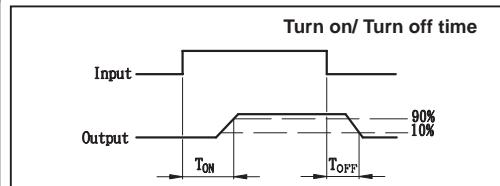
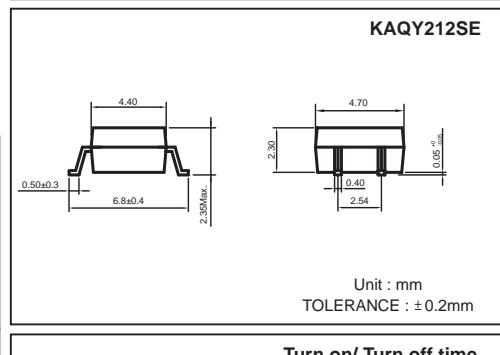
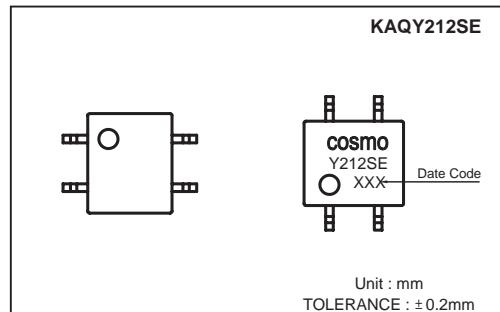


Features

1. Normally Open, Single Pole Single Throw
2. Control 60V AC or DC Voltage
3. Switch 200mA Loads
4. LED control Current, 2mA
5. Low ON-Resistance
6. dv/dt, >500V/ms
7. Isolation Test Voltage, 1500VACrms



Absolute Maximum Ratings

(Ta=25°C)

Emitter (Input)	Detector (Output)
Reverse Voltage	5.0V
Continuous Forward Current	50mA
Peak Forward Current	1A
Power Dissipation	100mW
Derate Linearly from 25°C	1.3mW/°C
General Characteristics	
Isolation Test Voltage	1500VACrms
Isolation Resistance	$\geq 10^{10}\Omega$
Vio=500V, Ta=25°C	
Total Power Dissipation	550mW
Derate Linearly from 25°C	2.5mW/°C
Storage Temperature Range	-40°C to +150°C
Operating Temperature Range	-40°C to +85°C
Junction Temperature	100°C
Soldering Temperature,	
2mm from case, 10 sec	260°C

Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Emitter (Input)						
Forward Voltage	VF	IF = 10mA		1.2	1.5	V
Operation Input Current	IFON	VL = ±20V, IL = 100mA, t = 10ms			2	mA
Recovery Input Current	IOFF	VL = -20V, IL ≤ 5μA	0.2			mA
Detector (Output)						
Output Breakdown Voltage	VB	IB = 50μA	60			V
Output Off-State Leakage	ITOFF	VT = 60V, IF = 0mA		0.2	1	μA
I/O Capacitance	CISO	IF = 0, f = 1MHz		6		p F
ON Resistance	RON	IL = 100mA, IF = 10mA		0.83	2.5	Ω
Turn-On Time	TON	IF = 10mA, VL = ±20V		0.2	1.5	ms
Turn-Off Time	TOFF	t = 10ms, IL = ±100mA		0.3	1.5	ms

Mos Relay Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQY212SE		1a	AC/DC	—	

Data Curve

Fig.1 Load current vs. ambient temperature
Allowable ambient temperature:
-40°C to +85°C

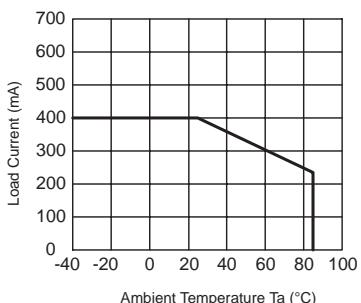


Fig.2 On resistance vs. ambient temperature
Across terminals 3 and 4 pin
LED current: 5mA
Continuous load current: 130mA(DC)

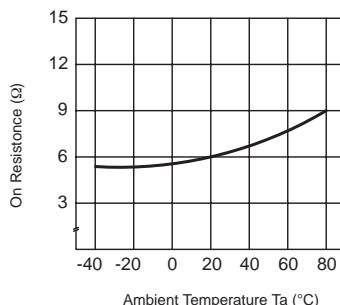


Fig.3 Turn on time vs. ambient temperature
Load voltage 60V(DC)
LED current: 5mA
Continuous load current: 130mA(DC)

