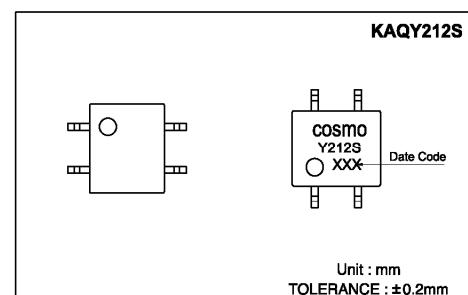


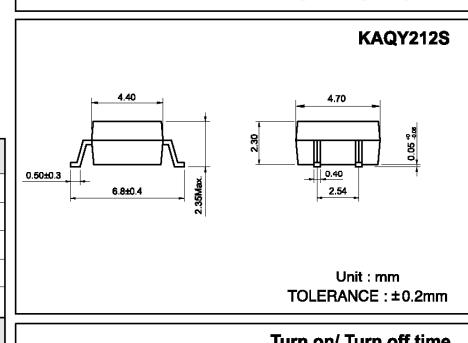
Features

1. Normally Open, Single Pole Single Throw
2. Control 60V AC or DC Voltage
3. Switch 400mA Loads
4. LED control Current, 5mA
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	Storage Temperature Range.... -40°C to +150°C
Vio=500V, Ta=25°C.....	Operating Temperature Range... -40°C to +85°C
Total Power Dissipation.....	Junction Temperature.....100°C
Derate Linearly from 25°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	FON	VL =±20V, IL =100mA, t =10ms		5		mA
Recovery Input Current	FOFF	VL =±20V, IL ≤5μA	0.2			mA
Detector (Output)						
Output Breakdown Voltage	V _B	IB =50μA	60			V
Output Off-State Leakage	TOFF	VT =60V , IF =0mA	0.2	1		uA
I/O Capacitance	C _{ISO}	F =0, f =1MHz	6			pF
ON Resistance	R _{ON}	IL =100mA, IF =10mA	0.83	2.5		Ω
Turn-On Time	T _{ON}	IF =10mA, VL =±20V	0.2	1.5		ms
Turn-Off Time	T _{OFF}	t =10ms, IL =±100mA	0.3	1.5		ms

Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQY212S		1a	AC/DC	—	

Data Curve

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

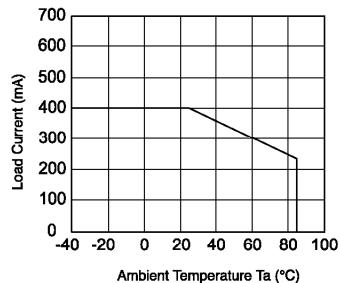


Fig.2 On resistance vs. ambient temperature
Across terminals 3 and 4 pin
LED current: 5mA
Continuous load current:400mA(DC)

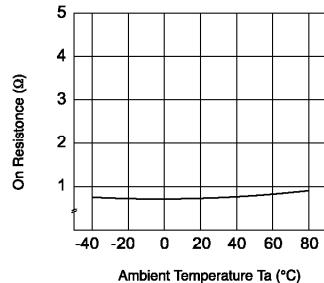


Fig.3 Turn on time vs. ambient temperature
Load voltage 60V(DC)
LED current: 5mA
Continuous load current:400mA(DC)

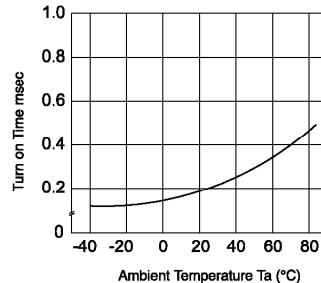


Fig.4 Turn off time vs. ambient temperature
LED current: 5mA; Load voltage:
60V(DC)
Continuous load current:400mA(DC)

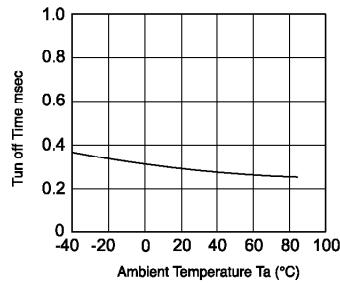


Fig.5 LED operate vs. ambient temperature
Load voltage 60V(DC)
Continuous load current:400mA(DC)

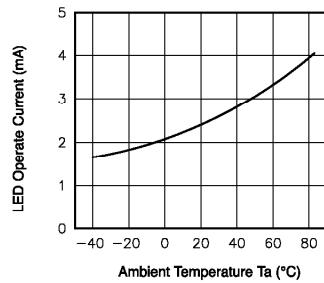


Fig.6 LED turn off current vs. ambient temperature
Load voltage 60V(DC)
Continuous load current:400mA(DC)

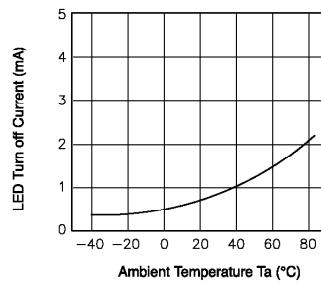


Fig.7 LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA

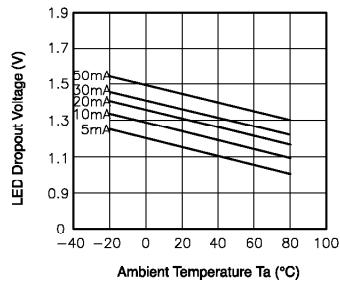


Fig.8 Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminals 3 and 4 pin
Ambient temperature: 25°C

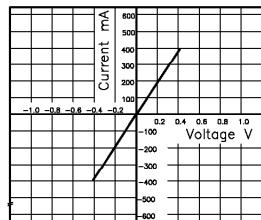


Fig.9 Off state leakage current
Across terminals 3 and 4 pin
Ambient temperature: 25°C

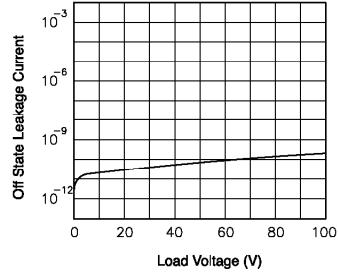


Fig.10 LED forward current vs. turn on time
Across terminals 3 and 4 pin;
Load voltage: 60V (DC);
Continuous load current:400mA (DC);
Ambient temperature: 25°C

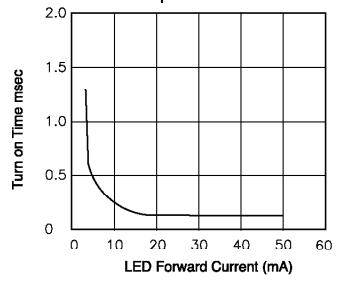


Fig.11 LED forward current vs. turn off time
Across terminals 3 and 4 pin;
Load voltage: 60V (DC);
Continuous load current:400mA (DC);
Ambient temperature: 25°C

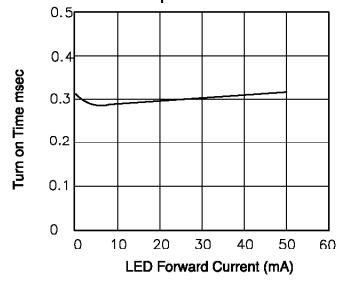


Fig.12 Applied voltage vs. output capacitance
Across terminals 3 and 4 pin
Frequency: 1MHz
Ambient temperature: 25°C

