

PART NUMBERING SYSTEM

ISOMOS™ PHOTO MOS RELAY

STANDARD & SOP

Example part number:

WPPM - 35 2 8 S - TRU

(1) (2) (3) (4) (5) (6)

(1) Photo MOS

(2) Load Voltage

06: 60V

10: 100V

20: 200V

35: 350V

40: 400V

(3) Contact Characteristics

2: 1 Form A

4: 1 Form B

6: 1 Form A + 1 Form B

8: Dual Form A

10: Dual Form B

(4) Pin Configuration

4: 4 pin

6: 6 pin

8: 8 pin

16: 16 pin

(5) Package Types

D: DIP

A: SMD

S: SOP

(6) Taping

TLD: Tape Direction Left

TRU: Tape Direction Right

CUSTOM VERSIONS

Example part number:

WPPML - 35 2 4 S - TRU

(1) (2) (3) (4) (5) (6)

(1) Photo MOS Custom

(2) Load Voltage

35: 350V

06: 60V (only available in SOP package)

(3) Contact Characteristics

2: 1 Form A

(4) Pin Configuration

4: 4 pin

(5) Package Types

D: DIP

A: SMD

S: SOP

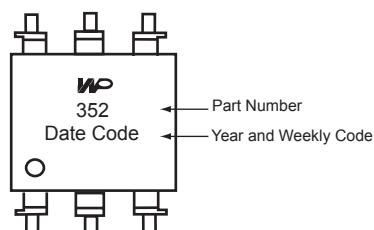
(6) Taping

TLD: Tape Direction Left

TRU: Tape Direction Right

Not all combinations are available

PART MARKING SYSTEM





Features

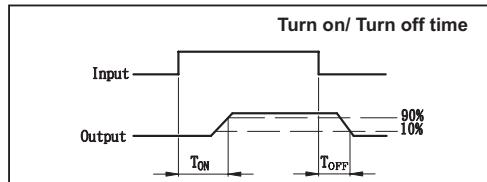
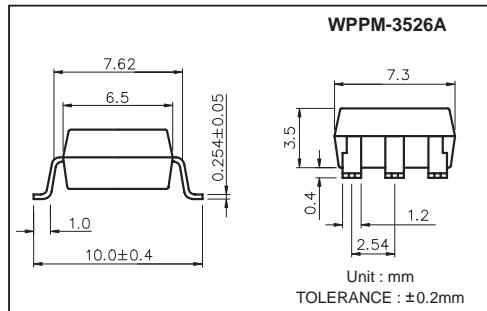
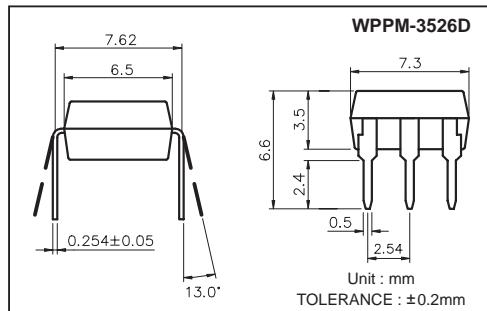
1. Normally open, single pole single throw.
2. Control 350VAC or DC voltage.
3. Switch 130mA loads.
4. LED control current, 5mA.
5. Low ON-resistance.
6. dv/dt, >500V/mS.
7. Isolation test voltage, 3750VRMS.

Part Numbering System & Part Marking System: Page 1.

Absolute Maximum Ratings

(Ta=25°C)

| Emitter (Input) | Detector (Output) |
|--|--|
| Reverse Voltage.....5.0V | Output Breakdown Voltage±350V |
| Continuous Forward Current50mA | Continuous Load Current±130mA |
| Peak Forward Current1A | Power Dissipation500mW |
| Power Dissipation100mW | |
| Derate Linearly from 25°C1.3mW/°C | |
| General Characteristics | |
| Isolation Test Voltage.....3750VRMS | Storage Temperature Range ...-40°C to +125°C |
| Isolation Resistance | Operating Temperature Range...-30°C to +85°C |
| VIO = 500V, TA = 25°C≥10 ¹⁰ Ω | Junction Temperature.....100°C |
| Total Power Dissipation550mW | Soldering Temperature, |
| Derate Linearly from 25°C2.5mW/°C | 2mm from case, 10 sec260°C |



Electro-optical Characteristics

(Ta=25°C)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|--------------------------|-------------------|---|---|------|------|------|
| Emitter (Input) | | | | | | |
| Forward Voltage | V _F | I _F =10mA | | 1.2 | 1.5 | V |
| Operation Input Current | I _{FOR} | V _L =±20V, I _L =100mA, t=10ms | | 5 | | mA |
| Recovery Input Current | I _{FOFF} | V _L =±20V, I _L ≤5μA | 0.2 | | | mA |
| Detector (Output) | | | | | | |
| Output Breakdown Voltage | V _B | I _B =50μA | 350 | | | V |
| Output Off-State Leakage | I _{TOFF} | V _T =100V, I _F =0mA | 0.2 | 1 | | μA |
| I/O Capacitance | C _{I/O} | I _F =0, f=1MHz | 6 | | | pF |
| ON Resistance | Connection | R _{ON} | I _L =100mA, I _F =10mA | 20 | 30 | Ω |
| | | | | 10 | 15 | |
| | | | | 5 | 7.5 | |
| Turn-On Time | T _{ON} | I _F =10mA, V _L =±20V | 0.3 | 1.0 | | ms |
| Turn-Off Time | T _{OFF} | t=10ms, I _L =±100mA | 0.7 | 1.5 | | ms |

