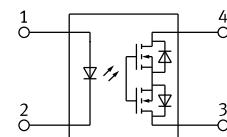


Features

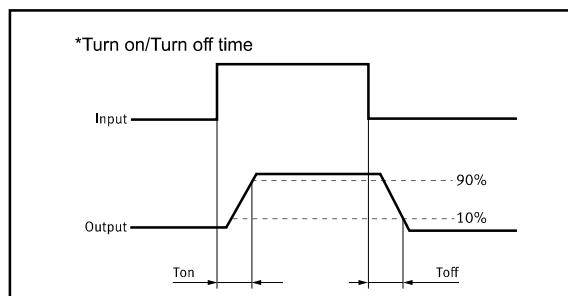
- * Low-level off state leakage current of max. 10 nA
- * Low driver power requirements (TTL/CMOS Compatible)
- * **Low C : Output capacitance= 8 pF(Typ.)**
- * No moving parts ,High reliability
- * Arc-Free with no snubbing circuits
- * 1500Vrms Input/Output isolation
- * Tape & Reel version available
- * SOP package 4Pintype in miniature design
(4.4×4.3×2.0mm/.173×.169×.083inch)

Applications

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



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



TYPES

Category	Output rating ¹		Part No.	Packing quantity
	Load voltage	Load current		
AC/DC	48 V	0.25 A	GAQY221R2S	1-reel:2,000 pcs.

Absolute Maximum Ratings (Ambient Temperature: 25°C)

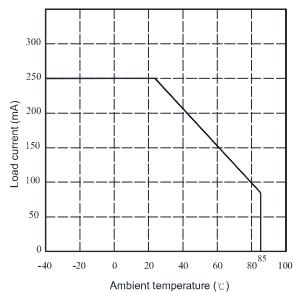
Item		Symbol	Value	Units	Note
Input	Continuous LED Current	I _F	50	mA	
	Peak LED Current	I _{FP}	1000	mA	f=100Hz, duty=1%
	LED Reverse Voltage	V _R	5	V	
	Input Power Dissipation	P _{In}	75	mW	
Output	Load Voltage	V _L	48V	V(AC peak or DC)	
	Load Current	I _L	0.25	A	
	Peak Load Current	I _{Peak}	0.60	A	100ms(1 pulse)
	Output Power Dissipation	P _{out}	450	mW	
Total Power Dissipation		P _T	500	mW	
I/O Breakdown Voltage		V _{I/O}	1500	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)

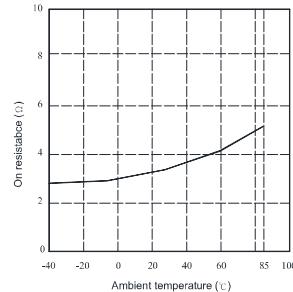
Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input	LED Forward Voltage	V _F		1.2	1.4	V	I _F =10mA
	Operation LED Current	I _{Fon}		0.5	2.0	mA	
	Recovery LED Current	I _{Foff}		0.35	0.5	mA	
	Recovery LED Voltage	V _{Foff}	0.7			V	
Output	On-Resistance	R _{on}		3.3	5.0	Ω	I _F =5mA, I _L =100mA, Time to flow is within 1 sec.
	Off-State Leakage Current	I _{Leak}		3	10	nA	V _L =Rating
	Output Capacitance	C _{out}		8		pF	V _L =0, f=1MHz
Transmission	Turn-On Time	T _{on}		0.03	0.50	ms	I _F =5mA, I _L =100mA,
	Turn-Off Time	T _{off}		0.03	0.10	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

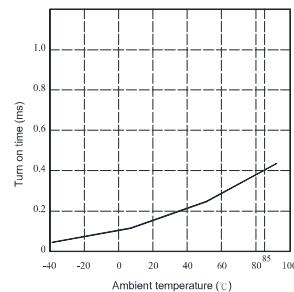
Load current Vs.
Ambient temperature



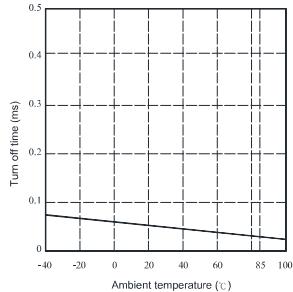
On resistance Vs.
Ambient temperature



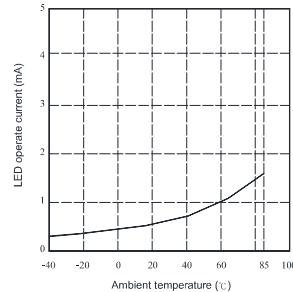
Turn on time Vs.
Ambient temperature



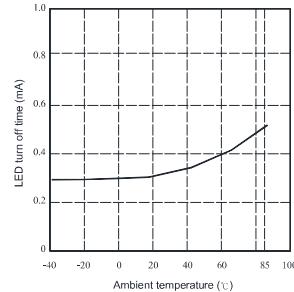
Turn off time Vs.
Ambient temperature



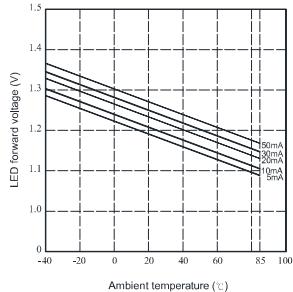
LED operate current Vs.
Ambient temperature



