



Features

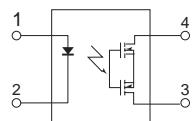
- SOP package 4 Pin type in miniature design (4.4X4.3X2.1mm/.173X.169X.083inch)
- Low driver power requirements (TTL/CMOS Compatible)
- No moving parts
- High reliability
- Arc-Free with no snubbing circuits
- 1500Vrms Input/Output isolation
- Tape & Reel version available



SOP-4

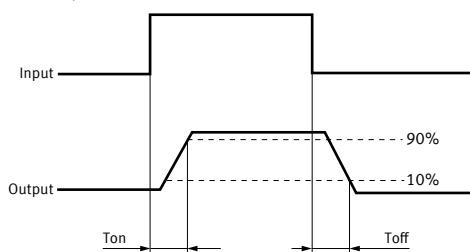
Applications

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



1. LED Anode
2. LED Cathode
3. Drain(MOSFET)
4. Drain(MOSFET)

*Turn on/Turn off time



Types

Category	Output rating		Part No.	Packing quantity
	Load voltage	Load current	SOP	Tape and reel
AC/DC	400 V	0.12A	AQY214S	1-reel: 2,000 pcs.



Absolute Ratings(Tamb = 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	400	V(AC peak or DC)	
	Load Current	I _L	120	mA	
	Peak Load Current	I _{Peak}	0.6	A	100ms(1 pulse)
	Output Power Dissipation	P _{out}	300	mW	
Total Power Dissipation		P _T	350	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.

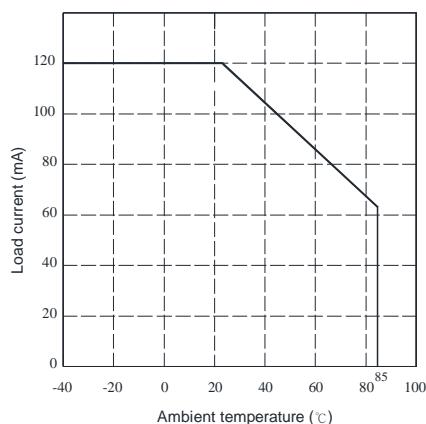
Electrical Characteristics Ratings at 25°C

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}	0.7			V	
Output	On-Resistance	R _{on}		15	20	Ω	I _F =5mA, I _L =100mA, Time to flow is within 1 sec.
	Off-State Leakage Current	I _{Leak}			0.01	uA	V _L =Rating
	Output Capacitance	C _{out}		45		pF	V _L =0, f=1MHz
Transmission	Turn-On Time	T _{on}		0.12	0.3	ms	I _F =5mA, I _L =100mA,
	Turn-Off Time	T _{off}		0.10	0.2	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

