

# Photocoupler

## Part Name: LA312

### Features

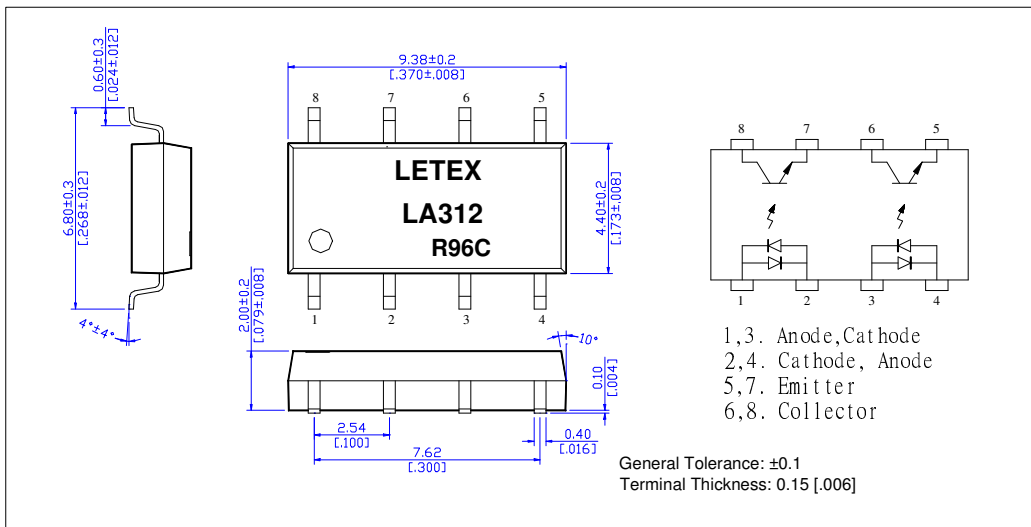
- SOP package 8 Pin type in miniature design
- 80% minimum current transfer ratio
- 1500V rms Input/Output isolation
- AC input.

### Applications

- Telephones
- Programmable controllers
- System appliances, measuring instruments.
- Signal transmission between circuits of different potentials and impedances.

### Outline Dimensions

(Unit: mm [inch])



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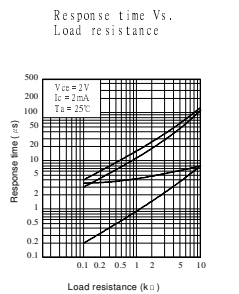
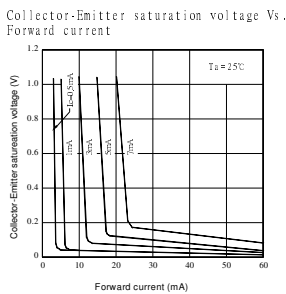
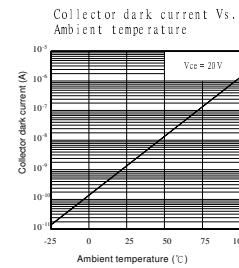
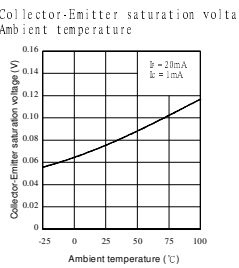
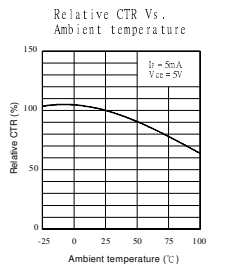
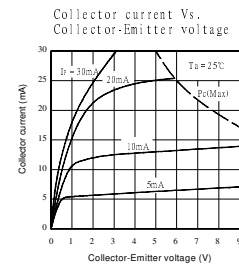
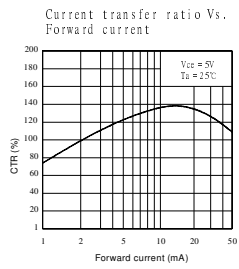
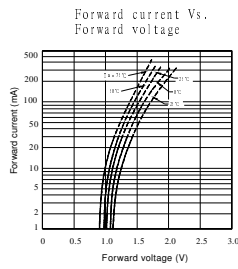
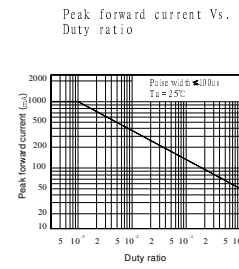
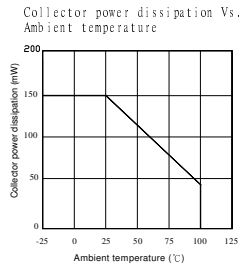
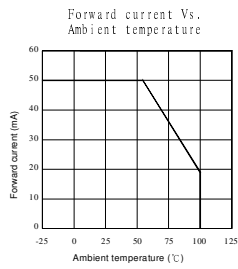
#### Absolute Maximum Ratings (Ambient Temperature: 25°C)

Item		Symbol	Rating	Units	Note
Input	Forward Current	IF	50	mA	
	Reverse Voltage	VR	5	V	
	Peak Forward Current	IFP	1	A	
Output	Collector to Emitter Voltage	Vceo	60	V	Ic=1mA, IB=0
	Emitter to Collector Voltage	Veco	6	V	IE=100μA, IB=0
	Collector Current	Ic	50	mA	
	Power Dissipation	Pc	150	mW	
I/O Breakdown Voltage		VI/O	1500	Vrms	RH=60%, 1min
Power Dissipation		PD	200	mW	
Storage Temperature		Tstg	-55 to +125	°C	
Operating Temperature		Top	-55 to +100	°C	
Soldering Temperature		Tsol	260	°C	10 seconds max.

