



Features

- Low driver power requirements (TTL/CMOS Compatible)
- Contact form: Normally-Off (1b)
- Load voltage: 60V max.
- On-Resistance: 3Ω max.
- 3750Vrms Input/Output isolation
- Tape & Reel version available

Applications

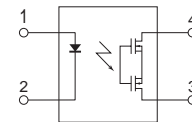
- Telecommunications (PC, Electronic notepad)
- Measuring and Testing equipment
- Industrial control
- Security equipments
- High speed inspection machine



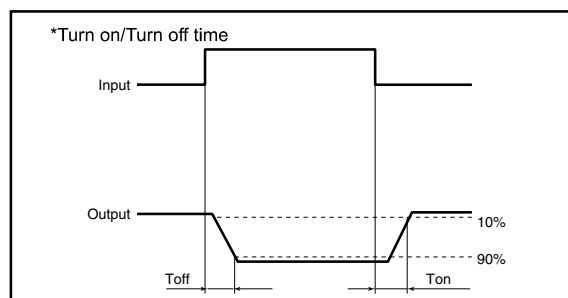
DIP4



SMD4



1. LED Anode
2. LED Cathode
3. Drain (MOSFET)
4. Drain (MOSFET)



TYPES

Category	Output rating		Package	Part No.	Packing quantity
	Load voltage	Load current			
AC/DC	60V	500mA	DIP4	GAQY412E	50pcs/tube
			SMD4	GAQY412EH	1000pcs/reel

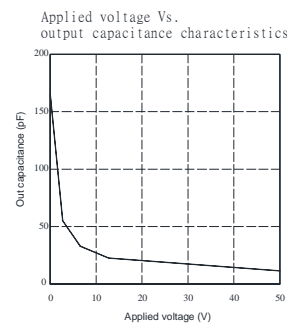
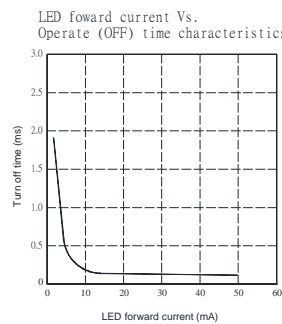
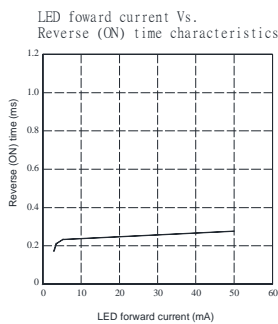
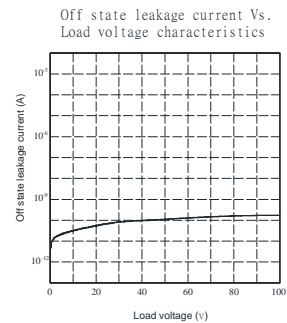
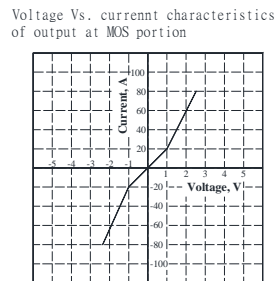
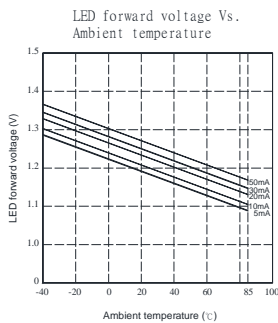
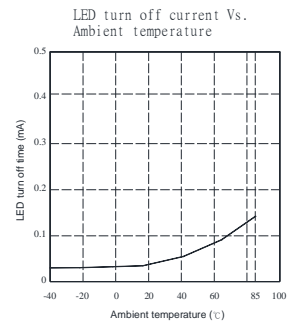
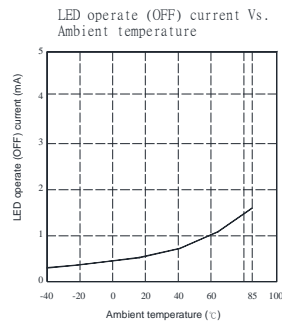
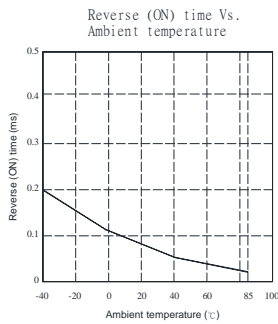
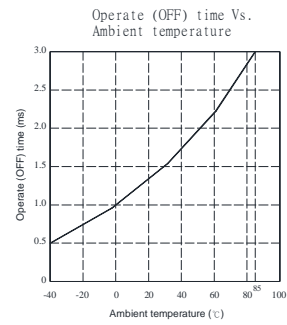
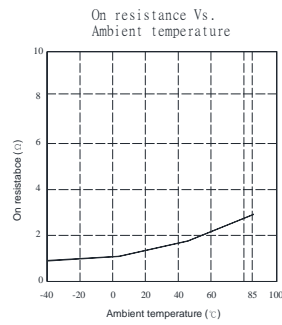
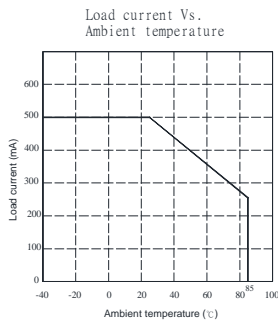
Absolute Maximum Ratings (Ambient Temperature: 25°C)

