

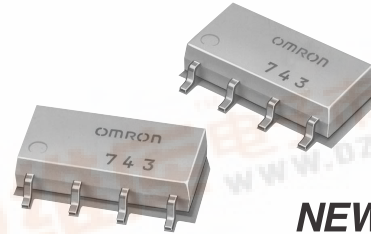
OMRON

MOS FET Relays

G3VM-352J

Slim, 2.1-mm High Relay Incorporating a MOS FET Optically Coupled with an Infrared LED in a Miniature, Flat SOP Package

- New models with 2 channels and an 8-pin SOP package included in 350-V load voltage series.
- Continuous load current of 110 mA.
- Dielectric strength of 1,500 Vrms between I/O.



NEW 

Note: The actual product is marked differently from the image shown here.

Application Examples

- Broadband systems
- Measurement devices
- Data loggers
- Amusement machines

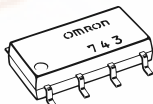
List of Models

| Contact form | Terminals | Load voltage (peak value) | Model | Number per stick | Number per tape |
|--------------|----------------------------|---------------------------|---------------|------------------|-----------------|
| DPST-NO | Surface-mounting terminals | 350 VAC | G3VM-352J | 50 | --- |
| | | | G3VM-352J(TR) | --- | 2,500 |

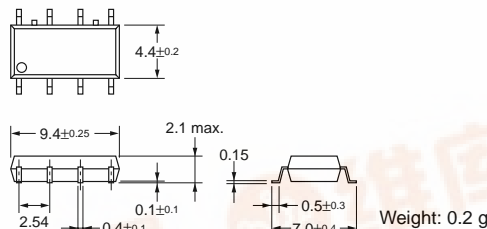
Dimensions

Note: All units are in millimeters unless otherwise indicated.

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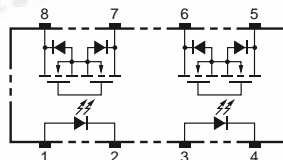


Note: The actual product is marked differently from the image shown here.



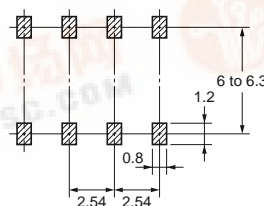
Terminal Arrangement/Internal Connections (Top View)

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Actual Mounting Pad Dimensions (Recommended Value, Top View)

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Absolute Maximum Ratings (Ta = 25°C)

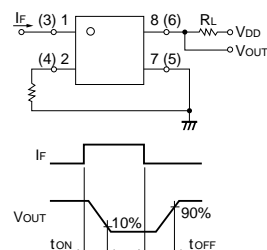
| Item | Symbol | Rating | Unit | Measurement Conditions |
|--|-------------------------------------|-----------------------|-------------|------------------------|
| Input | LED forward current | I _F | 50 | mA |
| | Repetitive peak LED forward current | I _{FP} | 1 | A |
| | LED forward current reduction rate | Δ I _F /°C | -0.5 | mA/°C |
| | LED reverse voltage | V _R | 5 | V |
| | Connection temperature | T _j | 125 | °C |
| Output | Output dielectric strength | V _{OFF} | 350 | V |
| | Continuous load current | I _O | 110 | mA |
| | ON current reduction rate | Δ I _{ON} /°C | -1.1 | mA/°C |
| Dielectric strength between input and output (See note 1.) | | V _{I-O} | 1,500 | Vrms |
| Operating temperature | | T _a | -40 to +85 | °C |
| Storage temperature | | T _{slg} | -55 to +125 | °C |
| Soldering temperature (10 s) | | --- | 260 | °C |

Note: 1. The dielectric strength between the input and output was checked by applying voltage between all pins as a group on the LED side and all pins as a group on the light-receiving side.

Electrical Characteristics (Ta = 25°C)

| Item | Symbol | Minimum | Typical | Maximum | Unit | Measurement conditions |
|--------------------------------|--|-------------------|---------|---------|------|------------------------|
| Input | LED forward voltage | V _F | 1.0 | 1.15 | 1.3 | V |
| | Reverse current | I _R | --- | --- | 10 | μA |
| | Capacity between terminals | C _T | --- | 30 | --- | pF |
| | Trigger LED forward current | I _{FT} | --- | 1 | 3 | mA |
| Output | Maximum resistance with output ON | R _{ON} | --- | 25 | 35 | Ω |
| | | | --- | 35 | 50 | Ω |
| | Current leakage when the relay is open | I _{LEAK} | --- | --- | 1.0 | μA |
| Capacity between I/O terminals | | C _{I-O} | --- | 0.8 | --- | pF |
| Insulation resistance | | R _{I-O} | 1,000 | --- | --- | MΩ |
| Turn-ON time | | t _{ON} | --- | 0.3 | 1 | ms |
| Turn-OFF time | | t _{OFF} | --- | 0.1 | 1 | ms |

Note: 2. Turn-ON and Turn-OFF Times



Recommended Operating Conditions

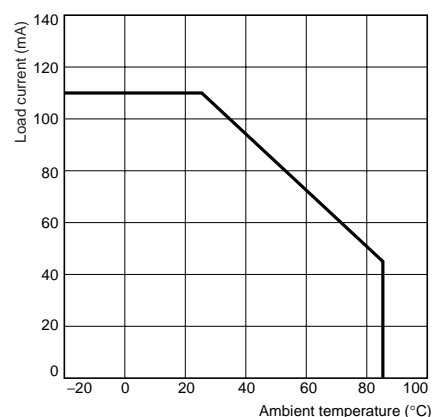
Use the G3VM under the following conditions so that the Relay will operate properly.

| Item | Symbol | Minimum | Typical | Maximum | Unit |
|-------------------------------|-----------------|---------|---------|---------|------|
| Output dielectric strength | V _{DD} | --- | --- | 280 | V |
| Operating LED forward current | I _F | 5 | 10 | 25 | mA |
| Continuous load current | I _O | --- | --- | 100 | mA |
| Operating temperature | T _a | -20 | --- | 65 | °C |

Engineering Data

Load Current vs. Ambient Temperature

G3VM-352J



Safety Precautions

Refer to page 6 for precautions common to all G3VM models.