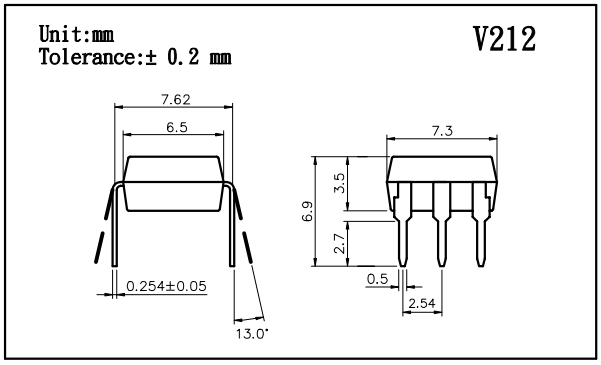
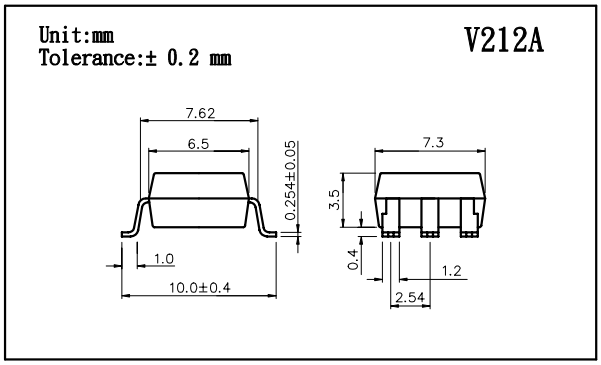
V212/V212A

HIGH VOLTAGE, PHOTO MOS RELAY

COSMO





FEATURES

- Normally Open, Single Pole Single Throw
- Control 60VAC or DC Voltage
- Switch 400mA Loads
- LED control Current, 5mA
- Low ON-Resistance
- dv/dt, >500V/ms
- Isolation Test Voltage, 3750VACrms

Absolute Maximum Ratings(Ta=25℃)

Emitter(Input)

Reverse Voltage 5.0V
Continuous Forward Current 50mA
Peak Forward Current 1A
Power Dissipation 100mW
Derate Linearly from 25℃ ..... 1.3mW/℃

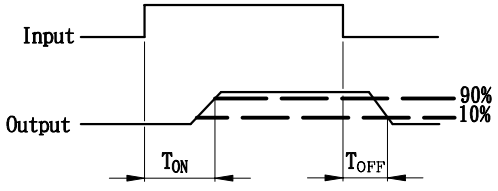
Detector(Output)

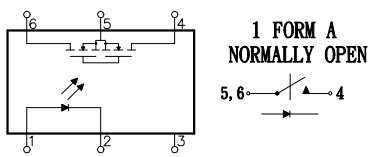
Output Breakdown Voltage ..... ± 60V
Continuous Load Current ..... ± 400mA
Power Dissipation 500mW

General Characteristics

Isolation Test Voltage 3750VACrms
Isolation Resistance Vio=500V, Ta=25℃ ..... $\geqq 10^{10}\Omega$
Total Power Dissipation 550mW
Derate Linearly from 25℃ ..... 2.5mW/℃
Storage Temperature Range ..... -40℃ to +125℃
Operating Temperature Range ..... -30℃ to +85℃
Junction Temperature ..... 100℃
Soldering Temperature, 2mm from case, 10 sec ..... 260℃

● Turn on/Turn off time





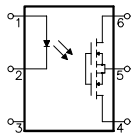
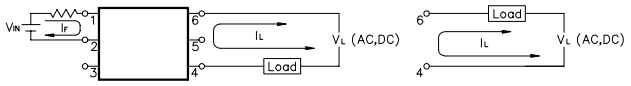
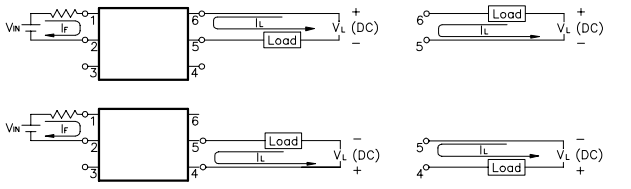
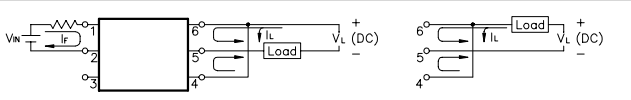
V212/V212A

