



## IS210

**Small Outline Photo DMOS-FET Relay with High Load Voltage Capabilities**

### APPROVALS

- UL Pending File No. E91231

### DESCRIPTION

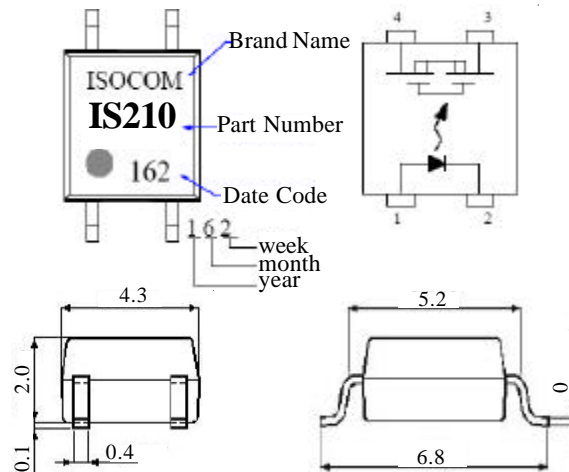
The IS210 is a miniature 1-Form A solid state relay in a 4 pin SOP package. The IS210 utilises MOSFET technology that is optically coupled to a highly efficient GaAlAs infrared light emitting diodes.

### FEATURES

- SOP 4 pin package for compact PCB's
- Lower driver power requirements
- High load voltage capability 400V
- No moving parts
- High reliability
- Arc-Free without snubbing circuits
- 1500Vrms Input/Output voltage
- All electrical parameters 100% tested
- Custom electrical selections available

### APPLICATIONS

- Telecommunications
- Industrial systems controllers
- Measuring instruments
- Security Equipment
- Signal transmission between systems of different potentials and impedances



### ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise specified)

Storage Temperature	_____	-40°C to +100°C
Operating Temperature	_____	-40°C to +85°C
Lead Soldering Temperature	_____	260°C (10s max)

### INPUT DIODE

Forward Current	_____	50mA
Reverse Voltage	_____	5V
Power Dissipation	_____	75mW

### OUTPUT MOSFET

Load Voltage	_____	400V
Load Current	_____	100mA
Output Power dissipation	_____	300mW

### POWER DISSIPATION

Total Power Dissipation	_____	350mW
(derate linearly 5.83mW/°C above 25°C)		

#### ISOCOM COMPONENTS 2004 LTD

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#### ISOCOM COMPONENTS ASIA LTD

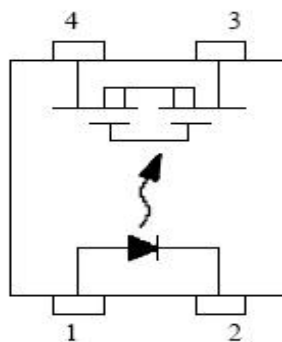
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**ELECTRICAL CHARACTERISTICS (  $T_A = 25^\circ\text{C}$  Unless otherwise noted )**

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage ( $V_F$ )		1.2	1.4	V	$I_F = 10\text{mA}$
	Reverse Current ( $I_R$ )			10	$\mu\text{A}$	$V_R = 5\text{V}$
Output	On State Resistance ( $R_{on}$ )		20	30	$\Omega$	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Off State Leakage Current ( $I_{Leak}$ )			1	$\mu\text{A}$	$V_L = \text{Rating}$
	Output Capacitance ( $C_{Out}$ )		110		pF	$V_L = 0, f = 1\text{MHz}$
Coupled	Input Control Current ( $I_{FON}$ )		0.5	3.0	mA	
	Recovery LED Current ( $I_{FOFF}$ )		0.35	0.5	mA	
	Recovery LED Voltage ( $V_{OFF}$ )	0.5			V	
	Turn On Time ( $T_{ON}$ )		0.23	0.5	mS	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Turn Off Time ( $T_{OFF}$ )		0.03	0.2	mS	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Input to Output Isolation ( $V_{ISO}$ )	1500			V	See note 1

Note 1 Measured with input leads shorted together and output leads shorted together.

Note 2 Special Selections are available on request. Please consult the factory.



- 1 LED Anode
- 2 LED Cathode
- 3 Drain MOSFET
- 4 Drain MOSFET