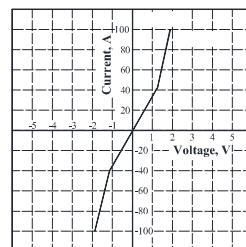
LED turn off current Vs.
Ambient temperature



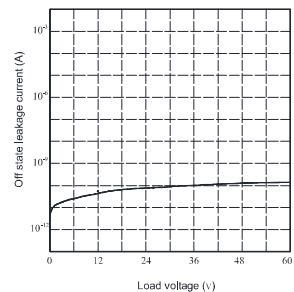
LED forward voltage Vs.
Ambient temperature



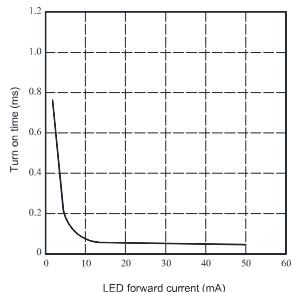
Voltage Vs. current characteristics
of output at MOS portion



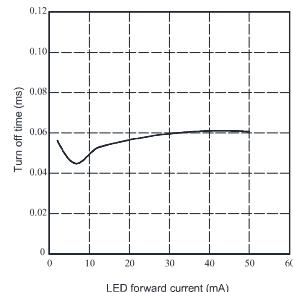
Off state leakage current Vs.
Load voltage characteristics



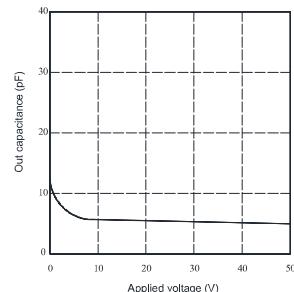
LED foward current Vs.
turn on time characteristics



LED foward current Vs.
turn off time characteristics

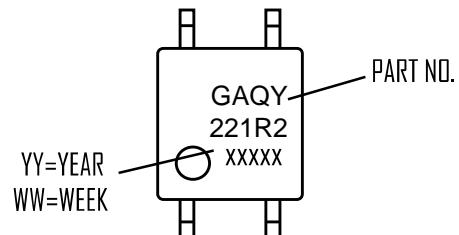


Applied voltage Vs.
output capacitance characteristics

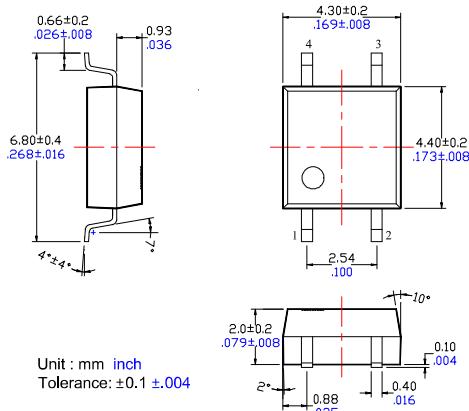


Dimensions

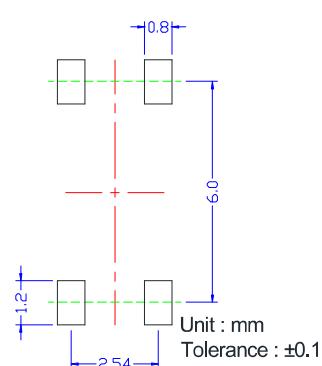
4-SOP



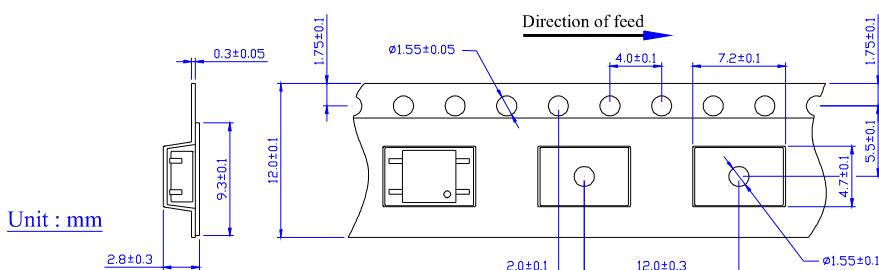
Surface mount terminal type



Recommended mounting pad (Top view)



Tape dimensions



Dimensions of tape reel

