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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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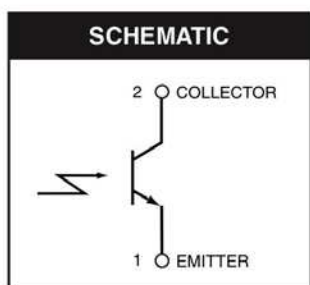
QTLP610CPD

Right Angle Surface Mount Infrared Phototransistor

QTLP61 OCPD is a phototransistor in miniature SMD package molded in a water clear plastic with right angle lens.

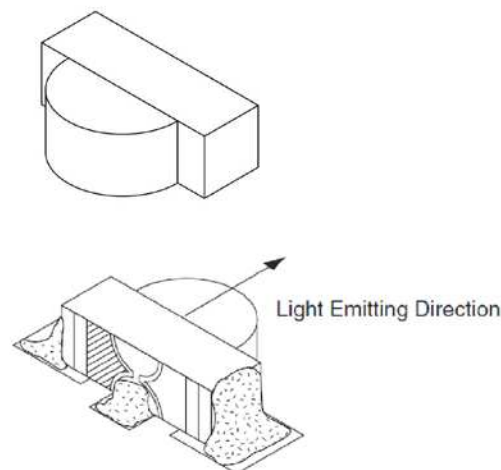
FEATURES

- NPN Silicon Phototransistor
- Right Angle Surface Mount Package
- Matched Emitters: QTLP610CIR
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel
- High Photo Sensitivity
- Low Junction Capacitance
- Fast Response Time
- Water Clear Lens



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ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-25 to +85	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +90	$^\circ\text{C}$
Soldering Temperature (Iron) ^(2,3,4)	T_{SOL-I}	240 for 5 sec	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	T_{SOL-F}	260 for 10 sec	$^\circ\text{C}$
Collector Emitter Voltage	V_{CE}	30	V
Emitter Collector Voltage	V_{EC}	5	V
Power Dissipation ⁽¹⁾	P_D	75	mW

Notes:

1. At 25°C or below.
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Pulse conditions: $t_p = 100\mu\text{s}$, $T = 10\text{ ms}$.

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)						
PARAMETER	TEST CONDITIONS ($\lambda_p = 940\text{nm}$)	SYMBOL	MIN.	TYP.	MAX.	UNITS
Peak Sensitivity Wavelength		λ_{PS}	—	860	—	nm
Reception Angle		θ	—	± 80	—	Deg.
Dark Current	$V_{CE} = 20\text{V}, E_e = 0$	I_D	—	—	100	nA
Collector-Emitter Breakdown	$I_C = 100\mu\text{A}, E_e = 0$	BV_{CEO}	30	—	—	V
Emitter-Collector Breakdown	$I_E = 100\mu\text{A}, E_e = 0$	BV_{ECO}	5	—	—	V
On-State Collector Current	$E_e = 1\text{mW/cm}^2$ $V_{CE} = 5\text{V}$	$I_{C(ON)}$	0.1	0.5	—	mA
Saturation Voltage	$E_e = 1\text{mW/cm}^2$ $I_C = 2\text{mA}$	$V_{CE(SAT)}$	—	—	0.4	V
Rise Time	$V_{CE} = 5\text{V}, R_L = 1000\Omega$	t_r	—	15	—	μs
Fall Time	$I_C = 1\text{mA}$	t_f	—	15	—	μs