HIGH VOLTAGE,PHOTO MOS RELAY

Characterisitcs (Ta=25℃)

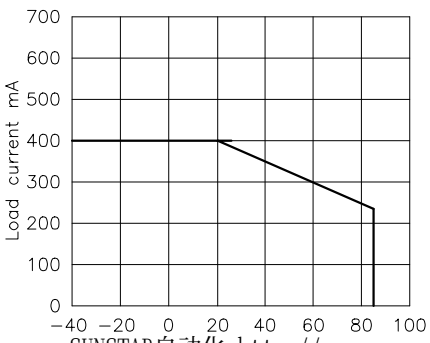
Description			Symbol	Min.	Typ.	Max.	Unit	Test Condition
Emitter(Input)								
Forward Voltage			VF		1.2	1.5	V	IF=10mA
Operation Input Current			IFON			5	mA	VL=± 20V, IL=100mA t=10mS
Recovery Input Current			IFOFF	0.2			mA	VL=± 20V, IL<=5uA
Detector (output)								
Output Breakdown Voltage			VB	60			V	IB=50uA
Output Off-State Leakage			IT(OFF)		0.2	1	uA	VT=60V, IF=0mA
I/O Capacitance			CISO		0.8		pF	IF=0, f=1MHz
ON Resistance	Con-nection	A			0.83	2.50	Ω	IL=100mA, IF=10mA
		B	RON		0.44	1.25		
		C			0.25	0.63		
Turn-on Time			TON		0.2	1.5	ms	IF=10mA, VL=± 20V
Turn-off Time			TOFF		0.3	1.5	ms	t=10ms, IL=± 100mA

Mos Relay Schematic and Wiring Diagrams

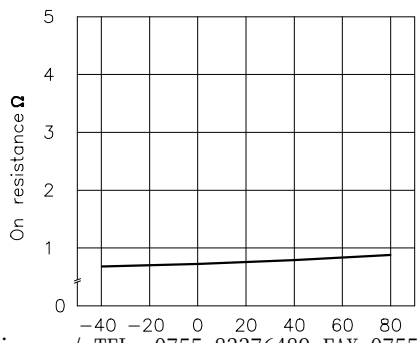
Type	Schematic	Output configur-ation	Load	Con-nection	Wiring Diagrams
V210 & V210A		1a	AC/DC	A	
			DC	B	
			DC	C	

DATA CURVE

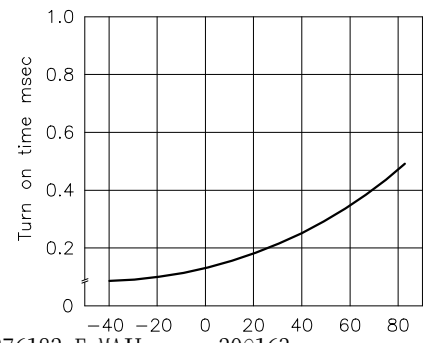
Load current vs. ambient temperature
Allowable ambient temperature:
-40℃ to +85℃



On resistance vs. ambient temperature
Across terminals 4 and 6 pin
LED current: 5mA
Continuouse load current: 130mA(DC)



Trun on time vs. ambient temperature
Load voltage 60V(DC)
LED current: 5mA
Continuouse load current: 130mA(DC)