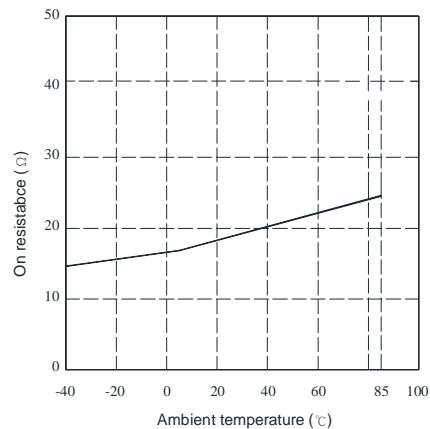


Reference Data

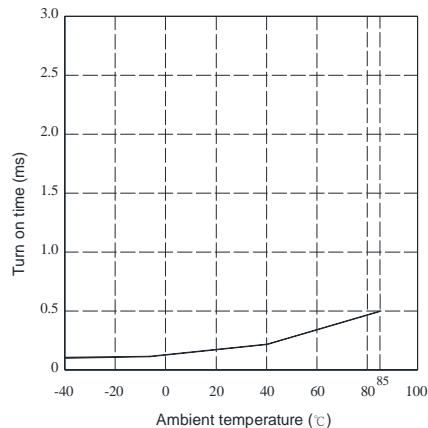
Load current Vs.
Ambient temperature



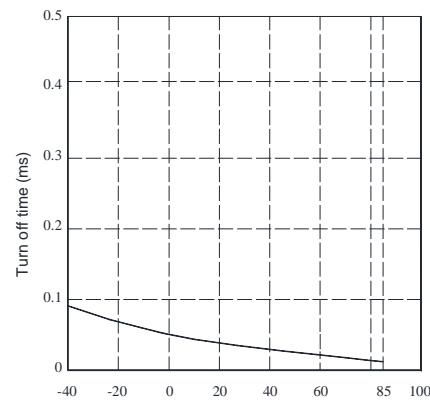
On resistance Vs.
Ambient temperature



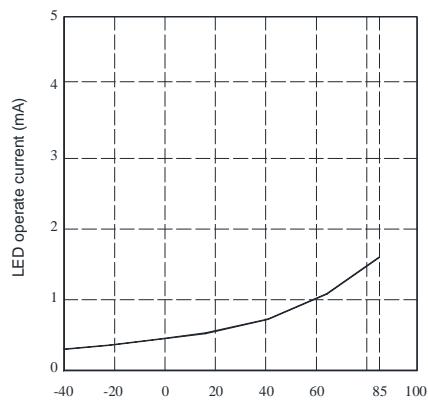
Turn on time Vs.
Ambient temperature



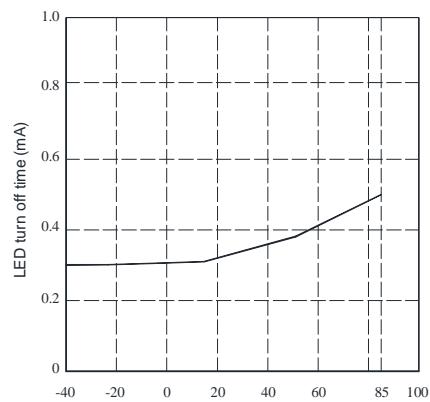
Turn off time Vs.
Ambient temperature



LED operate current Vs.
Ambient temperature

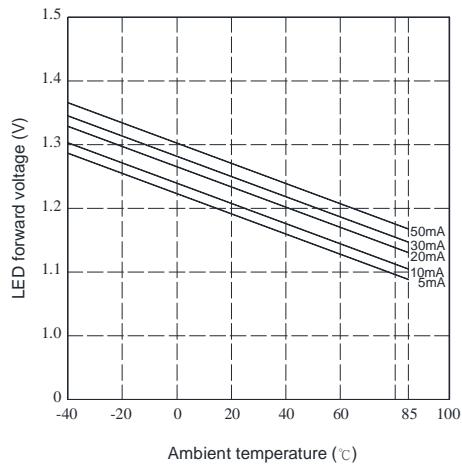


LED turn off current Vs.
Ambient temperature

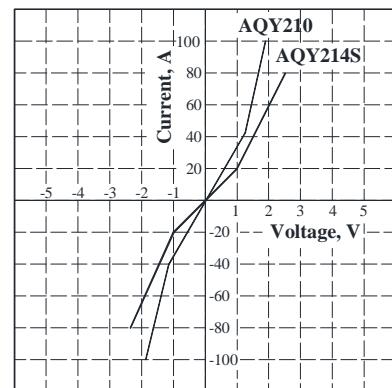




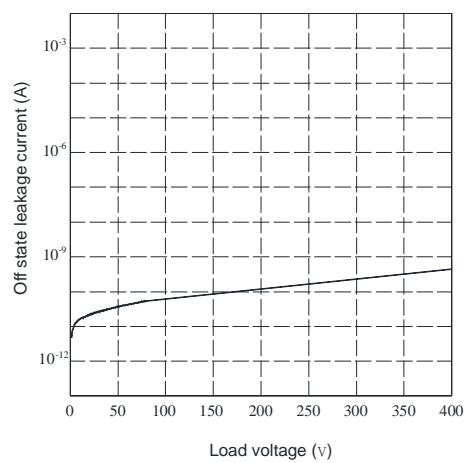
LED forward voltage Vs.
Ambient temperature



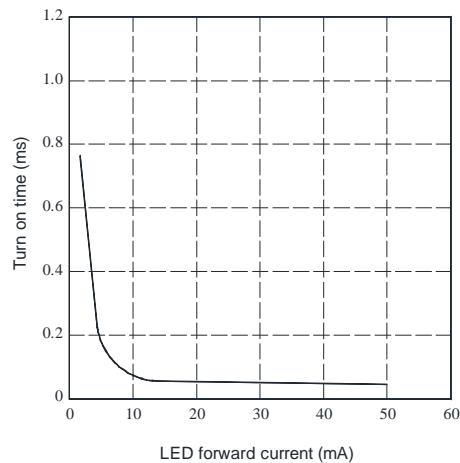
Voltage Vs. current characteristics of
output at MOS portion



