

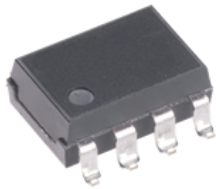


Features

- Low driver power requirements (TTL/CMOS Compatible)
- High reliability
- Arc-Free with no snubbing circuits
- 3750/5000Vrms Input/Output isolation
- Tape & Reel version available

Applications

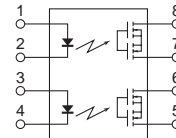
- Telecommunications (PC, Electronic notepad)
- Measuring and Testing equipment
- Industrial control
- Security equipments
- High speed inspection machine



SMD-8

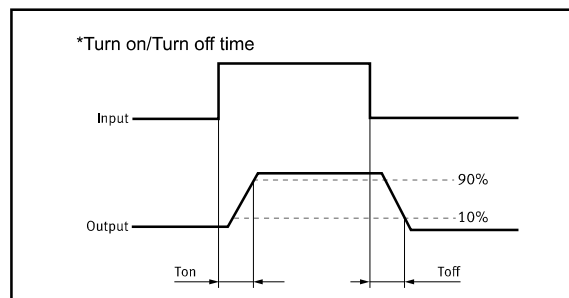


DIP-8



1,3. LED Anode
2,4. LED Cathode
5,6. Drain (MOS FET)
7,8. Drain (MOS FET)

(Unit: mm)



TYPES

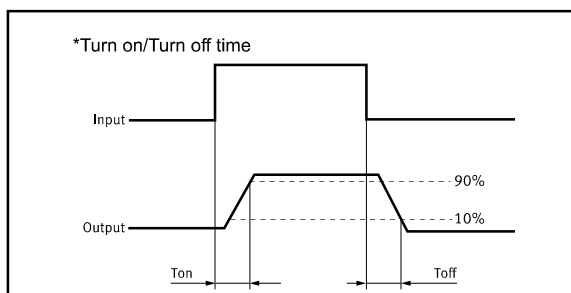
Category	Output rating		Part No.	Package	Packing quantity
	Load voltage	Load current			Tape and reel
AC/DC	60V	500mA	GAQW212GE	DIP-8	25pcs/Tube
			GAQW212GEH	SMD-8	1000pcs/1reel

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}	1.0	A	100ms(1 pulse)
	Output Power Dissipation	P_{out}	450	mW	
Total Power Dissipation		P_T	500	mW	
I/O Breakdown Voltage		V_{IO}	3750	Vrms	RH=60%, 1min
I/O Breakdown Voltage(Suffix-V)		V_{IO}	5000	Vrms	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.

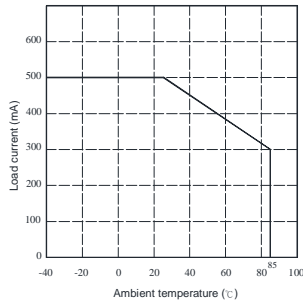
Electrical Specifications (Ambient Temperature: 25°C)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	LED Forward Voltage	V_F		1.2	1.5	V	$I_F=10mA$
	Operation LED Current	$I_{F on}$		0.5	5.0	mA	
	Recovery LED Current	$I_{F off}$		0.35	0.5	mA	
	Recovery LED Voltage	$V_{F off}$	0.7			V	
Output	On-Resistance	R_{on}		1.0	1.4	Ω	$I_F=10mA, I_L=100mA$, Time to flow is within 1 sec.
	Off-State Leakage Current	I_{Leak}			1.0	μA	$V_L=Rating$
	Output Capacitance	C_{out}		115		pF	$V_L=0, f=1MHz$
Transmission	Turn-On Time	T_{on}		0.5	0.8	ms	$I_F=10mA, I_L=100mA$,
	Turn-Off Time	T_{off}		0.35	0.5	ms	
Coupled	I/O Isolation Resistance	$R_{I/O}$	10^{10}			Ω	DC500V
	I/O Capacitance	$C_{I/O}$		0.8	1.5	pF	f=1MHz