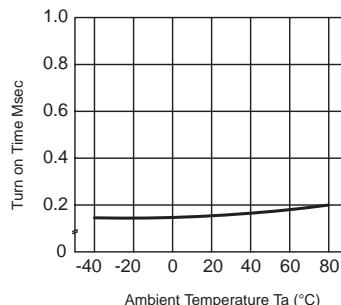


Fig.4 Turn off time vs. ambient temperature
LED current: 5mA; Load voltage:
60V(DC)
Continuous load current: 130mA(DC)

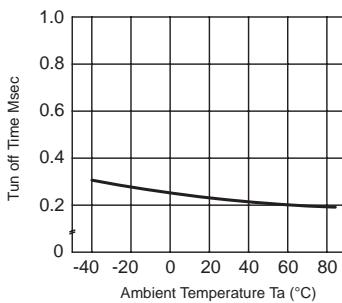


Fig.5 LED operate vs. ambient temperature
Load voltage 60V(DC)
Continuous load current: 130mA(DC)

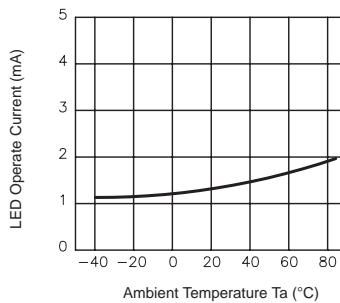


Fig.6 LED turn off current vs. ambient temperature
Load voltage 60V(DC)
Continuous load current: 130mA(DC)

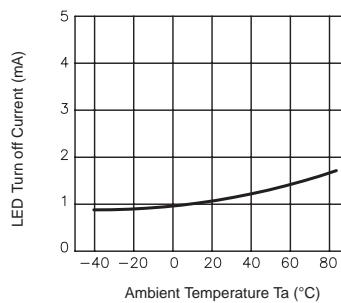


Fig.7 LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA

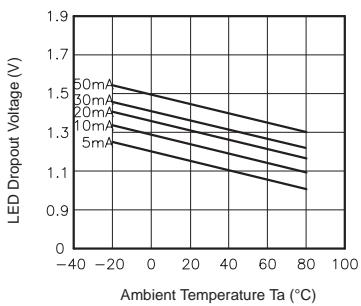


Fig.8 Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminals 3 and 4 pin
Ambient temperature: 25°C

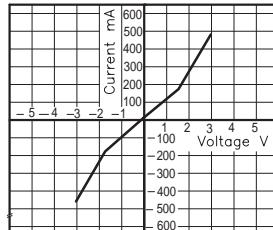


Fig.9 Off state leakage current
Across terminals 3 and 4 pin
Ambient temperature: 25°C

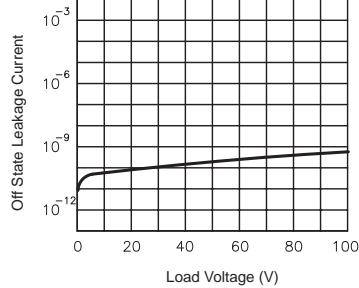


Fig.10 LED forward current vs. turn on time
Across terminals 3 and 4 pin;
Load voltage: 60V (DC) ;
Continuous load current: 130mA (DC);
Ambient temperature: 25°C

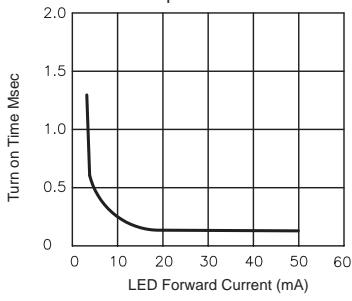


Fig.11 LED forward current vs. turn off time
Across terminals 3 and 4 pin;
Load voltage: 60V (DC) ;
Continuous load current: 130mA (DC);
Ambient temperature: 25°C

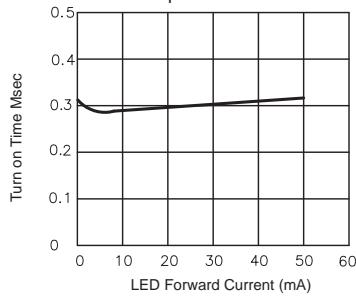


Fig.12 Applied voltage vs. output capacitance
Across terminals 3 and 4 pin
Frequency: 1MHz
Ambient temperature: 25°C