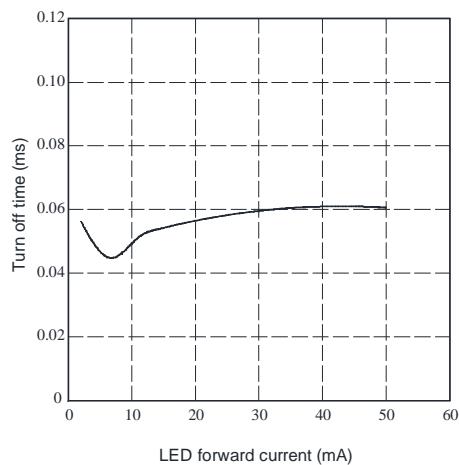
Off state leakage current Vs.
Load voltage characteristics



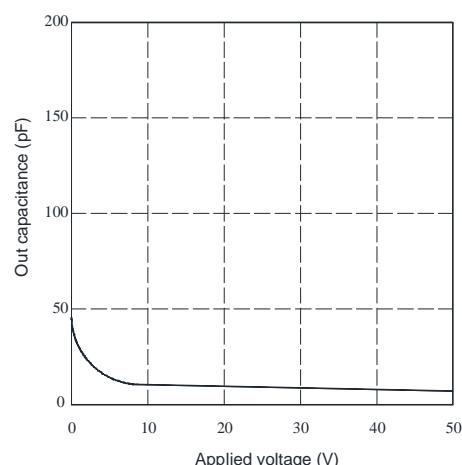
LED forward current Vs.
turn on time characteristics



LED forward current Vs.
turn off time characteristics



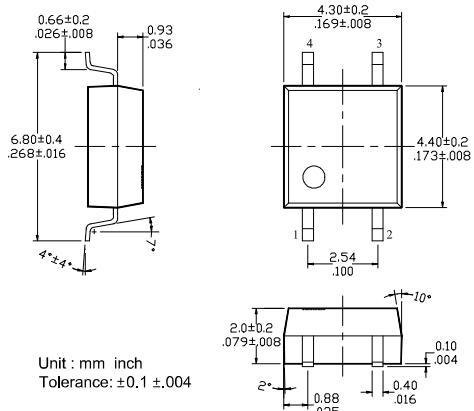
Applied voltage Vs.
output capacitance characteristics



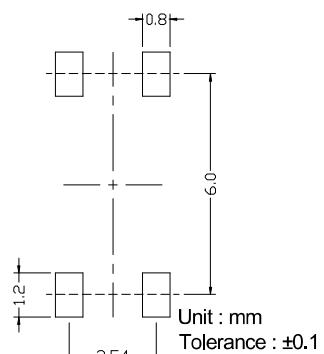


SOP-4 Package Information

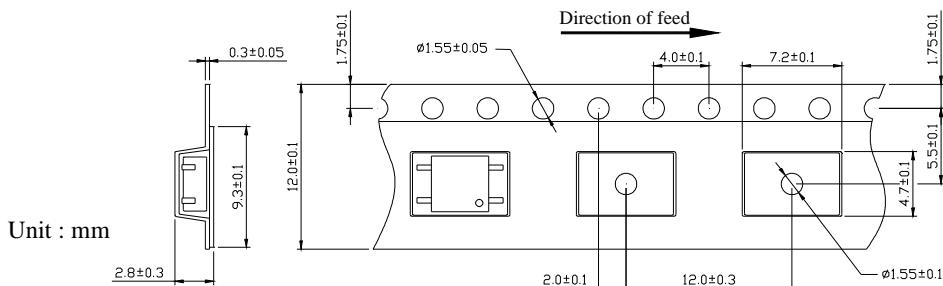
Surface mount terminal type



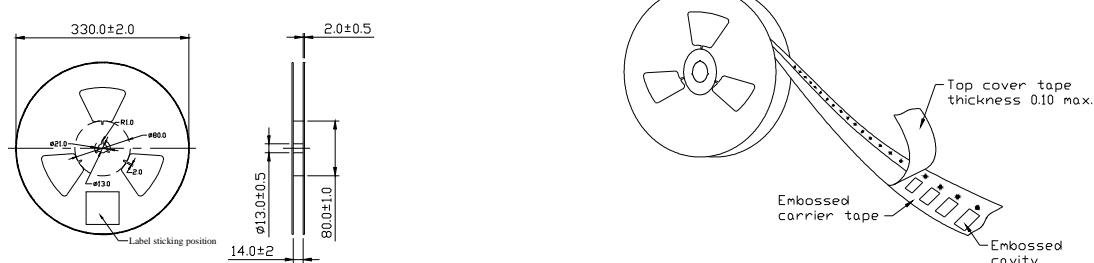
Recommended mounting pad (Top view)



Tape dimensions



Dimensions of tape reel





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