

COSMO

FEATURES

- Normally Open, Single Pole Single Throw
- Control 350VAC or DC Voltage
- Switch 130mA Loads
- LED control Current, 5mA
- Low ON-Resistance
- dv/dt, >500V/ms
- Isolation Test Voltage, 3750VACrms

Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Emitter(Input)

Reverse Voltage	5.0V
Continuous Forward Current	50mA
Peak Forward Current	1A
Power Dissipation	100mW
Derate Linearly from 25°C	1.3mW/ $^\circ\text{C}$

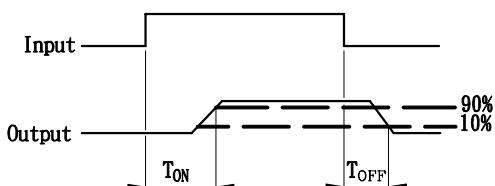
Detector(Output)

Output Breakdown Voltage	$\pm 350\text{V}$
Continuous Load Current	$\pm 130\text{mA}$
Power Dissipation	500mW

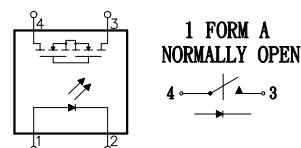
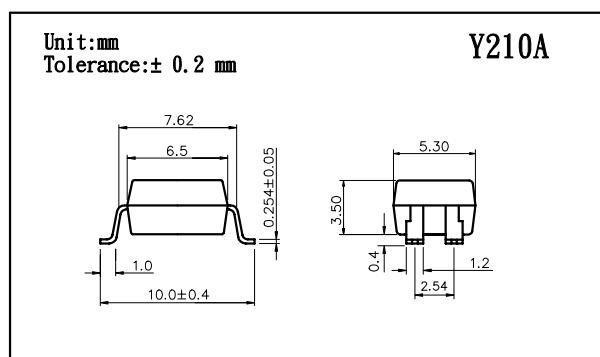
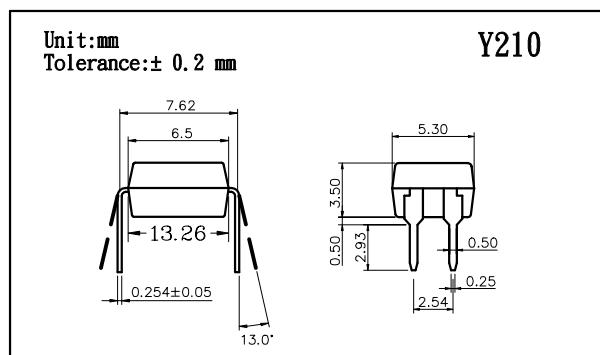
General Characteristics

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

- Turn on/Turn off time



Y210/Y210A HIGH VOLTAGE, PHOTO MOS RELAY



Y210/Y210A

HIGH VOLTAGE, PHOTO E-MOS RELAY

Characteristics

$(Ta=25^\circ C)$

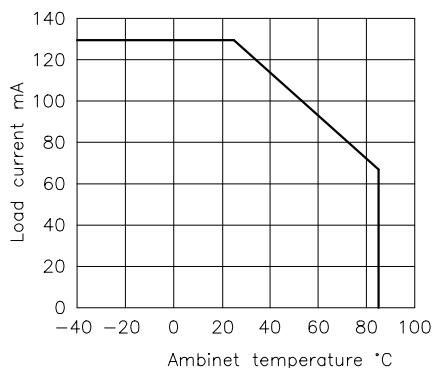
Description	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Emitter (Input)						
Forward Voltage	VF		1.2	1.5	V	IF=10mA
Operation Input Current	IFON			5	mA	VL=± 20V, IL=100mA $t=10\text{ms}$
Recovery Input Current	IFOFF	0.2			mA	VL=± 20V, IL<=5uA
Detector (output)						
Output Breakdown Voltage	VB	350			V	IB=50uA
Output Off-State Leakage	IT(OFF)		0.2	1	uA	VT=100V, IF=0mA
I/O Capacitance	CISO		6		pF	IF=0, f=1MHz
ON Resistance	RON		20	30	Ω	IL=100mA, IF=10mA
Turn-on Time	TON		0.3	1.0	ms	IF=10mA, VL=± 20V
Turn-off Time	TOFF		0.7	1.5	ms	$t=10\text{ms}$, IL=± 100mA

Mos Relay Schematic and Wiring Diagrams

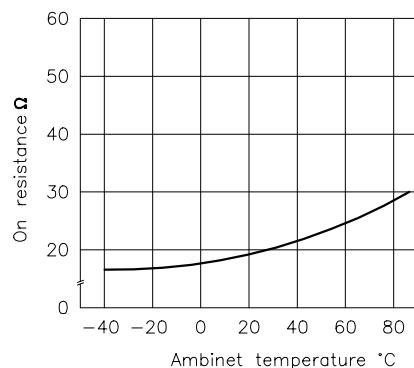
Type	Schematic	Output configuration	Load	Con-	Wiring Diagrams
Y210 & Y210A		1a	AC/DC	-	

DATA CURVE

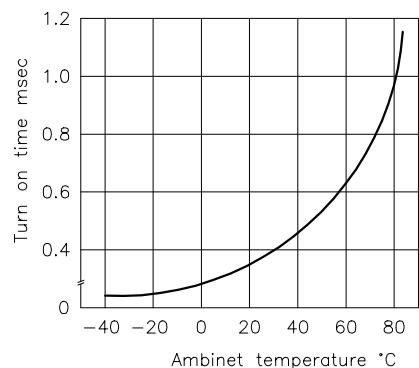
Load current vs. ambient temperature
Allowable ambient temperature:
-40°C to +85°C