TYPICAL PERFORMANCE CURVES

Fig. 1 Collector Power Dissipation vs. Ambient Temperature

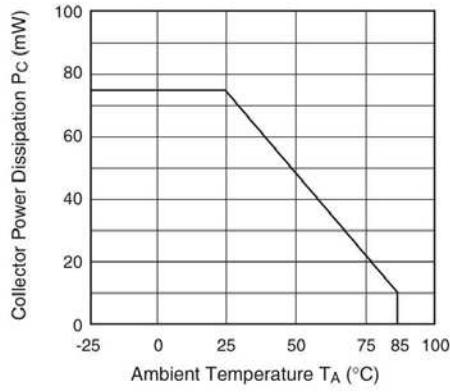


Fig. 2 Collector Dark Current vs. Ambient Temperature

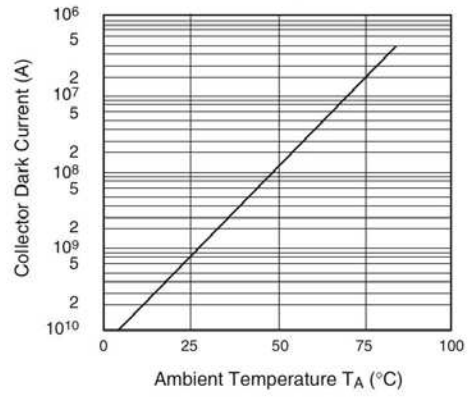


Fig. 3 Relative Collector Current vs. Ambient Temperature

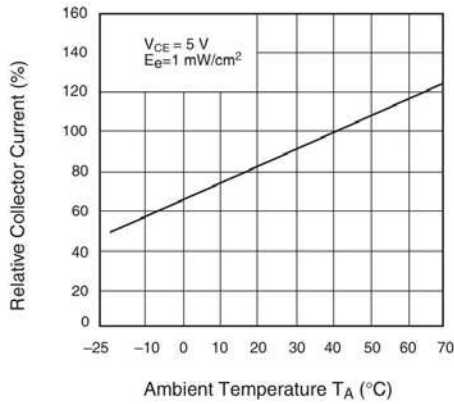


Fig. 4 Collector Current vs. Irradiance

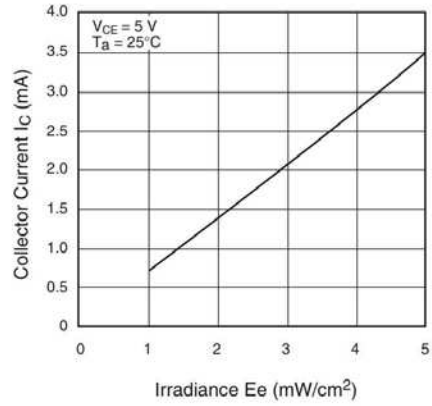


Fig. 5 Spectral Sensitivity

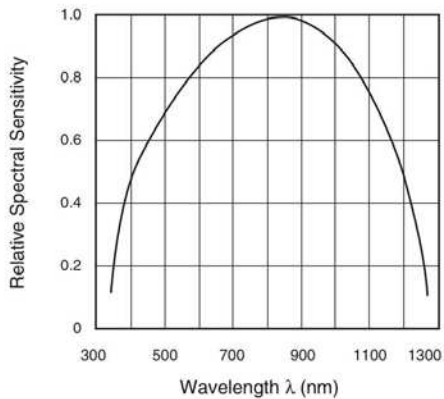
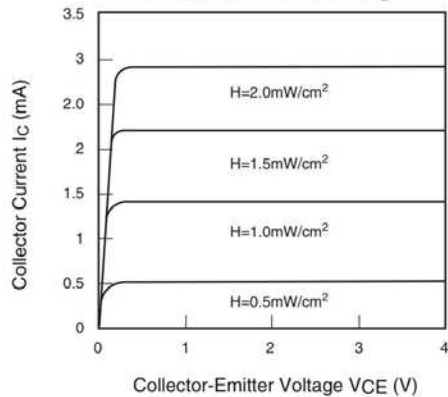
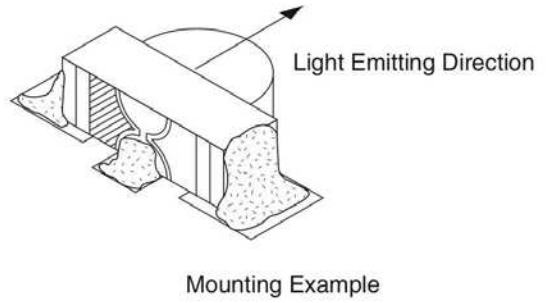
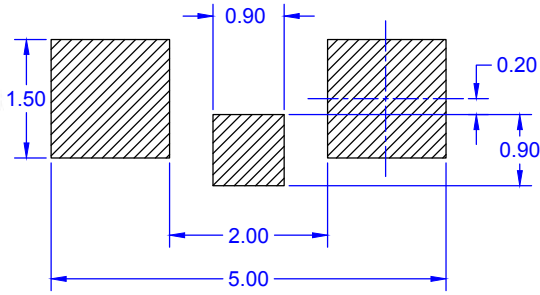