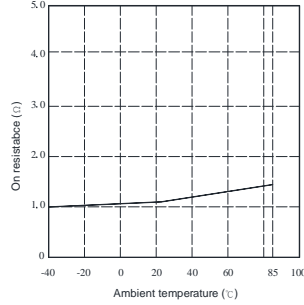


Reference Data

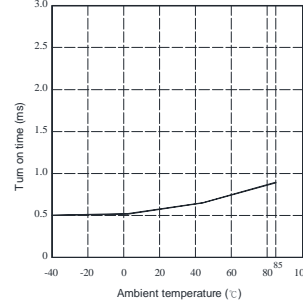
Load current Vs. Ambient temperature



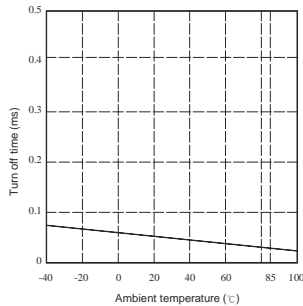
On resistance Vs. Ambient temperature



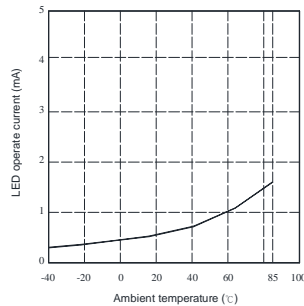
Turn on time Vs. Ambient temperature



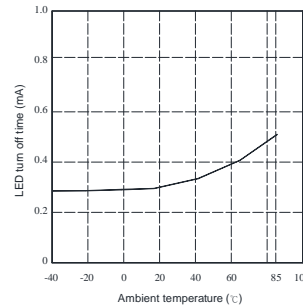
Turn off time Vs. Ambient temperature



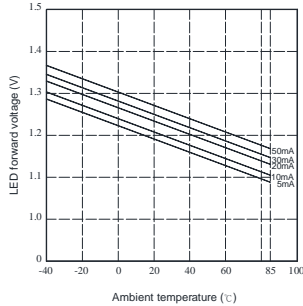
LED operate current Vs. Ambient temperature



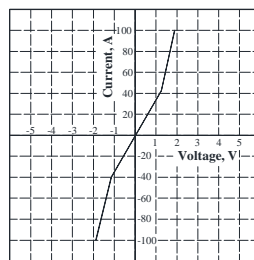
LED turn off current Vs. Ambient temperature



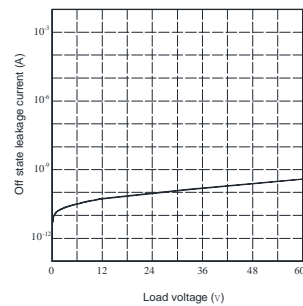
LED forward voltage Vs. Ambient temperature



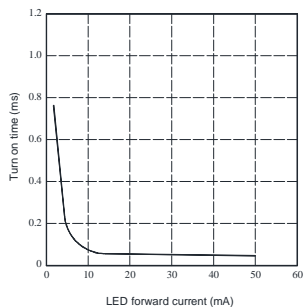
Voltage Vs. current characteristics of output at MOS portion



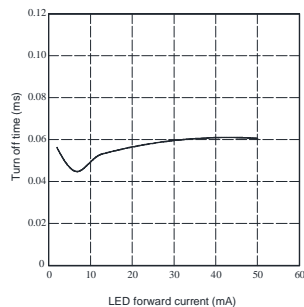
Off state leakage current Vs. Load voltage characteristics



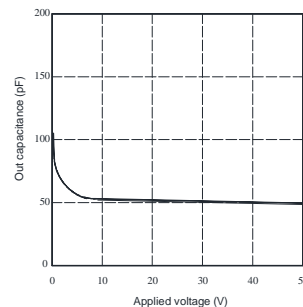
LED forward current Vs. turn on time characteristics



