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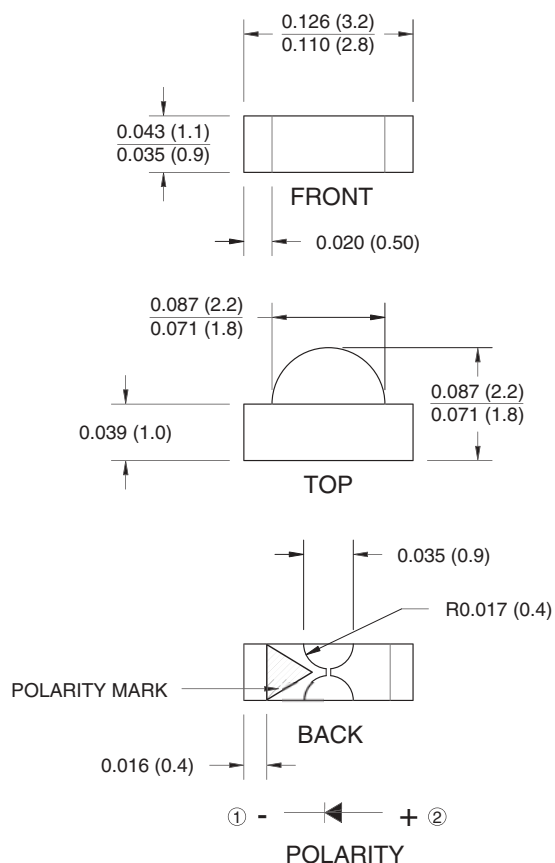
ON Semiconductor®

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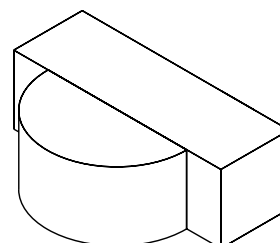
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PACKAGE DIMENSIONS



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) ^(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°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
	$I_F = 100\text{ mA}$, $t_P = 100\text{ }\mu\text{s}$, 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	μA
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	—	μs
Fall Time	$t_P = 20\text{ ms}$	t_f	—	1	—	μs

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Ambient Temperature

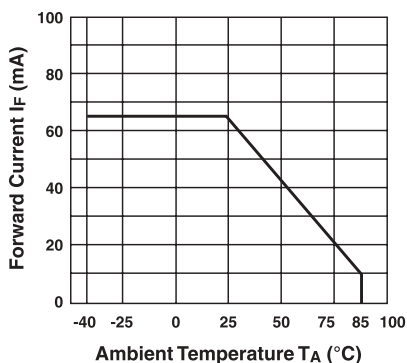


Fig. 2 Relative Radiant Intensity vs. Wavelength

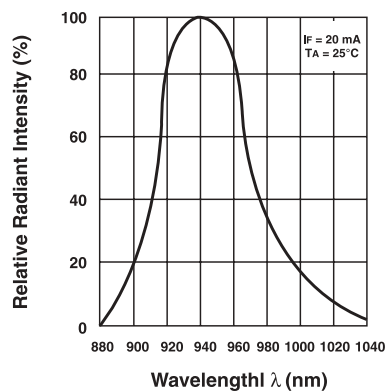


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

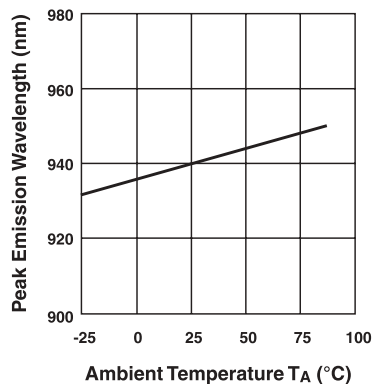


Fig. 4 Forward Current vs. Forward Voltage

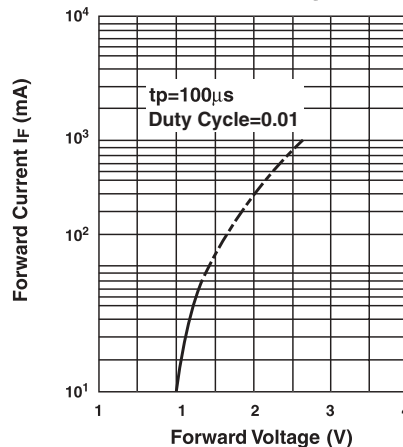


Fig. 5 Relative Intensity vs. Ambient Temperature (°C)