Item		Symbol	Value	Units	Note
Input	Continuous LED Current	I _F	50	mA	
	Peak LED Current	I _{FP}	1000	mA	f=100Hz, duty=1%
	LED Reverse Voltage	V _R	5	V	
	Input Power Dissipation	P _{In}	75	mW	
Output	Load Voltage	V _L	60	V(AC peak or DC)	
	Load Current	I _L	500	mA	
	Peak Load Current	I _{Peak}	0.6	A	1ms(1 pulse)
	Output Power Dissipation	P _{Out}	300	mW	
Total Power Dissipation		P _T	350	mW	
I/O Breakdown Voltage		V _{I/O}	3750	V _{rms}	RH=60%, 1min
Operating Temperature		T _{opr}	-40 to +85	°C	
Storage Temperature		T _{stg}	-40 to +100	°C	
Pin Soldering Temperature		T _{sol}	260	°C	10 sec max.

Electrical Specifications (Ambient Temperature: 25°C)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	LED Forward Voltage	V _F		1.2	1.5	V	I _F =10mA
	Operation LED Current	I _{Fon}		0.5	3.0	mA	
	Recovery LED Current	I _{Foff}	0.1	0.4		mA	
	Recovery LED Voltage	V _{Foff}	0.5			V	
Output	On-Resistance	R _{on}		1	3	Ω	I _F =0mA, I _L =50mA, Time to flow is within 1 sec.
	Off-State Leakage Current	I _{Leak}			1	uA	I _F =5mA, V _L =60V
	Output Capacitance	C _{out}		165		pF	I _F =5mA, V _L =0, f=1MHz
Transmis sion	Turn-On Time	T _{on}		0.5	1.5	ms	I _F =5mA, I _L =50mA
	Turn-Off Time	T _{off}		0.25	2.0	ms	
Coupled	I/O Isolation Resistance	R _{I/O}	10 ¹⁰			Ω	DC500V
	I/O Capacitance	C _{I/O}		0.8		pF	f=1MHz

Reference Data

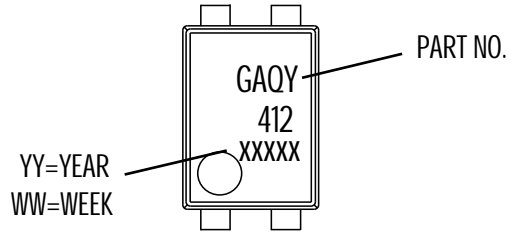


Dimensions

4-DIP



DIP4



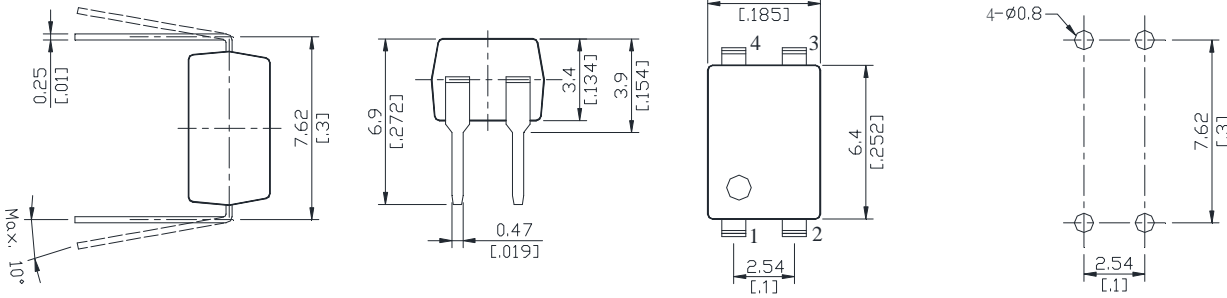
mm inch

Dimensions

Through hole terminal type

PC board pattern

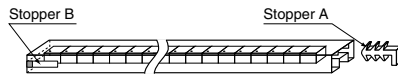
(TOP VIEW)