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



Turn on time vs. ambient temperature
Load voltage 350V(DC)
LED current: 5mA
Continuous load current: 130mA(DC)

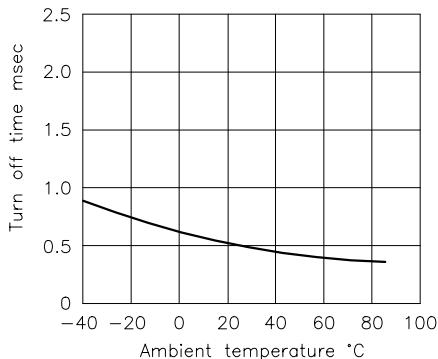


Y210/Y210A

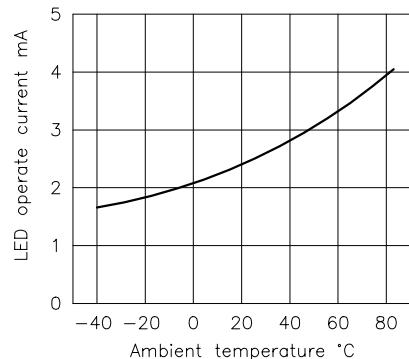
HIGH VOLTAGE, PHOTO E^MSOS RELAY

Y210/Y210A

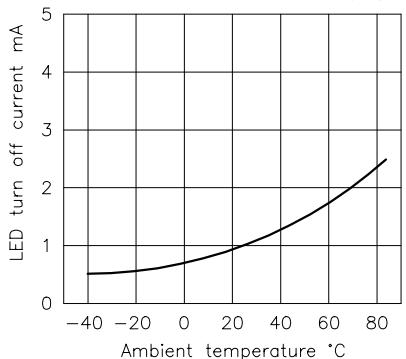
Turn off time vs. ambient temperature
LED current: 5mA; Load voltage: 350V(DC)
Continuous load current: 130mA(DC)



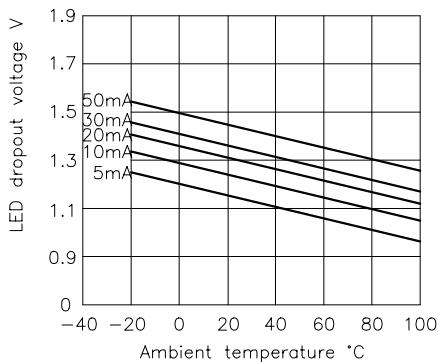
LED operate vs. ambient temperature
Load voltage: 350V(DC)
Continuous load current: 130mA(DC)



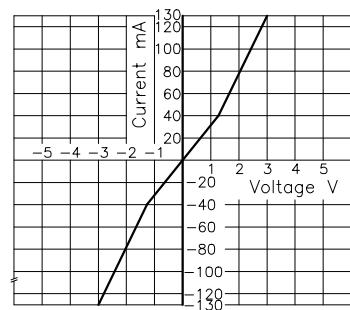
LED turn off current vs. ambient temperature
Load voltage: 350V(DC)
Continuous load current: 130mA(DC)



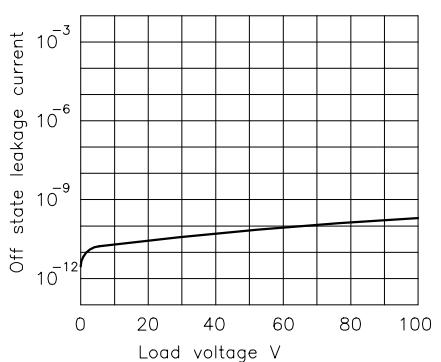
LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA



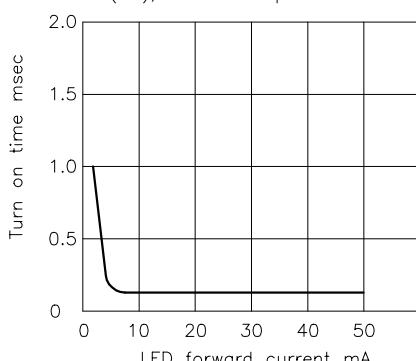
Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminals 3 and 4 pin
Ambient temperature: 25°C



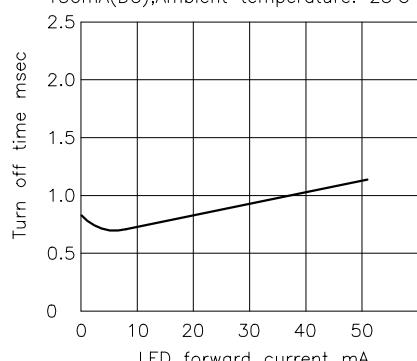
Off state leakage current
Across terminals 3 and 4 pin
Ambient temperature: 25°C



LED forward current vs. turn on time
Across terminals 3 and 4 pin; Load voltage: 350V(DC); Continuous load current: 130mA(DC); Ambient temperature: 25°C



LED forward current vs. turn off time
Across terminals 3 and 4 pin; Load voltage: 350V(DC); Continuous load current: 130mA(DC); Ambient temperature: 25°C



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