LED forward current Vs. turn off time characteristics



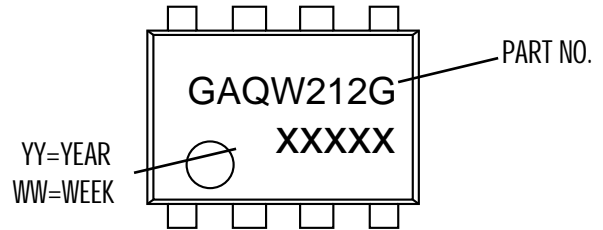
Applied voltage Vs. output capacitance characteristics



8-DIP

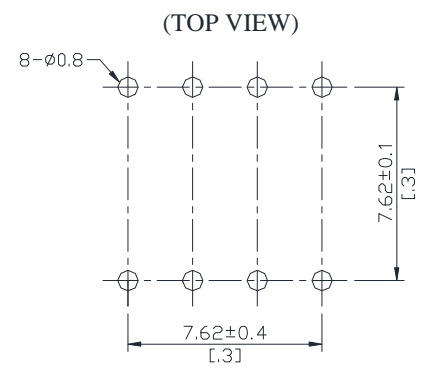
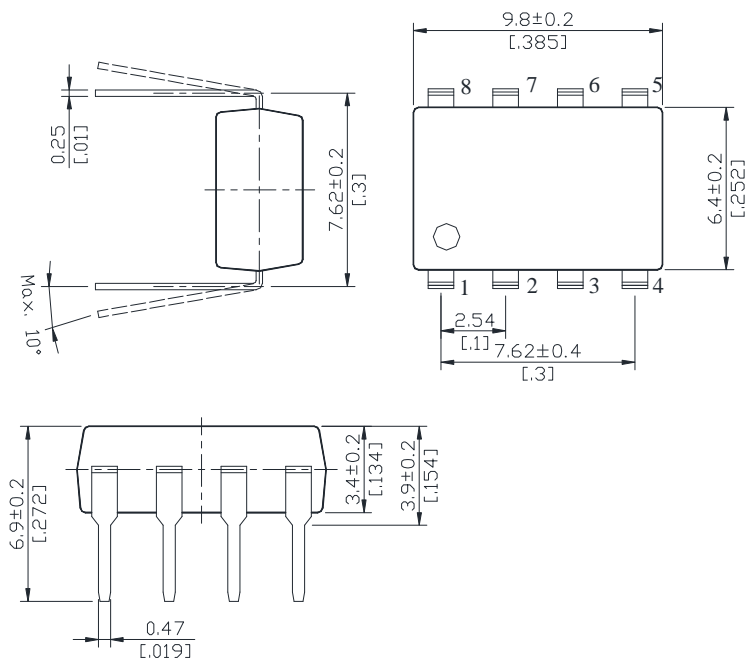
Dimensions

mm inch



Through hole terminal type

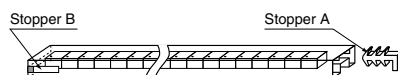
PC board pattern



Unit : mm inch
 Tolerance : +0.2 +.007

DIP type

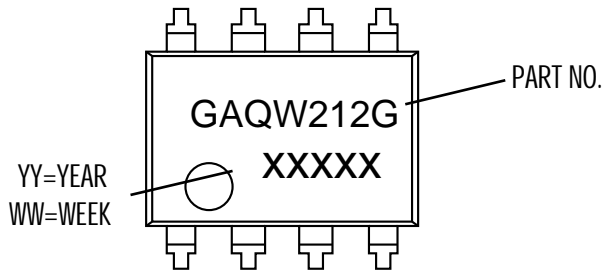
Devices are packaged in a tube so that pin No. 1 is on the stopper B side. Observe correct orientation when mounting them on PC boards.



