



Features

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

Applications

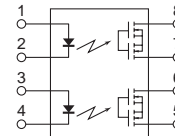
- Telecommunications (PC, Electronic notepad)
- Measuring and Testing equipment
- Industrial control
- Security equipments
- High speed inspection machine



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	40V	2500mA	GAQW211G2E	DIP-8	25pcs/Tube
			GAQW211G2EH	SMD-8	1000pcs/1reel

Absolute Maximum Ratings (Ambient Temperature: 25 °C)

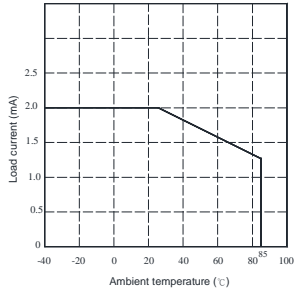
Item		Symbol	Value	Units	Note
Input	Continuous LED Current	I_F	50	mA	
	Peak LED Current	I_{FP}	1000	mA	f=100Hz, duty=1%
	LED Reverse Voltage	V_R	5	V	
	Input Power Dissipation	P_{In}	75	mW	
Output	Load Voltage	V_L	40	V(AC peak or DC)	
	Load Current	I_L	2.5	A	
	Peak Load Current	I_{Peak}	2.5	A	100ms(1 pulse)
	Output Power Dissipation	P_{out}	1.8	W	
Total Power Dissipation		P_T	2	W	
I/O Breakdown Voltage		$V_{I/O}$	3750	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)

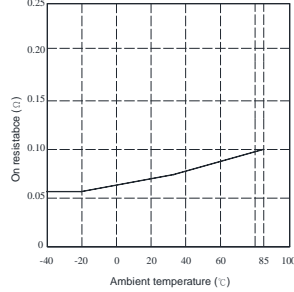
Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	LED Forward Voltage	V_F		1.2	1.4	V	$I_F=10mA$
	Operation LED Current	$I_{F On}$		0.5	3.0	mA	
	Recovery LED Current	$I_{F Off}$		0.35	0.5	mA	
	Recovery LED Voltage	$V_{F Off}$	0.5			V	
Output	On-Resistance	R_{On}		0.06	0.1	Ω	$I_F=5mA, I_L=100mA$, Time to flow is within 1 sec.
	Off-State Leakage Current	I_{Leak}			1	μA	$V_L=Rating$
	Output Capacitance	C_{Out}		190		pF	$V_L=0, f=1MHz$
Transmission	Turn-On Time	T_{On}		0.8	1.5	ms	$I_F=5mA, I_L=100mA$,
	Turn-Off Time	T_{Off}		0.02	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

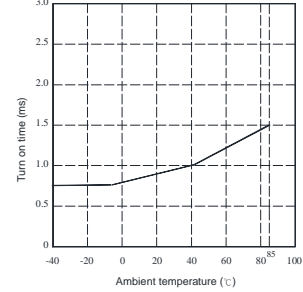
Load current Vs. Ambient temperature



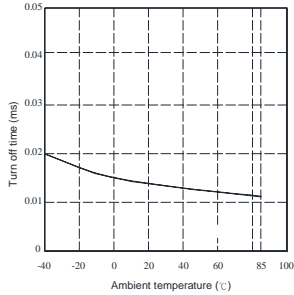
On resistance Vs. Ambient temperature



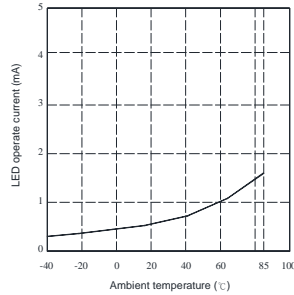
Turn on time Vs. Ambient temperature



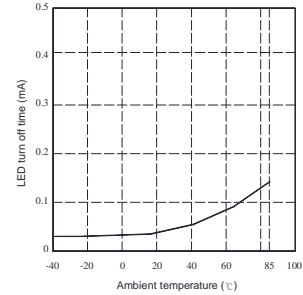
Turn off time Vs. Ambient temperature



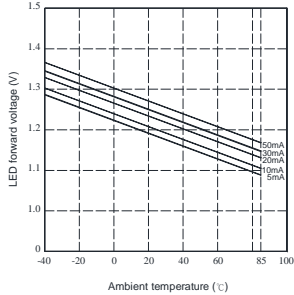
LED operate current Vs. Ambient temperature



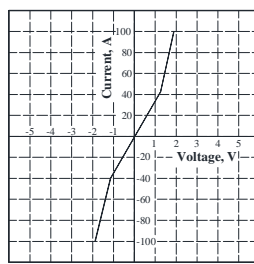
LED turn off current Vs. Ambient temperature



