

Photocoupler

Part Name: LA213

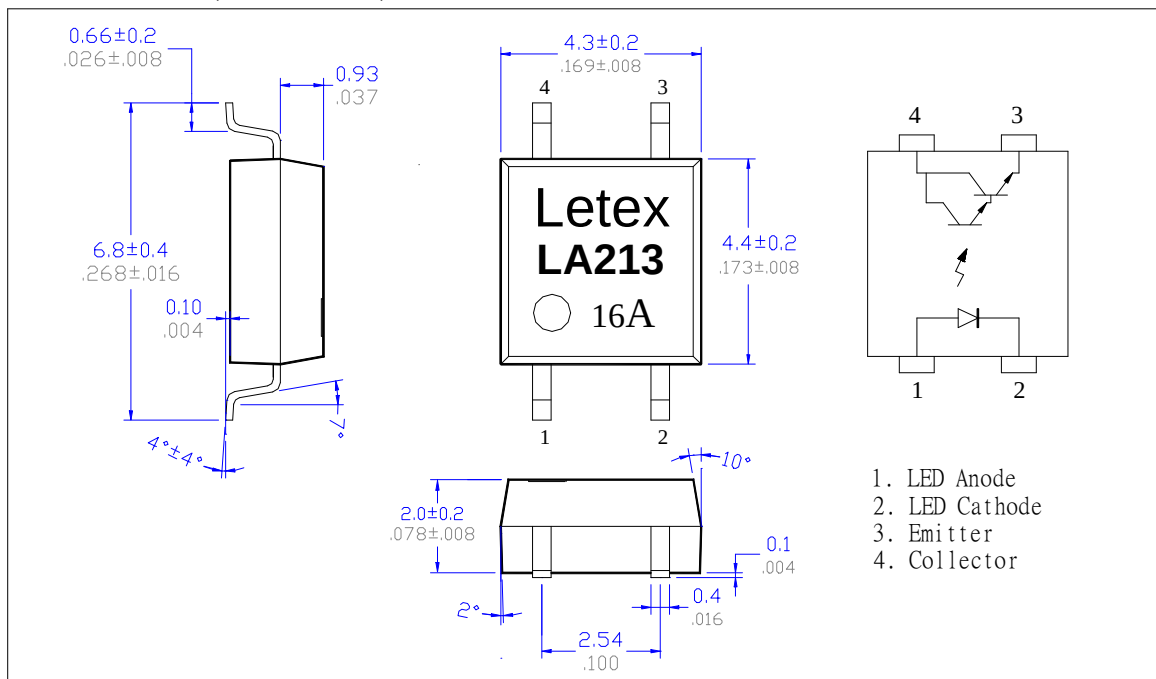
Features

- SOP package 4 Pin type in miniature design
- 600% minimum current transfer ratio
- 1500V rms Input/Output isolation