8-SMD

Dimensions

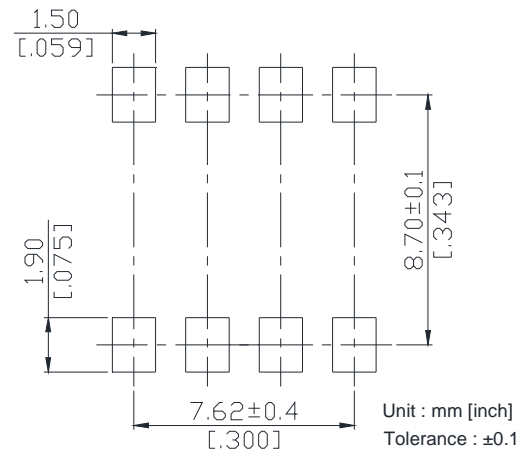
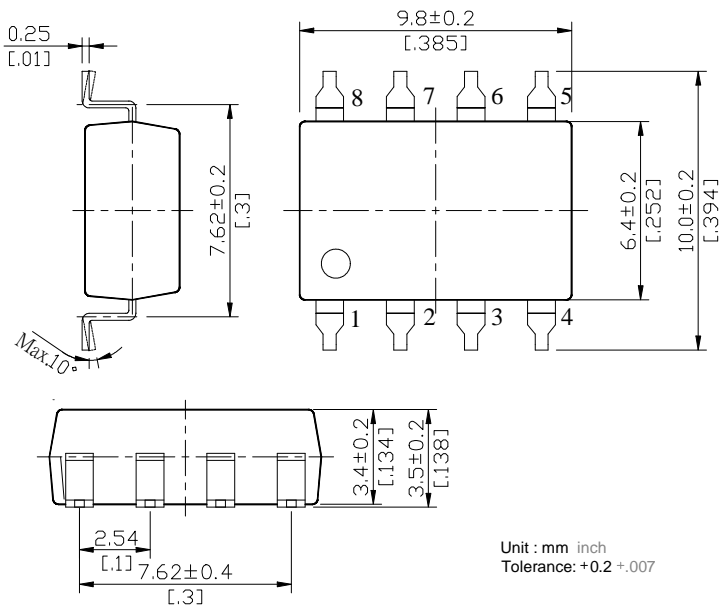
mm inch



Surface mount terminal type

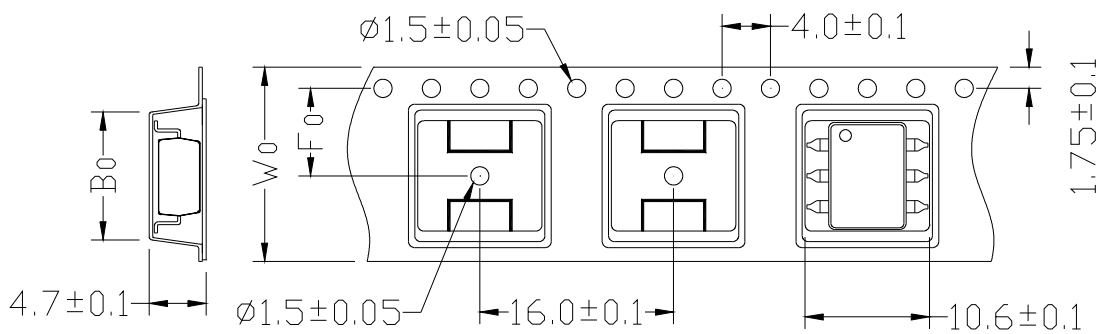
PC board pattern

(Top view)

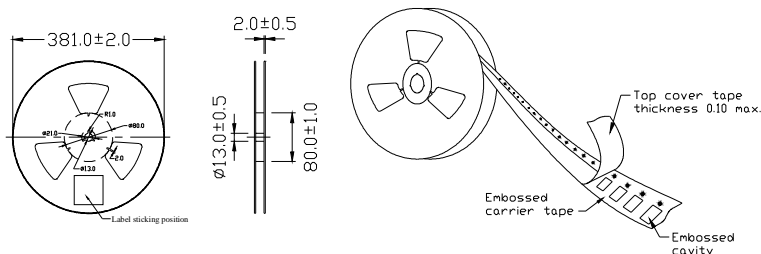


Tape dimensions

Direction of feed



Dimensions of tape reel



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