

## Features

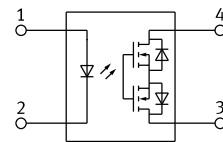
- LowRon=0.06Ω(Typ.)
- Low-level off state leakage current of max. 1 μA
- Low driver power requirements (TTL/CMOS Compatible)
- High reliability
- No moving parts
- 2500Vrms Input/Output isolation
- Arc-Free with no snubbing circuits
- SOP package 4 Pin type in miniature design (4.4×4.3×2.1mm / .173×.169×.083inch)
- The optically coupled input is controlled by a highly efficient GaAIAs infrared LED and MOS FETs on the output side.

## Applications

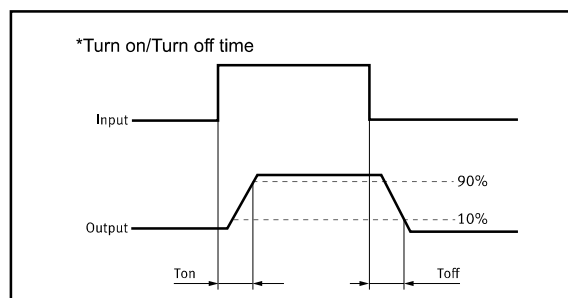
- Telecommunications (PC, Electronic notepad)
- Measuring and Testing equipment
- Industrial control
- Security equipments
- High speed inspection machine



SOP-4



1. LED Anode
2. LED Cathode
- 3, 4. Drain (MOS FET)



## TYPES

Category	Output rating <sup>*1</sup>		Part No.	Packing quantity
	Load voltage	Load current	SOP-4	Tape and reel
AC/DC	40 V	2.5A	GAQY211G2S	1-reel: 1,000 pcs.

Absolute Maximum Ratings (Ambient Temperature: 25°C)

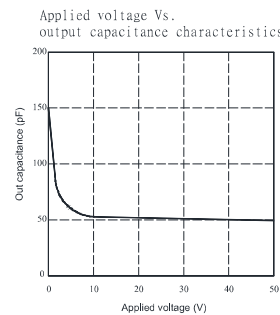
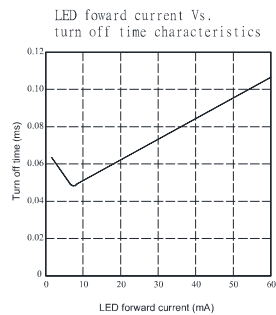
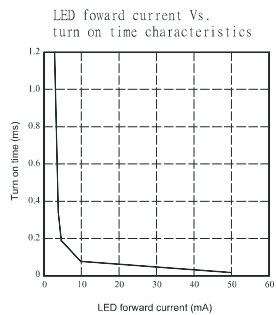
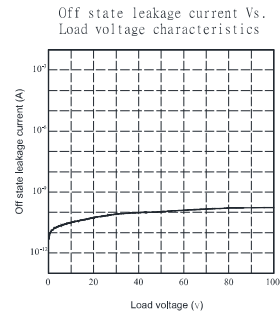
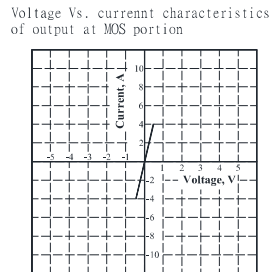
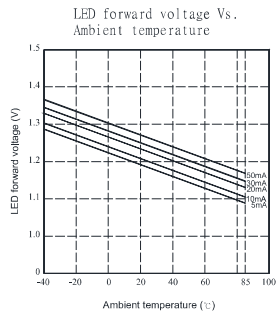
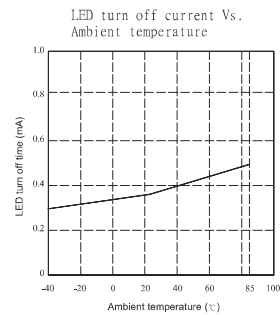
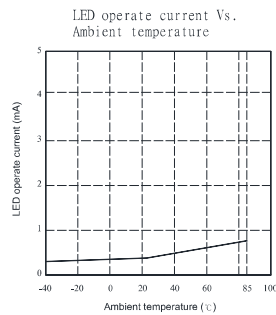
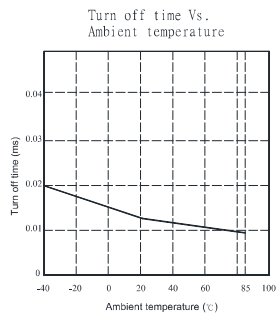
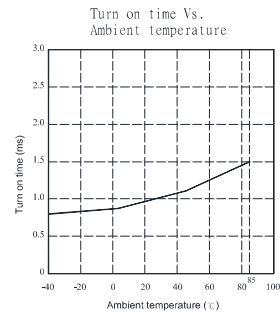
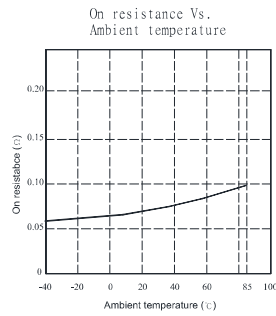
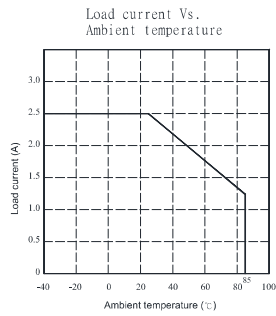
Item		Symbol	Value	Units	Note
Input	Continuous LED Current	$I_F$	50	mA	
	Peak LED Current	$I_{FP}$	1000	mA	f=100Hz, duty=1%
	LED Reverse Voltage	$V_R$	5	V	
	Input Power Dissipation	$P_{In}$	75	mW	
Output	Load Voltage	$V_L$	40	V(AC peak or DC)	
	Load Current	$I_L$	2.5	A	
	Peak Load Current	$I_{Peak}$	5.0	A	100ms(1 pulse)
	Output Power Dissipation	$P_{out}$	400	mW	
Total Power Dissipation		$P_T$	500	mW	
I/O Breakdown Voltage		$V_{I/O}$	2500	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	$I_{Fon}$		0.5	2.0	mA	
	Recovery LED Current	$I_{Foff}$		0.35	0.5	mA	
	Recovery LED Voltage	$V_{Foff}$	0.7			V	
Output	On-Resistance	$R_{on}$		0.06	0.1	$\Omega$	$I_F=5mA, I_L=100mA,$ Time to flow is within 1 sec.
	Off-State Leakage Current	$I_{Leak}$			1	$\mu A$	$V_L=Rating$
	Output Capacitance	$C_{out}$		150		pF	$V_L=0, f=1MHz$
Transmis sion	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	$R_{I/O}$	$10^{10}$			$\Omega$	DC500V
	I/O Capacitance	$C_{I/O}$		0.8	1.5	pF	f=1MHz