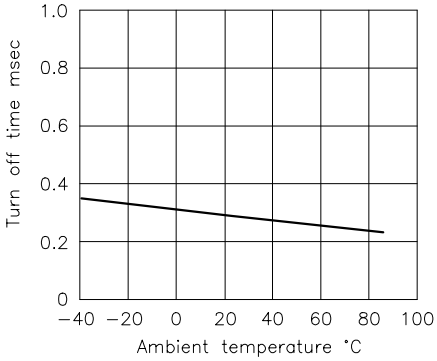


V212/V212A

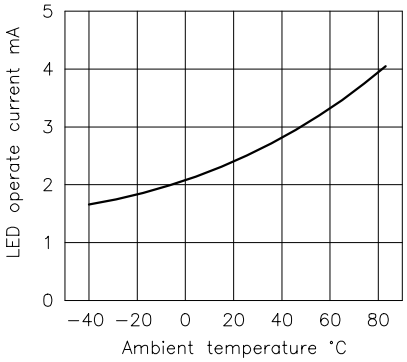
HIGH VOLTAGE,PHOTO MOS RELAY

V212/V212A

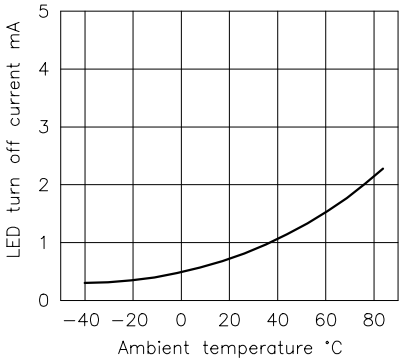
Turn off time vs. ambient temperature
LED current: 5mA;Load voltage: 60V(DC)
Continuous load current: 130mA(DC)



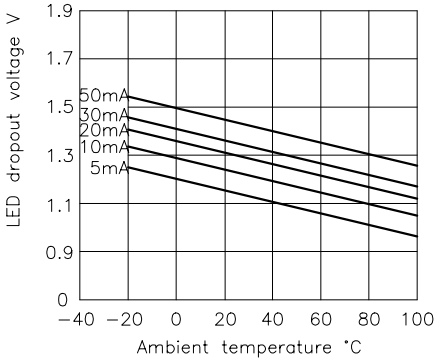
LED operate vs. ambient temperature
Load voltage: 60V(DC)
Continuous load current: 130mA(DC)



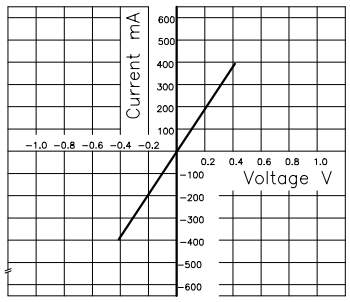
LED turn off current vs. ambient temperature
Load voltage: 60V(DC)
Continuons load current: 130mA(DC)



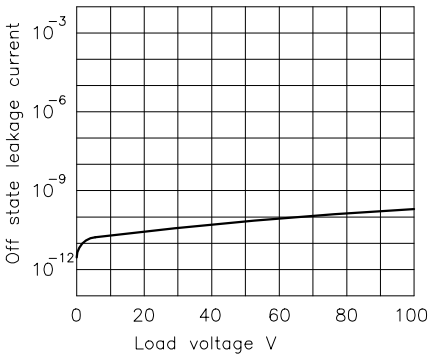
LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA



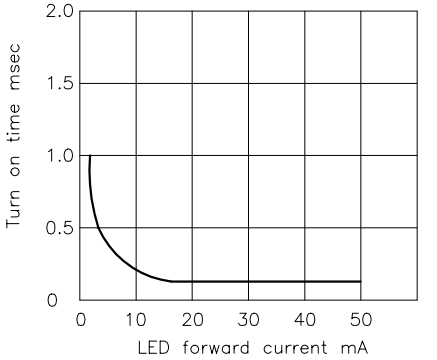
Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminals 4 and 6 pin
Ambient temperature: 25°C



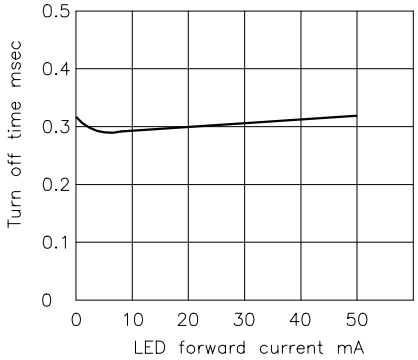
Off state leakage current
Across terminals 4 and 6 pin
Ambient temperature: 25°C



LED forward current vs. turn on time
Across terminals 4 and 6 pin;Load voltage: 60V(DC);Continuous load current: 130mA(DC);Ambient temperature: 25°C



LED forward current vs. turn off time
Across terminals 4 and 6 pin;Load voltage: 60V(DC);Continuous load current: 130mA(DC);Ambient temperature: 25°C



Applied voltage vs. output capacitance
Across terminals 4 and 6 pin
Frequency: 1MHz;Ambient temperature: 25°C