Y210B/Y210AB

HIGH VOLTAGE, PHOTO MOS RELAY

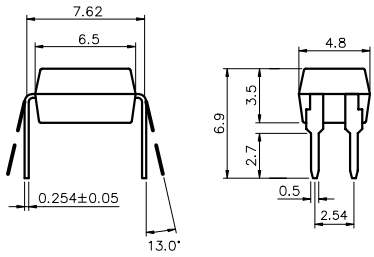
COSMO

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

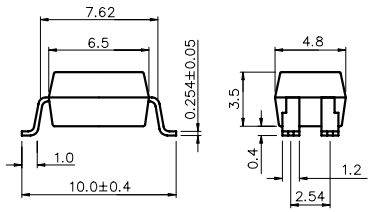
Unit:mm
Tolerance:± 0.2 mm

Y210B



Unit:mm
Tolerance:± 0.2 mm

Y210AB



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/℃

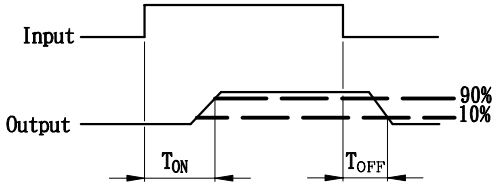
Detector(Output)

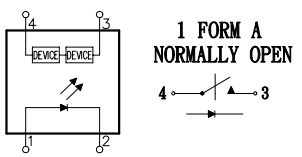
Output Breakdown Voltage ..... ± 350V
Continuous Load Current ..... ± 130mA
Power Dissipation 500mW

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





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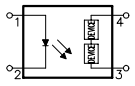
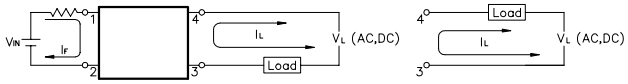
Characterisitcs (Ta=25℃)

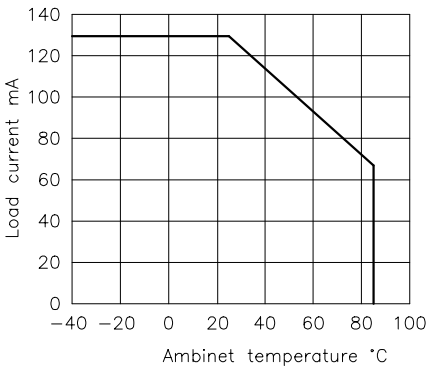
Description	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Emitter(Input)						
Forward Voltage	VF		1.2	1.5	V	IF=10mA
Operation Input Current	IFON			5	mA	VL=± 20V, IL=100mA t=10mS
Recovery Input Current	IFOFF	0.05			mA	VL=± 20V, IL<=5uA
Detector (output)						
Output Breakdown Voltage	VB	350			V	IB=50uA
Output Off-State Leakage	IT(OFF)		0.2	2	uA	VT=100V, IF=0mA
I/O Capacitance	CISO		6		pF	IF=0, f=1MHz
ON Resistance	RON		28	35	Ω	IL=100mA, IF=10mA
Turn-on Time	TON		0.1	0.5	ms	IF=10mA, VL=± 20V
Turn-off Time	TOFF		0.3	0.5	ms	t=10ms, IL=± 100mA

Mos Relay Schematic and Wiring Diagrams

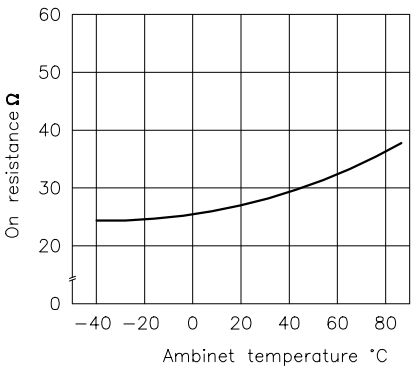
Type	Schematic	Output configur-ation	Load	Con-nection	Wiring Diagrams
Y210B & Y210AB		1a	AC/DC	-	

DATA CURVE

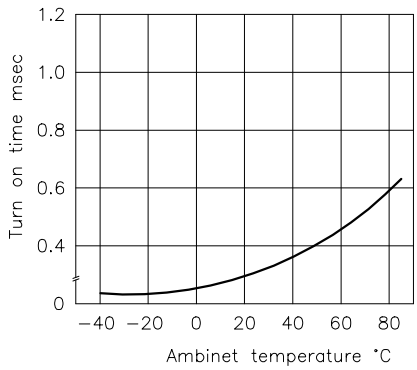
Load current vs. ambient temperature
Allowable ambient temperature:
-40℃ to +85℃