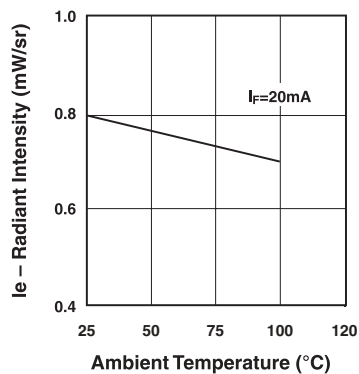
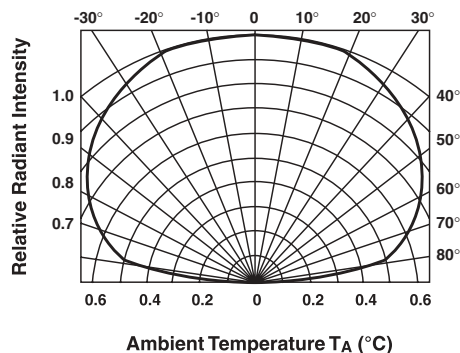
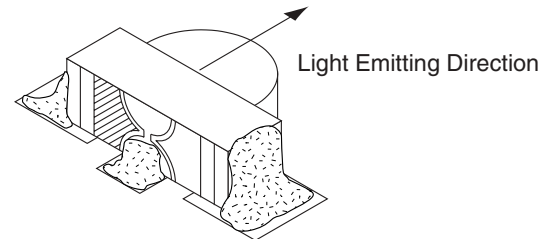
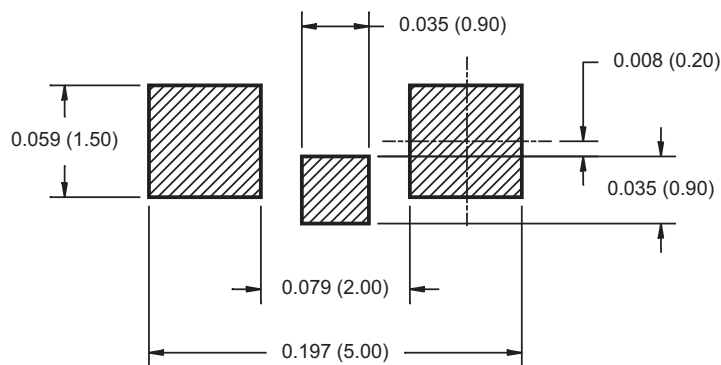