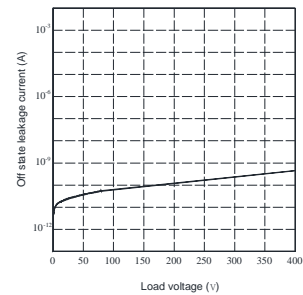
LED forward voltage Vs. Ambient temperature



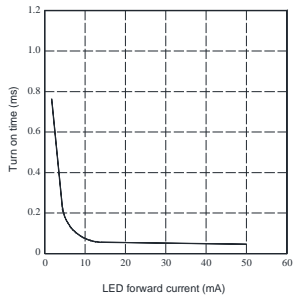
Voltage Vs. current characteristics of output at MOS portion



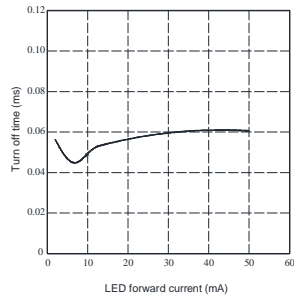
Off state leakage current Vs. Load voltage characteristics



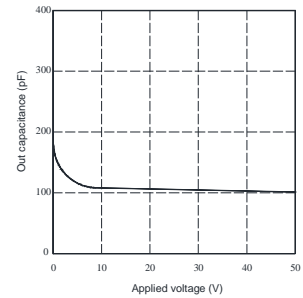
LED forward current Vs. turn on time characteristics



LED forward current Vs. turn off time characteristics



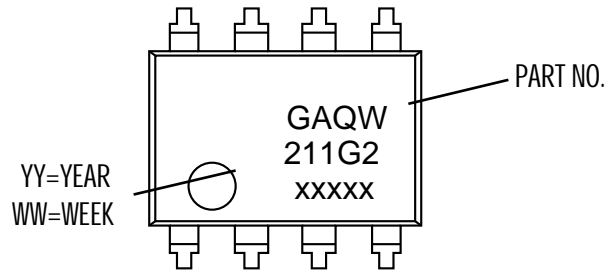
Applied voltage Vs. output capacitance characteristics



