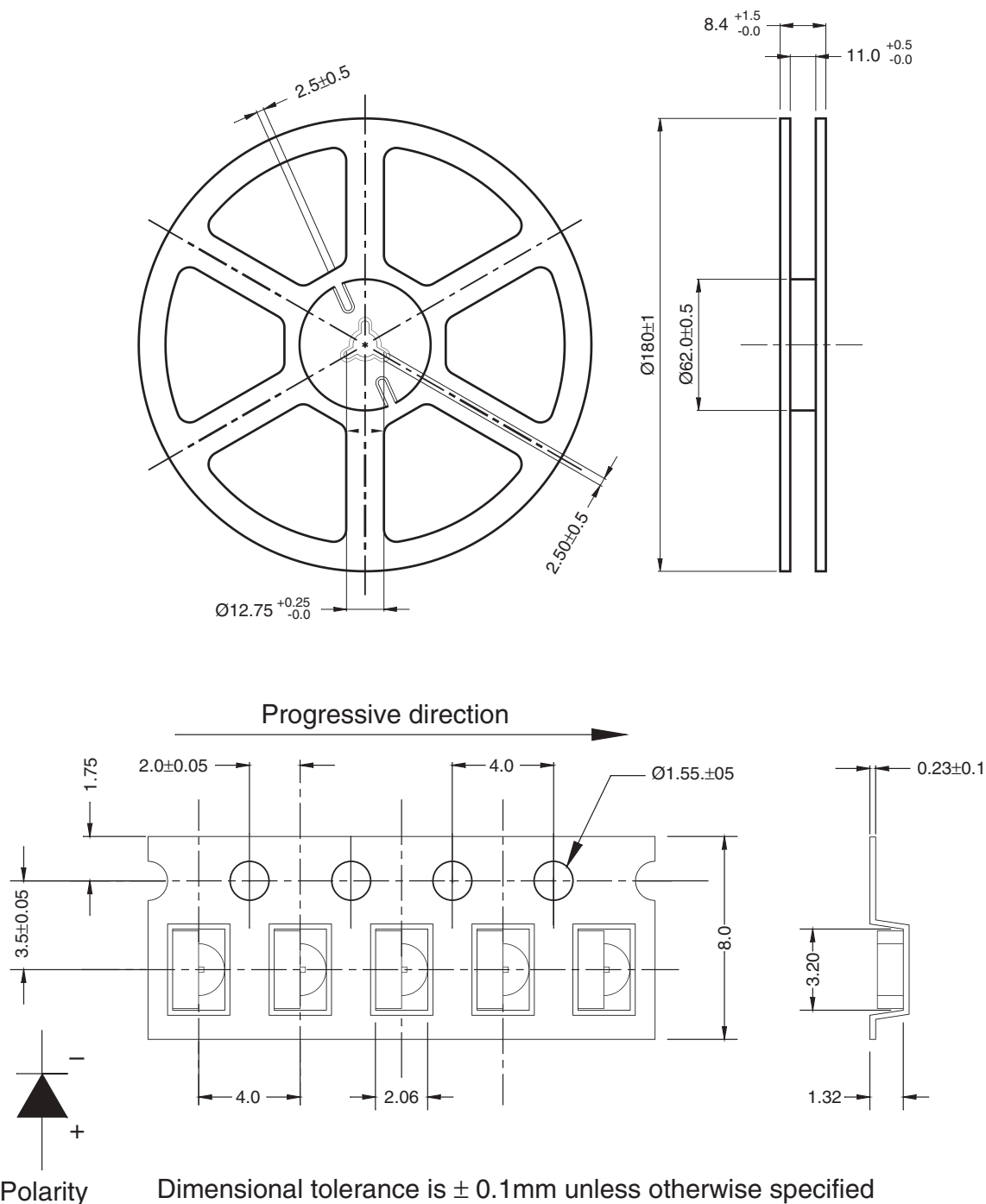


Mounting Example

### RECOMMENDED IR REFLOW SOLDERING PROFILE



### TAPE AND REEL DIMENSIONS



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