MOS Relay Schematic and Wiring Diagrams

| Type | Schematic | Output configuration | Load | Connection | Wiring Diagrams | |
|---------------------|-----------|----------------------|-------|------------|-----------------|--|
| 3526D & 3526A | | 1a | AC/DC | A | | |
| | | | | | | |
| | | | | | | |
| | | DC | B | | | |
| | | | | | | |
| | | DC | C | | | |
| | | | | | | |

Data Curve

Fig.1 Load current vs. ambient temperature
Allowable ambient temperature:
-40°C to +85°C

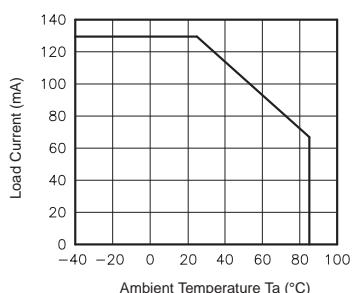


Fig.2 On resistance vs. ambient temperature
Across terminals 4 and 6 pin
LED current: 5mA
Continuous load current: 130mA(DC)

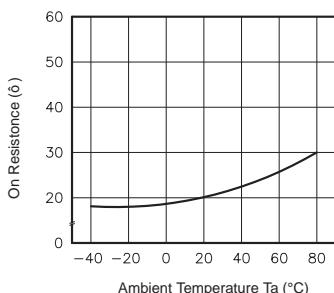


Fig.3 Turn on time vs. ambient temperature
Load voltage 350V(DC)
LED current: 5mA
Continuous load current: 130mA(DC)

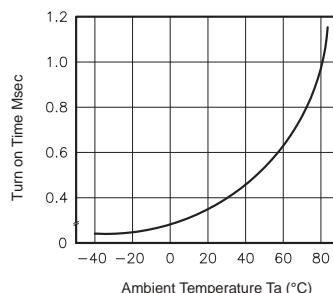


Fig.4 Turn off time vs. ambient temperature
LED current: 5mA; Load voltage:
350V(DC)
Continuous load current: 130mA(DC)

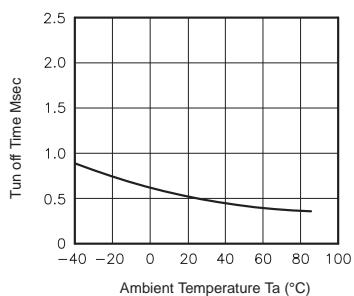


Fig.5 LED operate vs. ambient temperature
Load voltage 350V(DC)
Continuous load current: 130mA(DC)

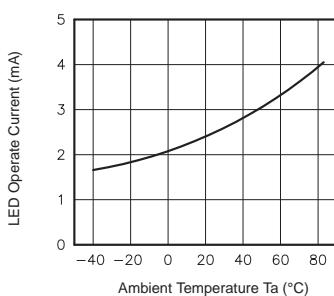


Fig.6 LED turn off current vs. ambient temperature
Load voltage 350V(DC)
Continuous load current: 130mA(DC)

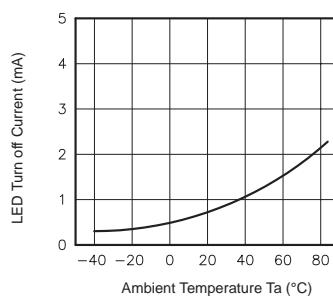


Fig.7 LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA

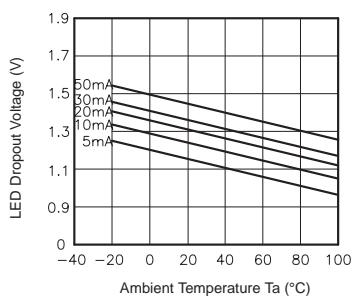


Fig.8 Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminals 4 and 6 pin
Ambient temperature: 25°C

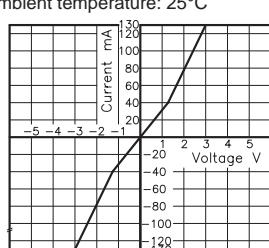


Fig.9 Off state leakage current
Across terminals 4 and 6 pin
Ambient temperature: 25°C

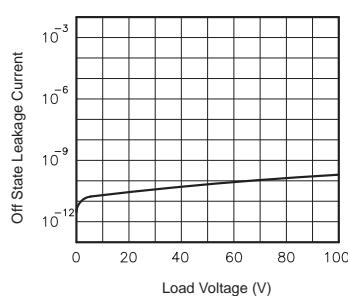


Fig.10 LED forward current vs. turn on time
Across terminals 4 and 6 pin;
Load voltage: 350V (DC);
Continuous load current: 130mA (DC);
Ambient temperature: 25°C

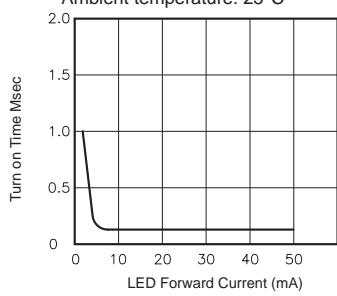


Fig.11 LED forward current vs. turn off time
Across terminals 4 and 6 pin;
Load voltage: 350V (DC);
Continuous load current: 130mA (DC);
Ambient temperature: 25°C

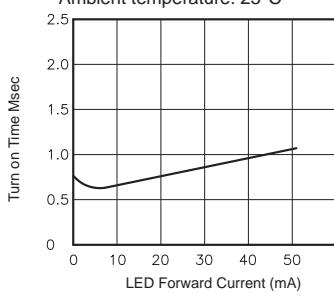


Fig.12 Applied voltage vs. output capacitance
Across terminals 4 and 6 pin
Frequency: 1MHz
Ambient temperature: 25°C

