

Photocoupler

Part Name: LA314

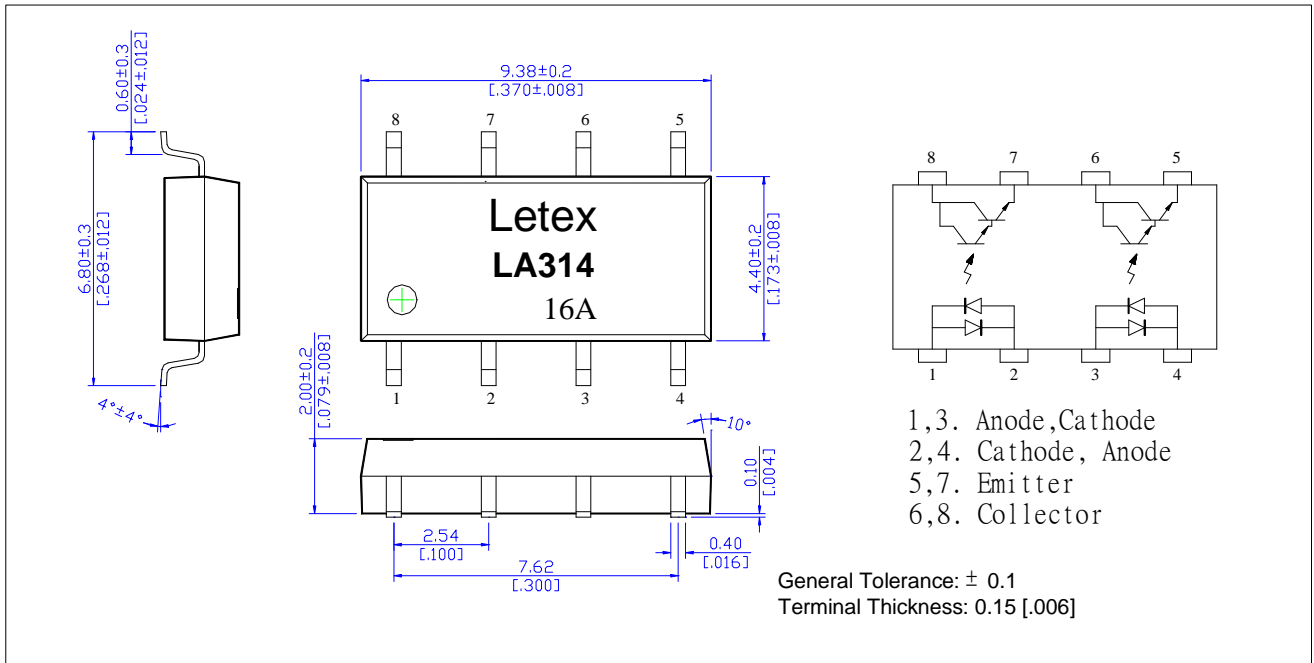
Features

- SOP package 4 Pin type in miniature design
- 600% 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.

Dimensions(Unit: mm [inch])



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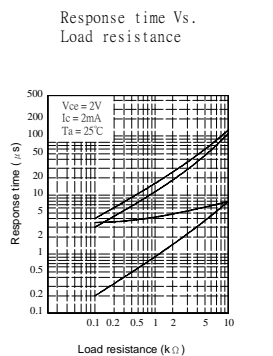
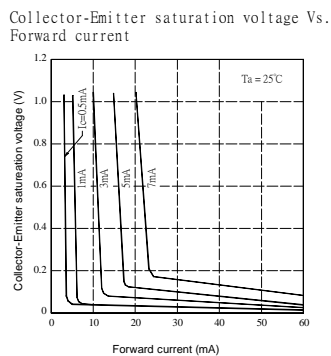
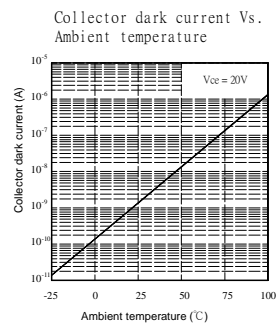
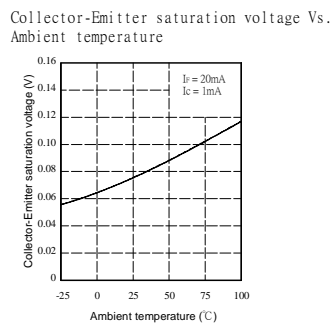
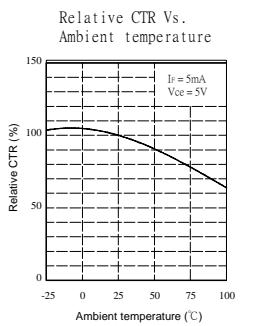
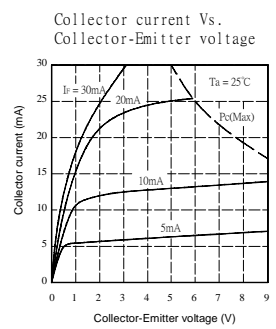
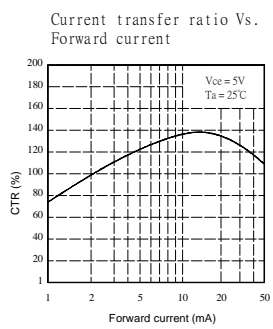
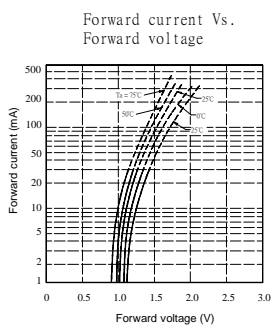
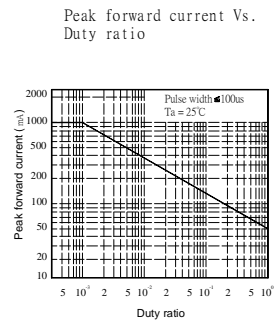
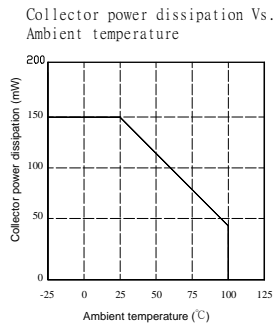
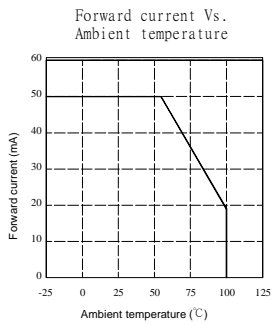
Absolute Maximum Ratings (Ambient Temperature: 25°C)

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	40	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		30		pF	V=0, f=1.0KHz
Output	C-E Breakdown Voltage	Vceo	35			V	Ic=0.5mA
	E-C Breakdown Voltage	Veco	6			V	Ie=0.1mA
	Collector Dark Current	Iceo			100	nA	Vce=20V, IF=0
Coupled	Current Transfer Ratio	CTR	600	1600	7000	%	IF= ± 1mA, Vce=5V
	Collector Saturation Voltage	Vce(sat)			1	V	IF=±20mA, Ic=1mA
	Isolation Resistance	R _{I/O}			10 ⁹	Ω	V=500V DC
	Isolation Capacitance	C _{I/O}		1.0		pF	V=0, f=1.0MHz
	Rise Time	tr			300	μs	Vce=5V, Ic=2mA,
	Fall Time	tf			250	μs	RL=100Ω

Photocoupler Reference Data



Test circuit for response time