Unit : mm inch
Tolerance: +0.2 +.007

DIP type

Devices are packaged in a tube so that pin No. 1 is on the stopper B side. Observe correct orientation when mounting them on PC boards.

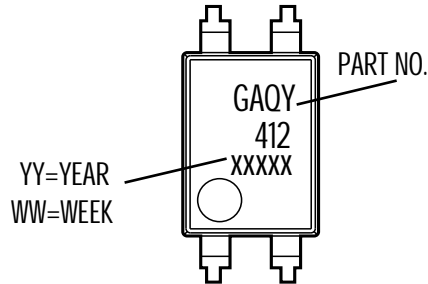


Dimensions

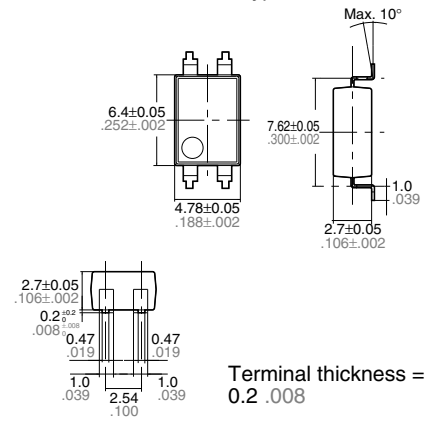
4-SMD



SMD4



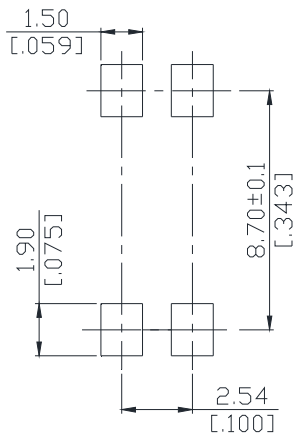
Surface mount terminal type



Terminal thickness = 0.2 .008

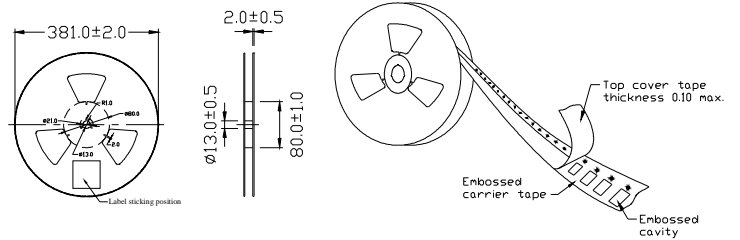
General tolerance: ±0.1 ±0.04

PC board pattern (Top view)

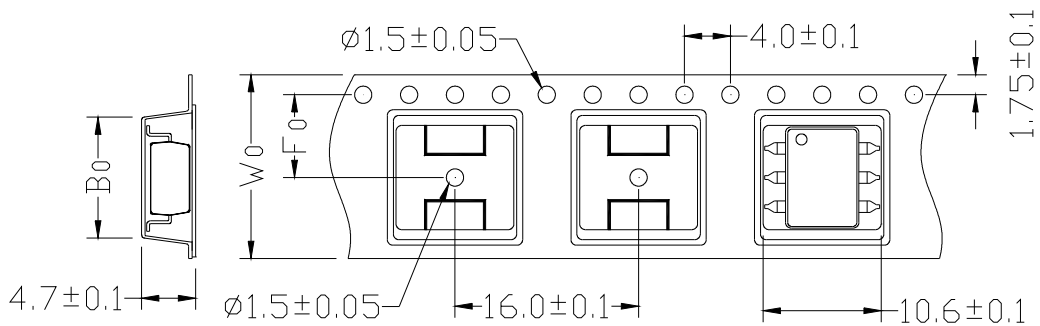


Unit : mm [inch]
Tolerance : ±0.1

Tape dimensions



Dimensions of tape reel



Unit: mm

TYPE	B0±0.1	F0±0.1	W0±0.1	13"REEL/PCS
4P	5.3	7.5	16	1000