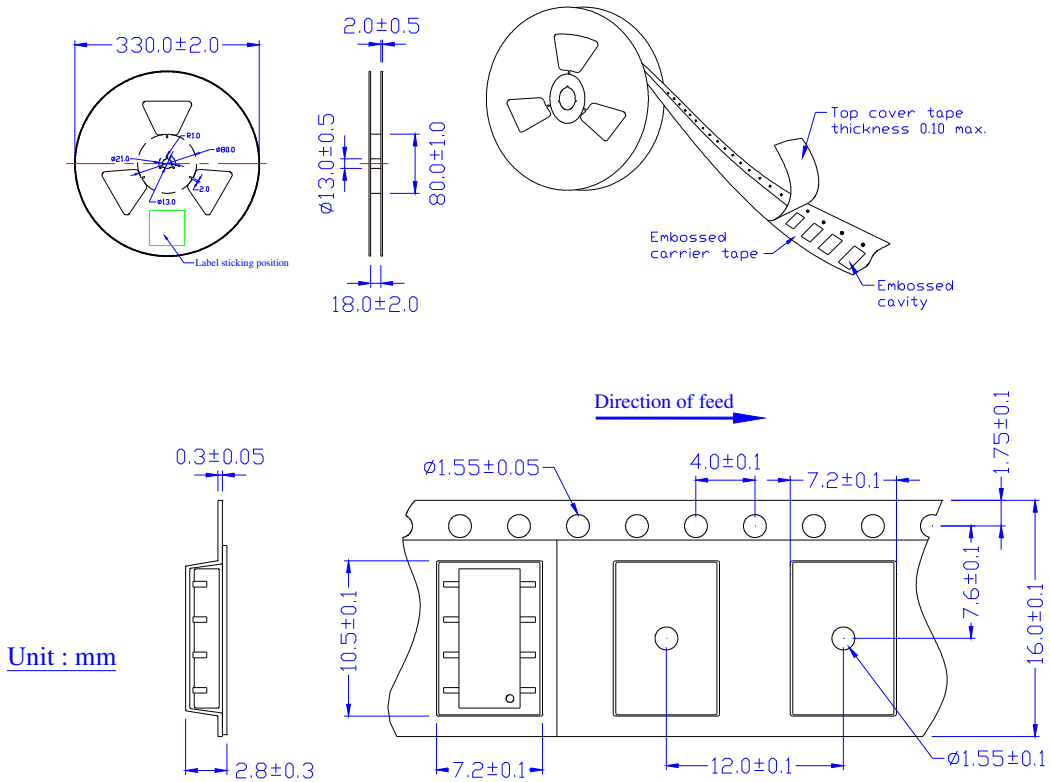
#### Electrical Specifications (Ambient Temperature: 25°C)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions	
Input	Forward Voltage	VF		1.2	1.4	V	IF= ± 20mA	
	Reverse Current	IR			-	μA		
	Junction Capacitance	Ct		25		pF	V=0, f=1.0KHz	
Output	C-E Breakdown Voltage	Vceo	60			V	Ic=0.5mA	
	E-C Breakdown Voltage	Veco	5			V	Ie=0.1mA	
	Collector Dark Current	Iceo			100	nA	Vce=20V, IF=0	
Coupled	Current Transfer Ratio	CTR	BIN GRADE			%	IF= ± 1mA, Vce=5V	
			A	80				160
			B	130				260
			C	200				240
		D	300		600			
	Collector Saturation Voltage	Vce(sat)			0.4	V	IF=±20mA, Ic=1mA	
	Isolation Resistance	R <sub>I/O</sub>		10 <sup>9</sup>		Ω	V=500V DC	
	Isolation Capacitance	C <sub>I/O</sub>		1.0		pF	V=0, f=1.0MHz	
Rise Time	tr		6		μs	Vce=5V, Ic=2mA,		
Fall Time	tf		6		μs	RL=100Ω		

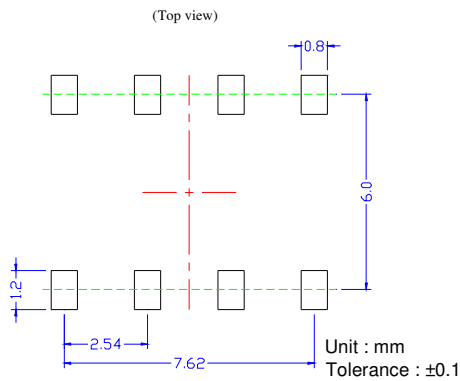
## Reference Data



## Taping Specifications for Surface Mount Devices

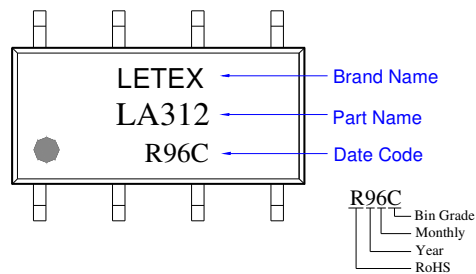


### Recommended Mounting Pad



### 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: 1,000pcs per reel, 2 reel per box, 5 boxes per carton.