

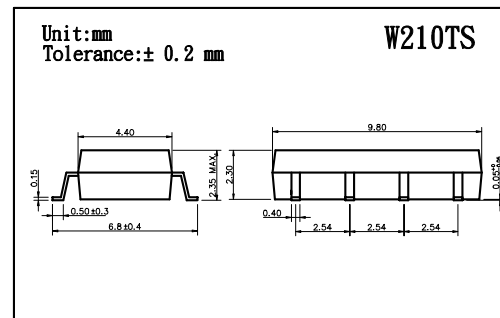
W210TS

HIGH VOLTAGE, PHOTO MOS RELAY

COSMO

FEATURES

- Photo Mos Relay and Optocoupler in One Package
- Control 350VAC or DC Voltage
- Switch 130mA Loads
- LED control Current, 5mA
- Low ON-Resistance
- $dv/dt, >500V/ms$
- Isolation Test Voltage, 1500VACrms



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

Emitter(Input)

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

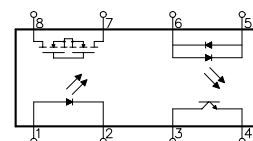
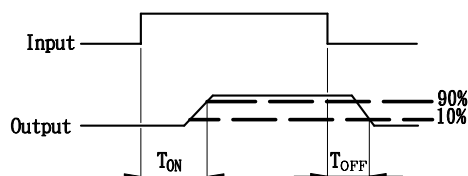
Detector(Output)

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

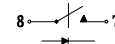
General Characteristics

Isolation Test Voltage	1500VACrms
Isolation Resistance $V_{io}=500V, T_a=25^\circ C$	$\geq 10^{10} \Omega$
Total Power Dissipation	550mW
Derate Linearly from $25^\circ C$	2.5mW/ $^\circ C$
Storage Temperature Range	$-40^\circ C$ to $+125^\circ C$
Operating Temperature Range	$-30^\circ C$ to $+85^\circ C$
Junction Temperature	$100^\circ C$
Soldering Temperature, 2mm from case, 10 sec	$260^\circ C$

- Turn on/Turn off time



1 FORM A
NORMALLY OPEN



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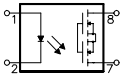
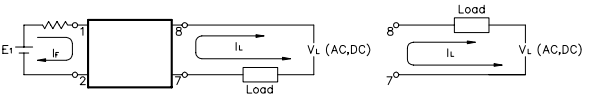
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Characteristics

(Ta=25°C)

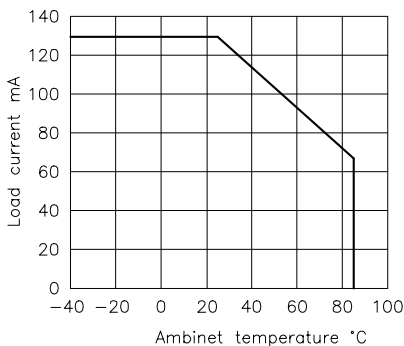
Description	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Emitter(Input)						
Forward Voltage	VF		1.2	1.5	V	IF=10mA
Operation Input Current	IFON			5	mA	VL=± 20V, IL=100mA t=10mS
Recovery Input Current	IFOFF	0.2			mA	VL=± 20V, IL<=5uA
Detector (output)						
Output Breakdown Voltage	VB	350			V	IB=50uA
Output 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=10ms, IL=± 100mA

Mos Relay Schematic and Wiring Diagrams

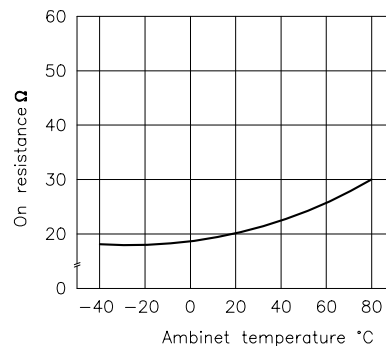
Type	Schematic	Output configuration	Load	Con-nection	Wiring Diagrams
W210TS		1a	AC/DC	-	

DATA CURVE

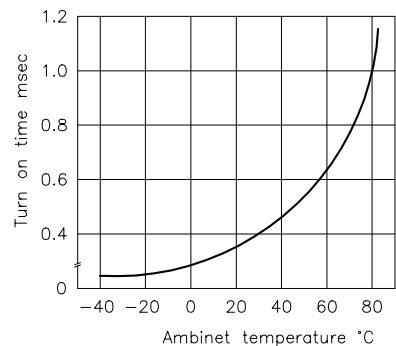
Load current vs. ambient temperature
 Allowable ambient temperature:
 -40°C to +85°C



On resistance vs. ambient temperature
 Across terminals 7 and 8 pin
 LED current: 5mA
 Continuous load current: 130mA(DC)