Fig. 6 Collector Current vs. Collector-Emitter Voltage

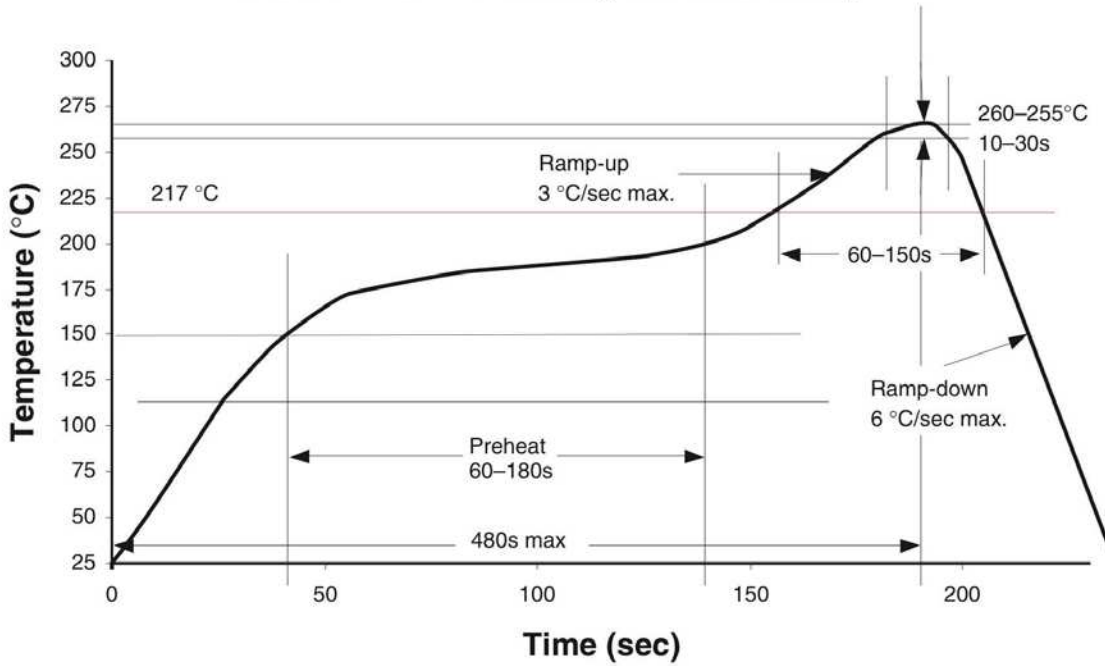


RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

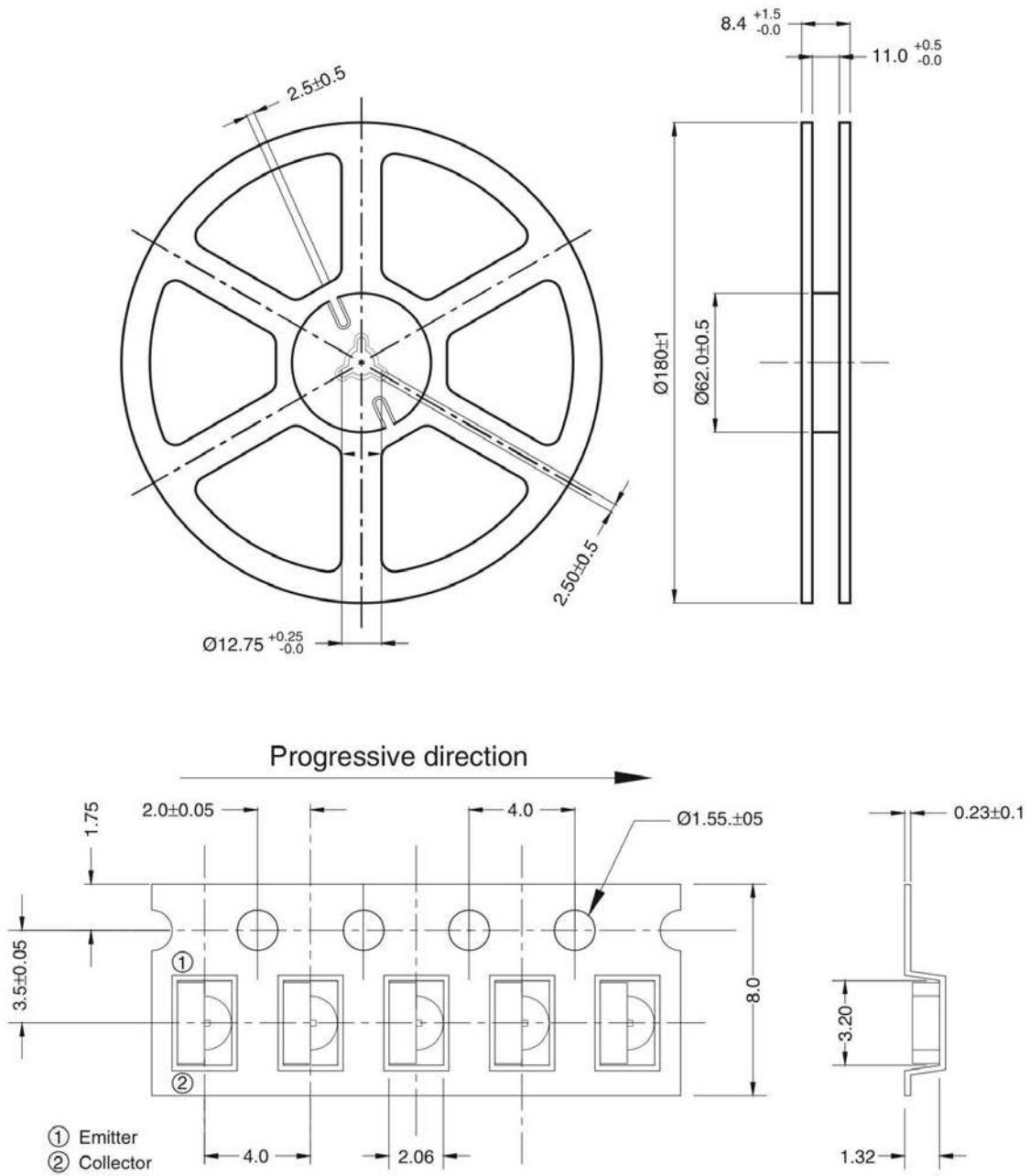


RECOMMENDED IR REFLOW SOLDERING PROFILE

Classification Reflow Profile (JEDEC J-STD-020C)



TAPE AND REEL DIMENSIONS

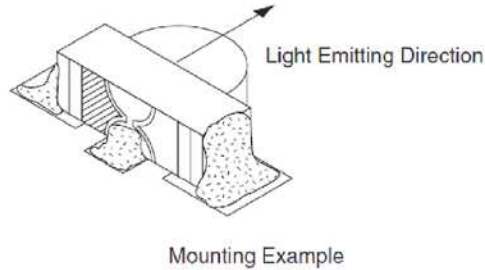
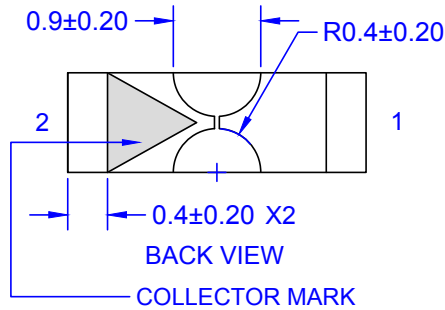