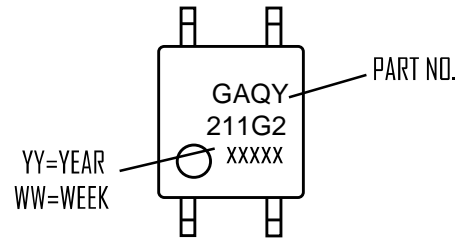
Please obey the following conditions to ensure proper device operation and resetting. Input LED current (Recommended value):  $I_F \geq 5mA$  and  $\leq 30mA$ .  
Examples of resistance value to control LED forward current ( $I_F=5mA, INPUT VOLTAGE="E", RESISTORS="R"$ )  
"E"=3.3V,"R"=330 $\Omega$ ; "E"=5V,"R"=640 $\Omega$ ; "E"=12V,"R"=1.9K $\Omega$ ; "E"=15V,"R"=2.5K $\Omega$ ; "E"=24V,"R"=4.1K $\Omega$ ;

## Reference Data

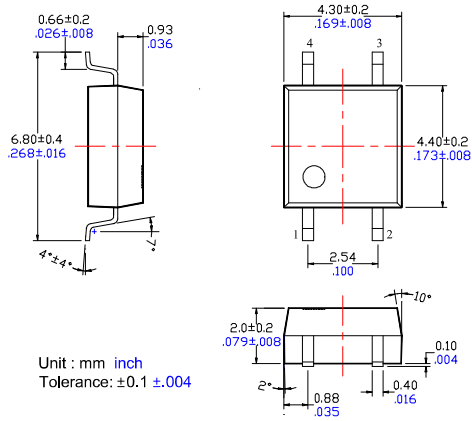


## Dimensions

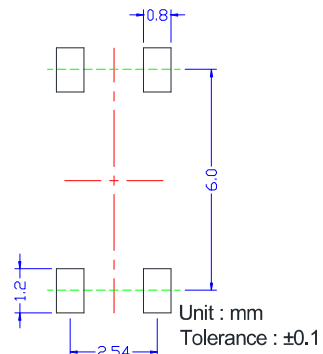
### 4-SOP



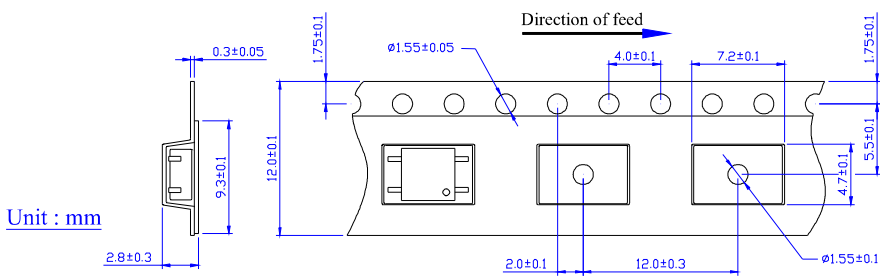
Surface mount terminal type



Recommended mounting pad (Top view)



Tape dimensions



Dimensions of tape reel