Turn on time vs. ambient temperature
 Load voltage 400V(DC)
 LED current: 5mA
 Continuous load current: 130mA(DC)

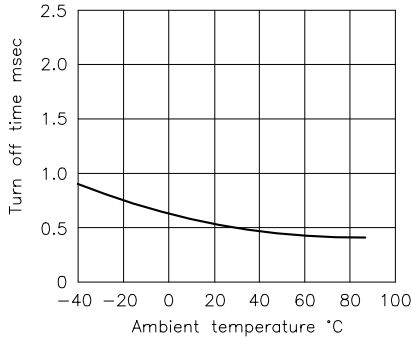


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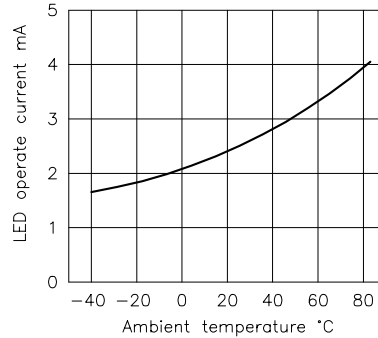
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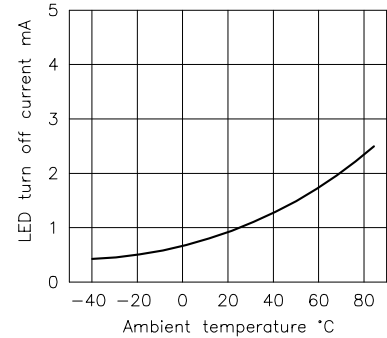
Turn off time vs. ambient temperature
LED current: 5mA
Load voltage: 400V(DC)
Continuous load current: 130mA(DC)



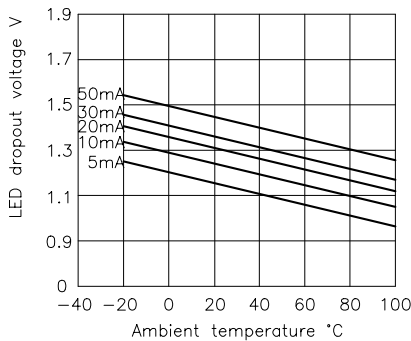
LED operate vs. ambient temperature
Load voltage: 400V(DC)
Continuous load current: 130mA(DC)



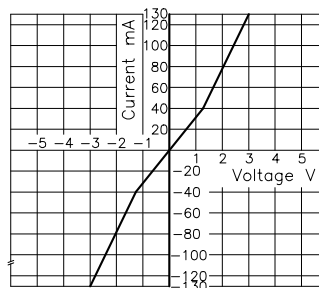
LED turn off current vs. ambient temperature
Load voltage: 400V(DC)
Continuous load current: 130mA(DC)



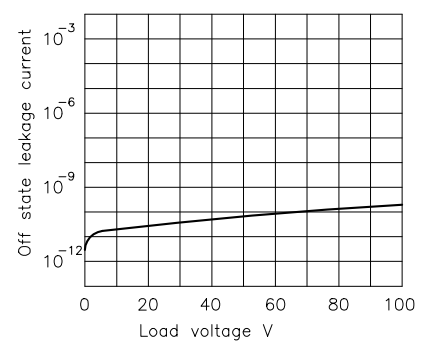
LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA



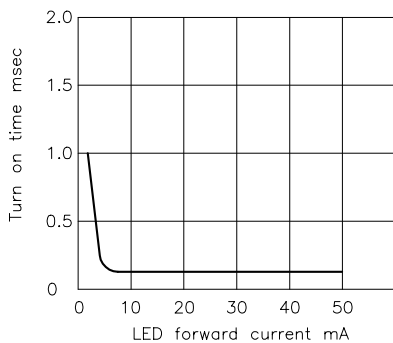
Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminal 7 and 8 pin
Ambient temperature: 25°C



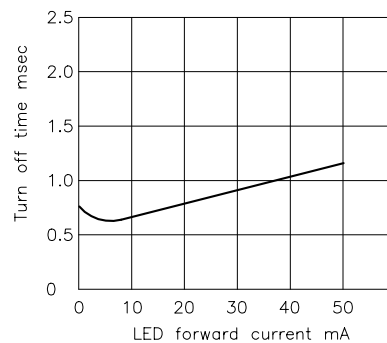
Off state leakage current
Across terminals 7 and 8 pin
Ambient temperature: 25°C



LED forward current vs. turn on time
Across terminals 7 and 8 pin
load voltage: 400V(DC); Continuous load current: 130mA(DC); Ambient temperature: 25°C



LED forward current vs. turn off time
Across terminals 7 and 8 pin
load voltage: 400V(DC); Continuous load current: 130mA(DC); Ambient temperature: 25°C



Applied voltage vs. output capacitance
Across terminals 7 and 8 pin
Frequency: 1MHz; Ambient temperature 25°C

