Photovoltaic Isolator

Description

The **LTP1G4** is a miniature SOP package photovoltaic isolator which output is controlled by a highly efficient GaAlAs infrared LED for a optical couple to drive a series connected photo diode array which is suitable for MOS FET gate.

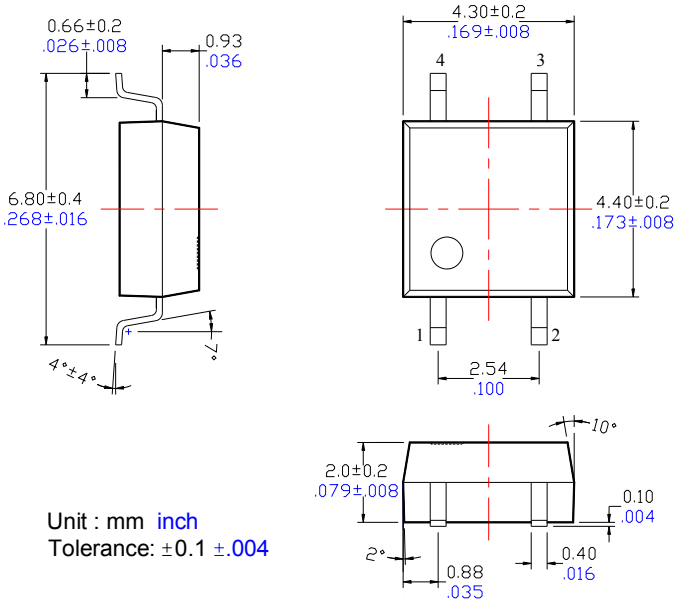
Features

- SOP package 4 Pin type (4.4×4.3×2.0mm / .173×.169×.083inch)
- I/O isolation Voltage: 2500Vrms
- Solid-State Reliability

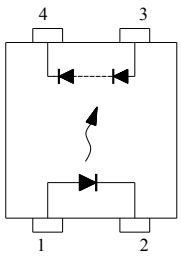
Applications

- MOS-FET driver
- Power supply (Vcc) for electronic circuits

Outline Dimensions



Unit : mm inch
Tolerance: ±0.1 ±.004



1. LED Anode
2. LED Cathode
3. PVG (+)
4. PVG (-)

Photovoltaic Specifications

Part Name: LTP-1G4

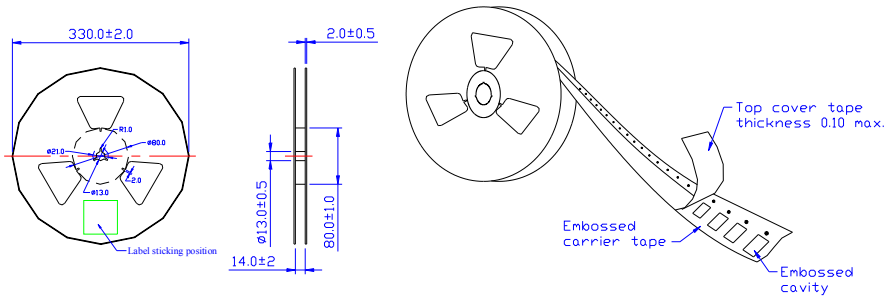
Absolute Maximum Ratings (Ambient Temperature: 25℃)

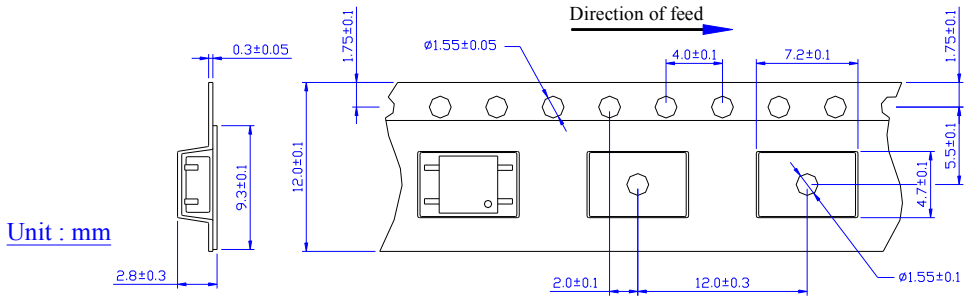
Item		Symbol	Value	Units	Note
Input	Continuous LED Current	I_F	50	mA	
	LED Reverse Voltage	V_R	5	V	
	Peak Forward Current	I_{FP}	1000	mA	
	Power Dissipation	Po	75	mA	
Output	Maximum Forward Voltage	V	8.0	$V_{(DC)}$	I_F=10uA
	Maximum Reverse Current	I_R	10	$uA_{(DC)}$	V_R=10V
I/O Isolation Voltage		$V_{I/O}$	2500	Vrms	RH=60%, 1min
Operating Temperature		T_{Opr}	-40 to +85	℃	
Storage Temperature		T_{Stg}	-40 to +125	℃	
Pin Soldering Temperature		T_{Sol}	260	℃	10 sec max.

Electrical Specifications (Ambient Temperature: 25℃)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	LED Forward Voltage	V_F		1.2	1.4	V	I_F=10mA
	LED Reverse Current	I_R			10	uA	V_R=5V
	Operation LED Current	IFon		0.5	5.0	mA	
	Recovery LED Current	IFoff	0.2		0.5	mA	
Output (Coupled)	Minimum Open Circuit Voltage	Vo	5.0	8.3		V	I_F=10mA, R_L=10MΩ
	Minimum Short Circuit Current	Is	5.0	14		uA	I_F=10mA, R_L=100Ω
	Turn-on Time	Ton		0.8		ms	I_F=10mA, C_L=1000pF
	Turn-off Time	Toff		0.1		ms	
	I/O Capacitance	$C_{I/O}$		1.0		pF	f=1MHz
	I/O Isolation Resistance	$R_{I/O}$	10^{10}			Ω	DC500V

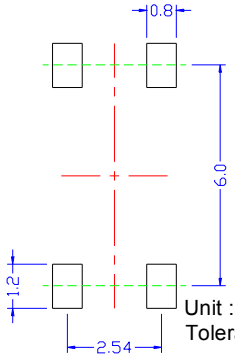
Taping Specifications for Surface Mount Devices





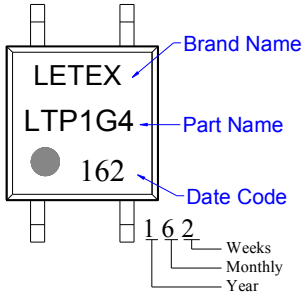
Recommended Mounting Pad

(Top view)



Marking

(Each photo MOS Relay shall be marked with the following information)



Note: 1. There shall be leader of 230 mm minimum which may consist of carrier and or cover tape follower by a minimum of 160 mm of carrier tape sealed with cover tape.

2. There shall be a minimum of 160 mm of empty component pockets sealed with cover tape.
3. Devices are pockets in accordance with EIA standard EIA-481-A and specifications given above.
4. Packaging: 2,000pcs per reel, 2 reel per box, 5 boxes per carton.