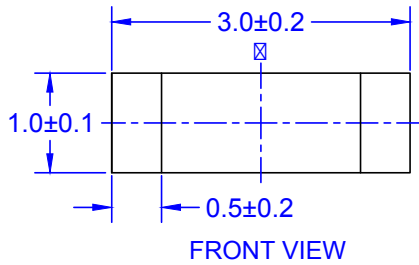
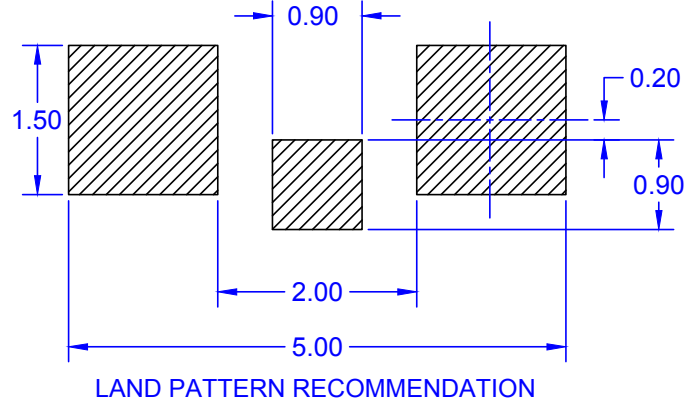
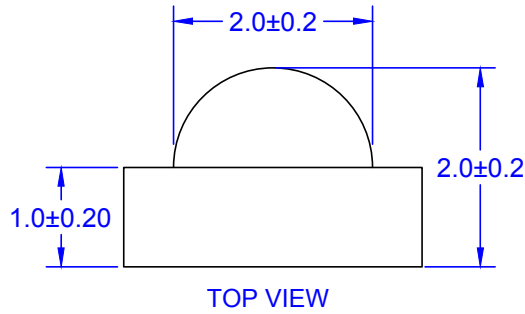


Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm

PACKAGE DIMENSIONS



NOTES:

- A. NO INDUSTRY STANDARD APPLIES TO THIS PACKAGE
- B. ALL DIMENSIONS ARE IN MILLIMETERS
- C. COLLECTOR: PIN 2 EMITTER: PIN 1
- D. DRAWING FILENAME: MKT-DCE212ArevO

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