



### Features

- Low driver power requirements (TTL/CMOS Compatible)
- No moving parts
- High reliability
- Arc-Free with no snubbing circuits
- 3750Vrms Input/Output isolation

### Applications

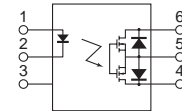
- Telecommunications (PC, Electronic notepad)
- Measuring and Testing equipment
- Industrial control
- Security equipments
- High speed inspection machine Arc-Free with no snubbing circuits



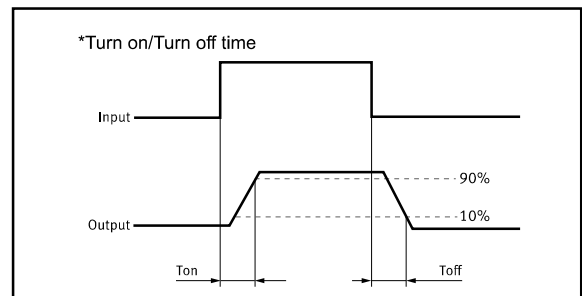
SMD-6



DIP-6



1. LED Anode
2. LED Cathode
4. Drain (MOS FET)
5. Source (MOS FET)
6. Drain (MOS FET)



### TYPES

Category	Output rating		Package	Part No.	Packing quantity
	Load voltage	Load current			
AC/DC	60V	3000mA	DIP6	GAQV252G3E	50pcs/tube
			SMD6	GAQV252G3EH	1000pcs/reel

Absolute Maximum Ratings (Ambient Temperature: 25 °C)

Item		Symbol	Value	Units	Note
Input	Continuous LED Current	I <sub>F</sub>	50	mA	
	Peak LED Current	I <sub>FP</sub>	500	mA	f=100Hz, duty=1%
	LED Reverse Voltage	V <sub>R</sub>	5	V	
	Input Power Dissipation	P <sub>In</sub>	75	mW	
Output	Load Voltage	V <sub>L</sub>	60	V(AC peak or DC)	
	Load Current	I <sub>L</sub>	3000	mA	
	Peak Load Current	I <sub>Peak</sub>	6000	mA	1ms(1pulse)
	Output Power Dissipation	P <sub>out</sub>	500	mW	
Total Power Dissipation		P <sub>T</sub>	550	mW	
I/O Breakdown Voltage		V <sub>I/O</sub>	5000	V <sub>rms</sub>	RH=60%, 1min
Operating Temperature		T <sub>opr</sub>	-40 to +85	°C	
Storage Temperature		T <sub>stg</sub>	-40 to +100	°C	
Pin Soldering Temperature		T <sub>sol</sub>	260	°C	10 sec max.

Electrical Specifications (Ambient Temperature: 25 °C)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	LED Forward Voltage	V <sub>F</sub>		1.3	3.0	V	I <sub>F</sub> =10mA
	Operation LED Current	I <sub>F on</sub>		1.2	2.0	mA	
	Recovery LED Current	I <sub>F off</sub>		0.3	0.9	mA	
	Recovery LED Voltage	V <sub>F off</sub>	0.7			V	
Output	On-Resistance	R <sub>on</sub>		0.04	0.052	Ω	I <sub>F</sub> =5mA, I <sub>L</sub> =100mA, Time to flow is within 1 sec.
	Off-State Leakage Current	I <sub>Leak</sub>			1	uA	V <sub>L</sub> =Rating
	Output Capacitance	C <sub>out</sub>		500		pF	V <sub>L</sub> =0, f=1MHz
Transmission	Turn-On Time	T <sub>on</sub>		0.8	5	ms	I <sub>F</sub> =5mA, I <sub>L</sub> =100mA,
	Turn-Off Time	T <sub>off</sub>		0.1	1.0	ms	
Coupled	I/O Isolation Resistance	R <sub>I/O</sub>	10 <sup>10</sup>			Ω	DC500V
	I/O Capacitance	C <sub>I/O</sub>		0.8	1.3	pF	f=1MHz

Please obey the following conditions to ensure proper device operation and resetting. Input LED current (Recommended value): I<sub>F</sub> ≥5mA and ≤30mA.  
Examples of resistance value to control LED forward current (I<sub>F</sub>=5mA, INPUT VOLTAGE="E", RESISTORS="R")  
"E"=3.3V, "R"=330Ω; "E"=5V, "R"=640Ω; "E"=12V, "R"=1.9KΩ; "E"=15V, "R"=2.5KΩ; "E"=24V, "R"=4.1KΩ;