Fig. 6 Relative Radiant Intensity vs. Angular Displacement

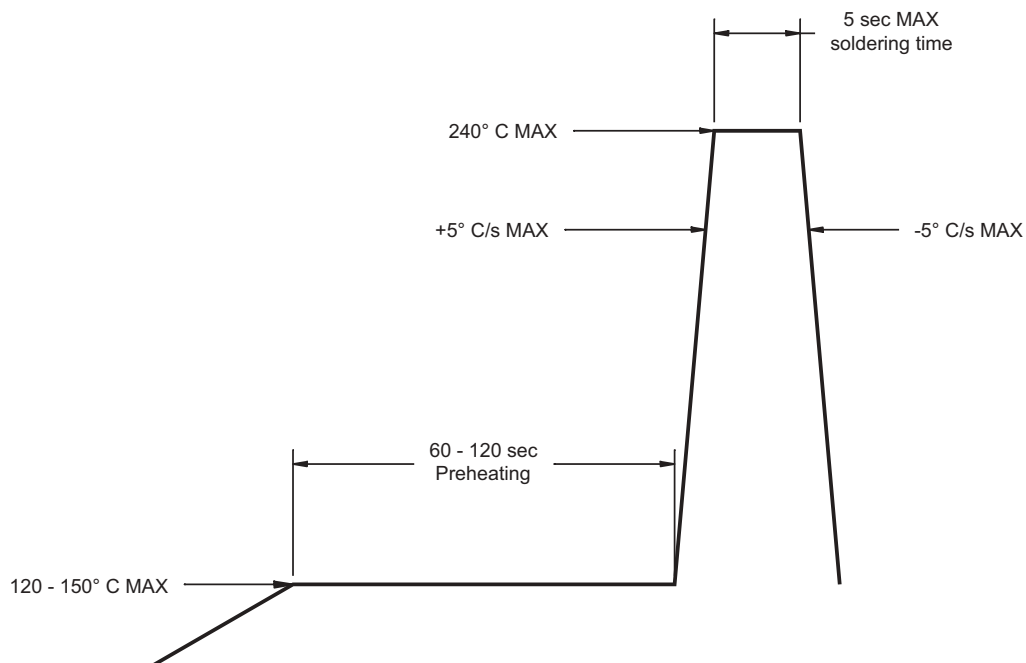


RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

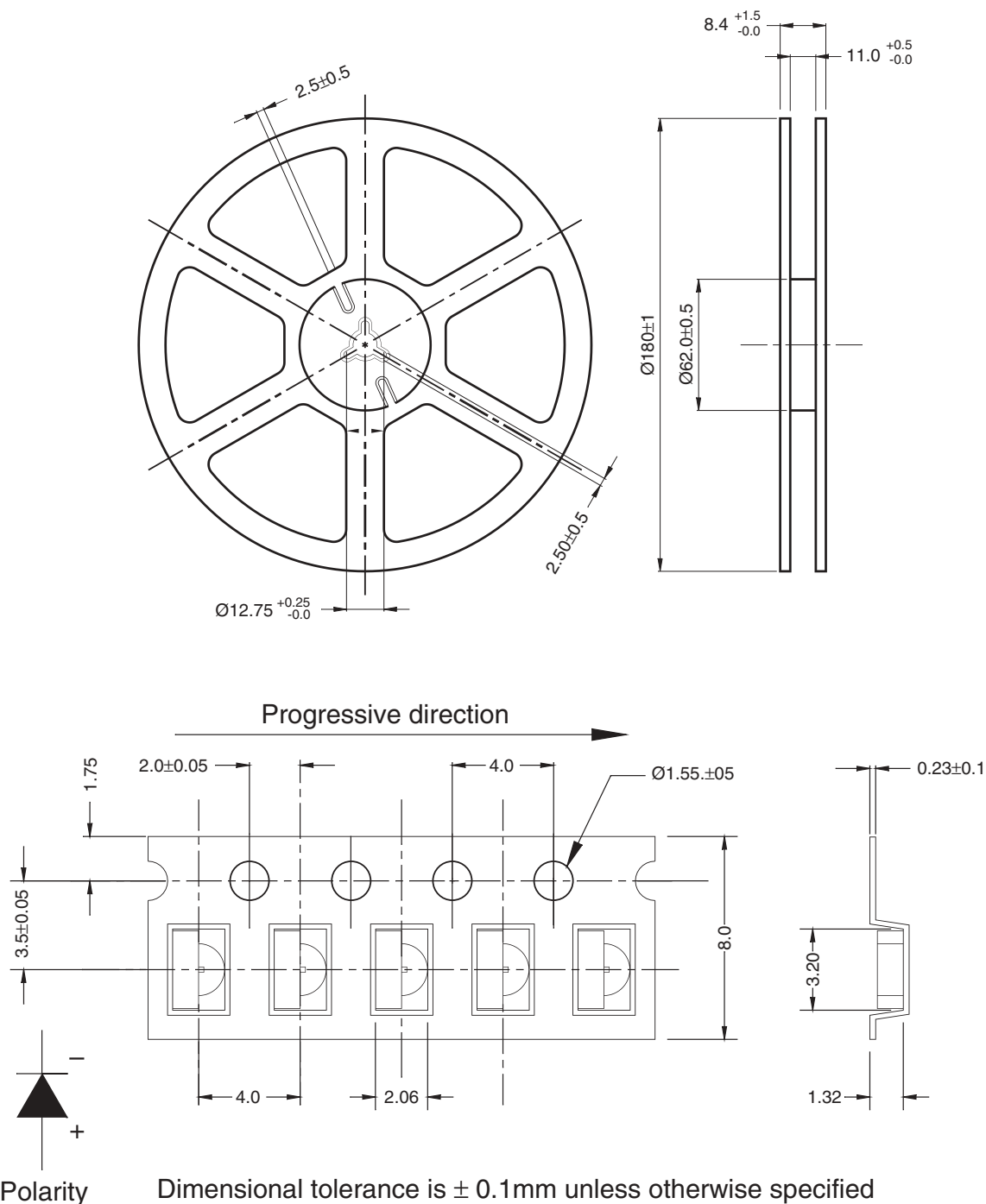


Mounting Example

RECOMMENDED IR REFLOW SOLDERING PROFILE



TAPE AND REEL DIMENSIONS



Dimensional tolerance is $\pm 0.1\text{mm}$ unless otherwise specified

Angle: ± 0.5

Unit: mm

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