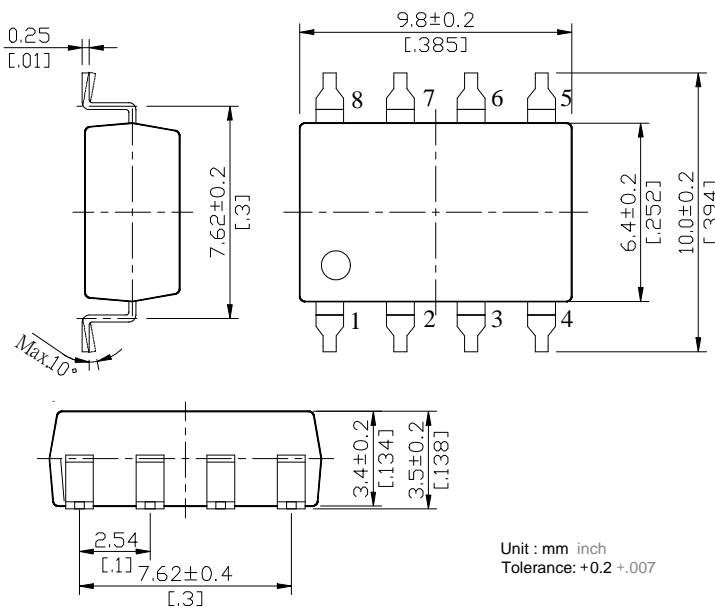
8-SMD

Dimensions

mm inch

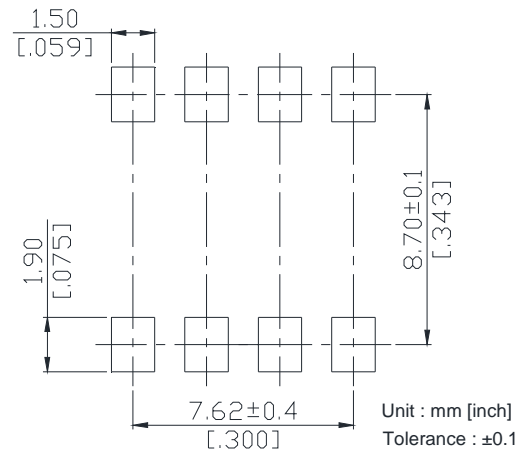


Surface mount terminal type



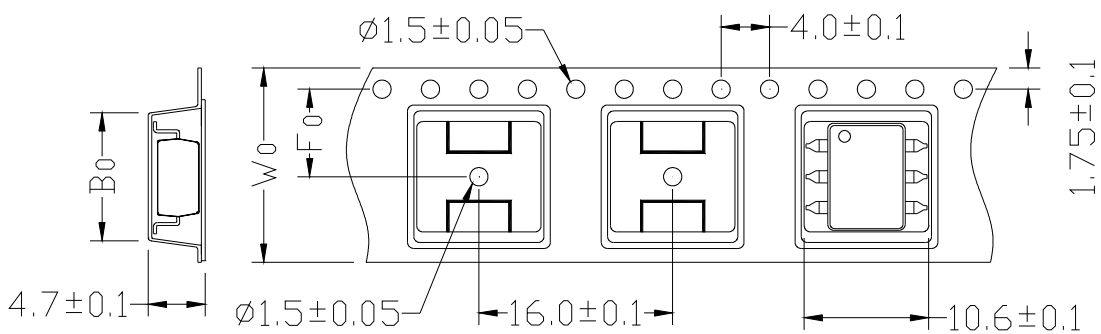
PC board pattern

(Top view)

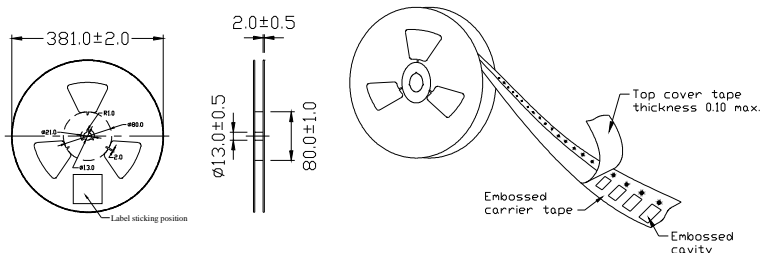


Tape dimensions

Direction of feed



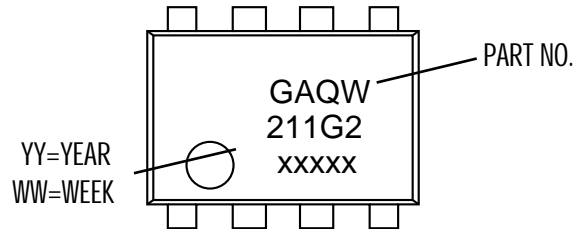
Dimensions of tape reel



8-DIP

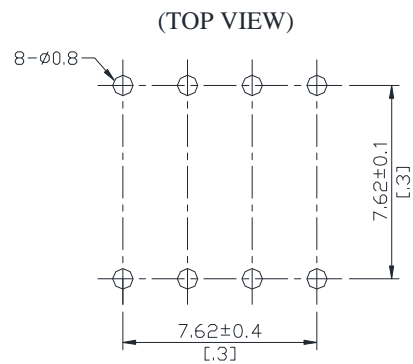
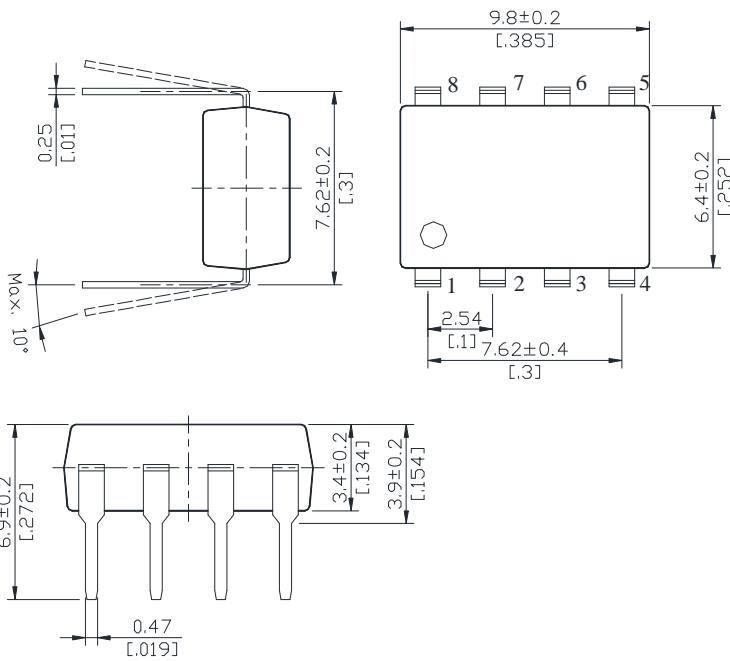
Dimensions

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.