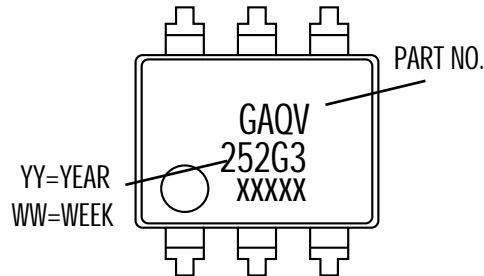
## Dimensions

### 6-SMD

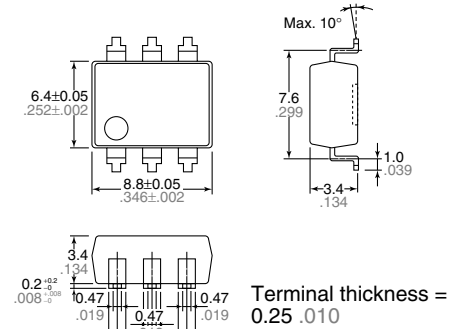


### Dimensions

mm inch

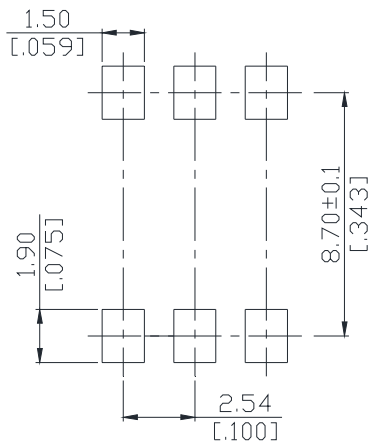


### Surface mount terminal type



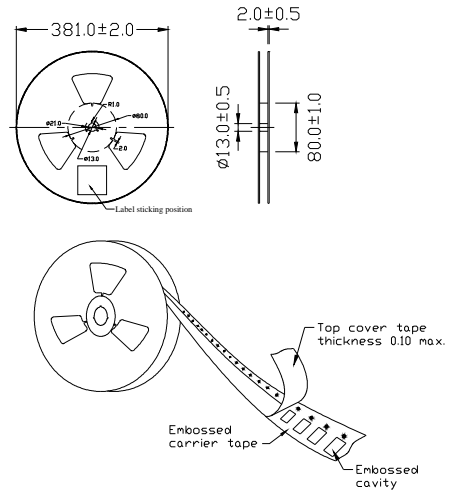
General tolerance:  $\pm 0.1 \pm .004$

### PC board pattern (Top view)

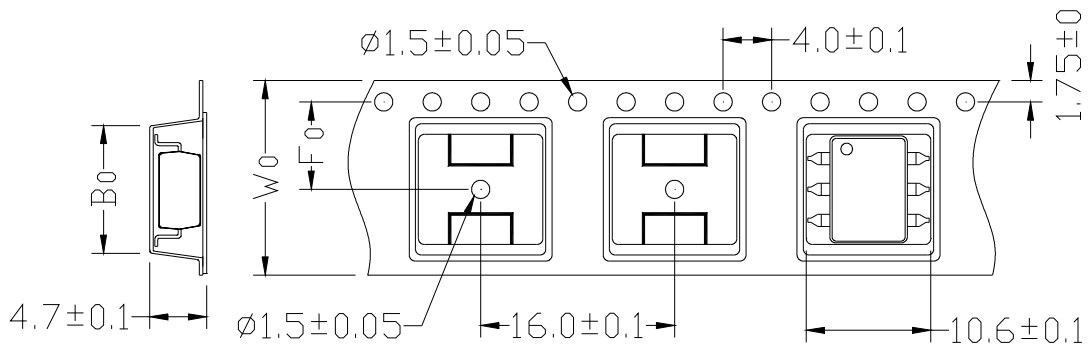


Unit : mm [inch]  
Tolerance :  $\pm 0.1$

### Tape dimensions



### Dimensions of tape reel



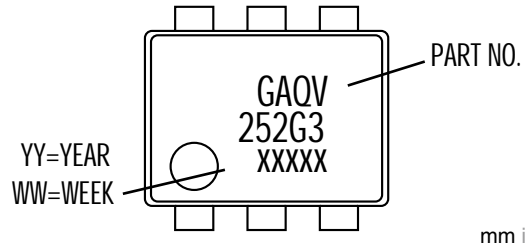
Unit: mm

TYPE	B0±0.1	F0±0.1	W0±0.1	13"REEL/PCS
6P	9.4	7.5	16	1000

## Dimensions 6-DIP

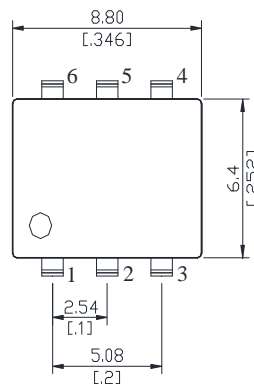
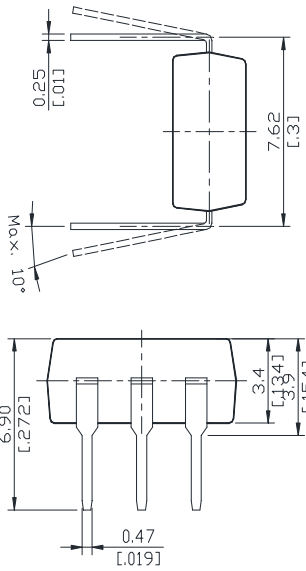


Dimensions



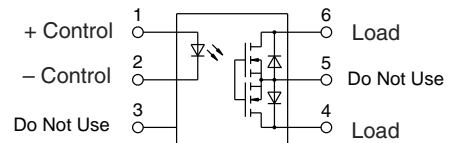
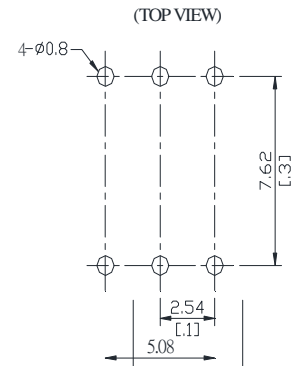
mm inch

Through hole terminal type



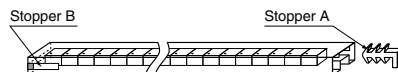
Unit : mm inch  
Tolerance: +0.2 +.007

PC board patter



### 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.



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