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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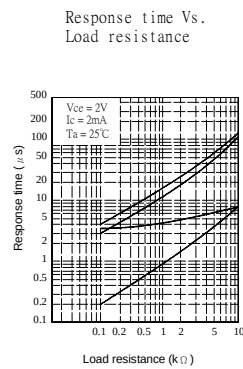
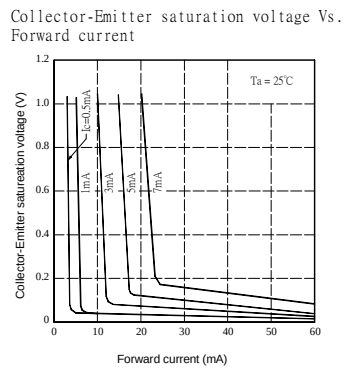
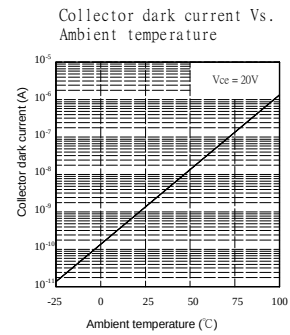
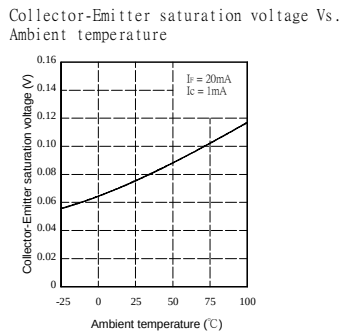
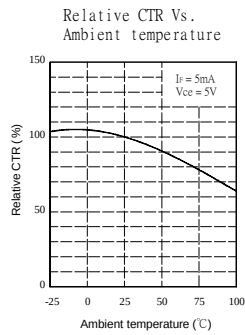
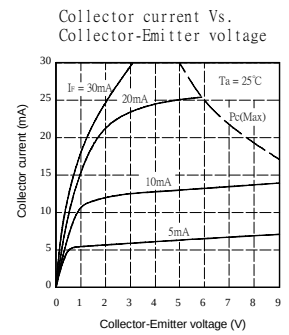
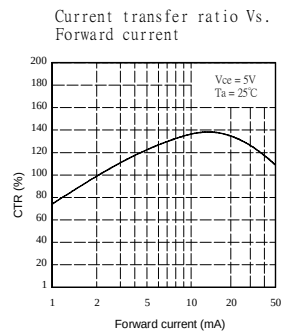
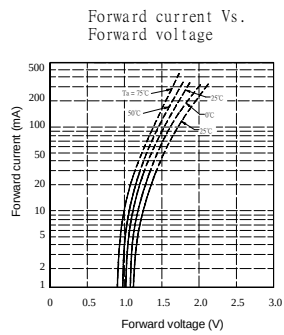
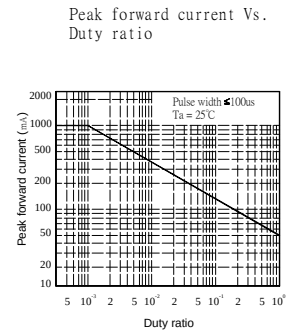
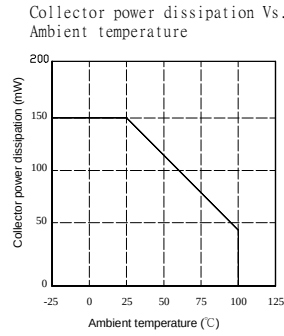
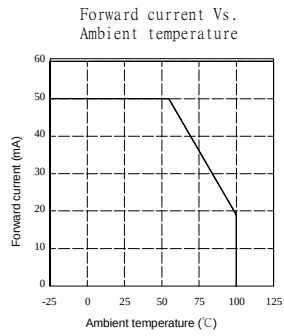
Absolute Maximum Ratings (Ambient Temperature: 25°C)

Item		Symbol	Rating	Units	Note
Input	Forward Current	I _F	50	mA	
	Reverse Voltage	V _R	5	V	
	Peak Forward Current	I _{FP}	1	A	
Output	Collector to Emitter Voltage	V _{ceo}	35	V	I _c =1mA, I _B =0
	Emitter to Collector Voltage	V _{eco}	6	V	I _E =100μA, I _B =0
	Collector Current	I _c	80	mA	
	Power Dissipation	P _c	150	mW	
I/O Breakdown Voltage		V _{I/O}	1500	V _{rms}	RH=60%, 1min
Power Dissipation		P _D	200	mW	
Storage Temperature		T _{stg}	-55 to +125	°C	
Operating Temperature		T _{op}	-55 to +100	°C	
Soldering Temperature		T _{Sol}	260	°C	10 seconds max.

Electrical Specifications (Ambient Temperature: 25°C)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	Forward Voltage	V _F		1.2	1.4	V	I _F = 20mA
	Reverse Current	I _R			10	μA	
	Junction Capacitance	C _t		30		pF	V=0, f=1.0KHz
Output	C-E Breakdown Voltage	V _{ceo}	35			V	I _c =0.5mA
	E-C Breakdown Voltage	V _{eco}	6			V	I _e =0.1mA
	Collector Dark Current	I _{ceo}			100	nA	V _{ce} =20V, I _F =0
Coupled	Current Transfer Ratio	CTR	600	1600	7000	%	I _F = 1mA, V _{ce} =5V
	Collector Saturation Voltage	V _{ce(sat)}			1	V	I _F =20mA, I _c =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	t _r			300	μs	V _{ce} =5V, I _c =2mA, R _L =100Ω
	Fall Time	t _f			250	μs	

Photocoupler Reference Data



Test circuit for response time