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



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



Y210B/Y210AB

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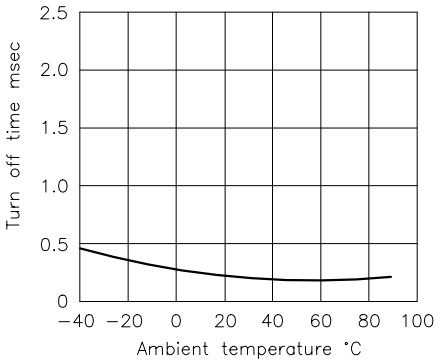
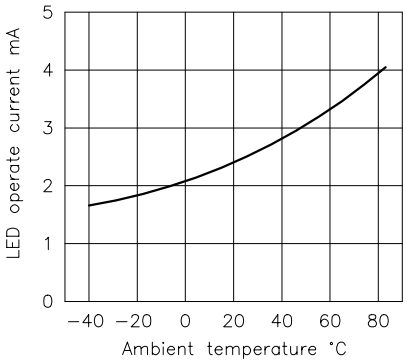
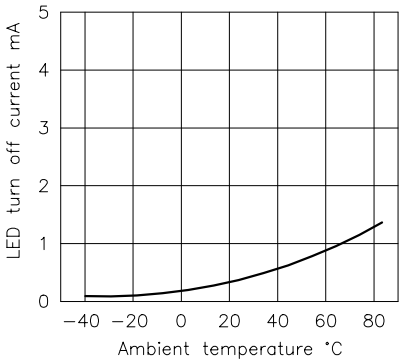
Turn off time vs. ambient temperature
LED current: 5mA;Load voltage: 350V(DC)
Continuous load current: 130mA(DC)



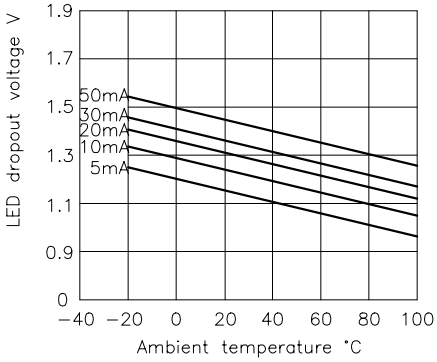
LED operate vs. ambient temperature
Load voltage: 350V(DC)
Continuous load current: 130mA(DC)



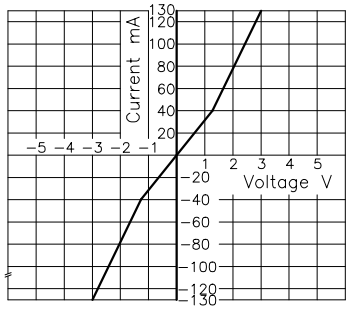
LED turn off current vs. ambient temperature
Load voltage: 350V(DC)
Continuons load current: 130mA(DC)



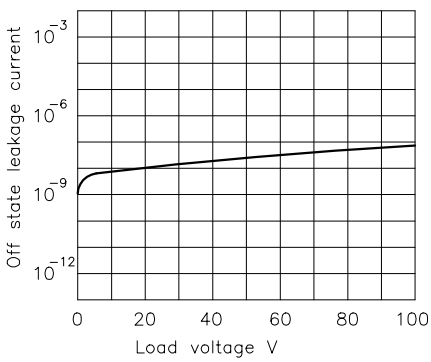
LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA



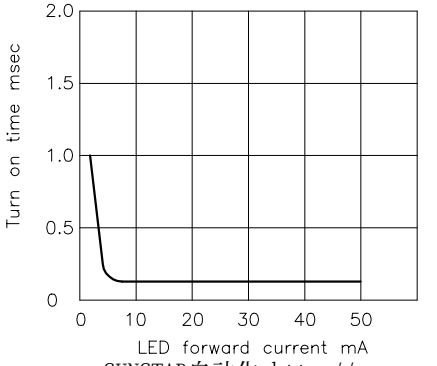
Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminals 3 and 4 pin
Ambient temperature: 25°C



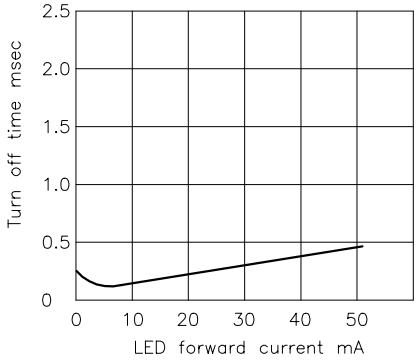
Off state leakage current
Across terminals 3 and 4 pin
Ambient temperature: 25°C



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