

MOS FET Relays

G3VM-61VY

Special SOP4-pin package with Dielectric strength AC 3.75 kV

- Trigger LED forward current of 2 mA (maximum) facilitates power saving designs and prolonged battery life.
- Continuous load current of 70 mA.

RoHS compliant

⚠ Refer to "Common Precautions".

■ Application Examples

- Broadband systems
- Security systems
- Industrial equipment
- Battery powered equipment
- Measurement devices
- Amusement machines

■ List of Models

Package	Contact form	Terminals	Load voltage (peak value) (See the note.)	Model	Number per stick	Number per tape
Special SOP4	SPST-NO	Surface-mounting terminals	60 V	G3VM-61VY	150	---
				G3VM-61VY(TR)	---	3,000

Note: The AC peak and DC value are given for the load voltage.

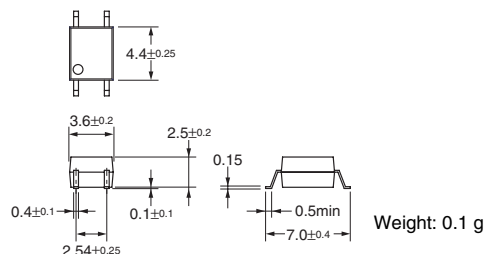
■ Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3VM-61VY

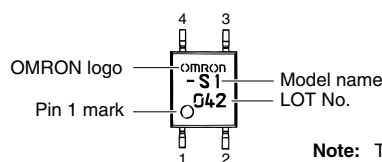
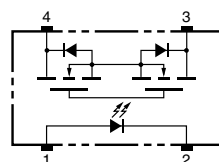


Note: The actual product is marked differently from the image shown here.



■ Terminal Arrangement/Internal Connections (Top View)

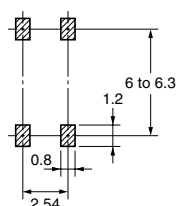
G3VM-61VY



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

■ Actual Mounting Pad Dimensions (Recommended Value, Top View)

G3VM-61VY



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

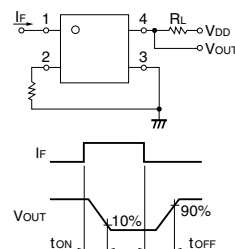
Item	Symbol	Rating	Unit	Measurement Conditions
Input	LED forward current	I_F	50	mA
	Repetitive peak LED forward current	I_{FP}	1	A
	LED forward current reduction rate	$\Delta I_F/^\circ\text{C}$	-0.5	mA/ $^\circ\text{C}$
	LED reverse voltage	V_R	5	V
Output	Connection temperature	T_j	125	$^\circ\text{C}$
	Load voltage (AC peak/DC)	V_{OFF}	60	V
	Continuous load current (AC peak/DC)	I_O	70	mA
	ON current reduction rate	$\Delta I_O/^\circ\text{C}$	-0.7	mA/ $^\circ\text{C}$
Dielectric strength between input and output (See note 1.)	Connection temperature	T_j	125	$^\circ\text{C}$
	Dielectric strength between input and output (See note 1.)	V_{I-O}	3,750	V_{rms}
	Operating temperature	T_a	-40 to +85	$^\circ\text{C}$
	Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$
Soldering temperature (10 s)	Operating temperature	T_a	-40 to +85	$^\circ\text{C}$
	Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$
Soldering temperature (10 s)	Soldering temperature (10 s)	---	260	$^\circ\text{C}$
	Soldering temperature (10 s)	---	260	$^\circ\text{C}$

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 ($T_a = 25^\circ\text{C}$)

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}	---	0.6	2	mA
Output	Maximum resistance with output ON	R_{ON}	---	25	50	Ω
	Current leakage when the relay is open	I_{LEAK}	---	1	1000	nA
Capacity between I/O terminals		C_{I-O}	---	0.4	---	pF
Insulation resistance		R_{I-O}	1,000	---	---	M Ω
Turn-ON time		t_{ON}	---	1	5	ms
Turn-OFF time		t_{OFF}	---	0.5	5	ms

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



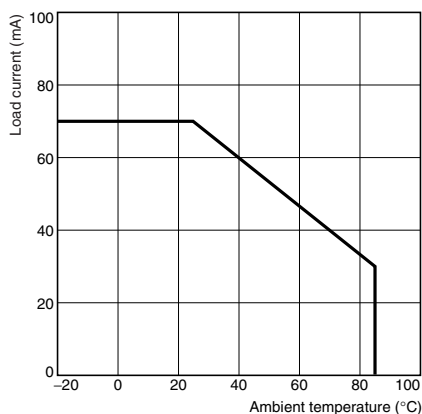
Recommended Operating Conditions

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

Item	Symbol	Minimum	Typical	Maximum	Unit
Load voltage (AC peak/DC)	V_{DD}	---	---	48	V
Operating LED forward current	I_F	---	3	25	mA
Continuous load current (AC peak/DC)	I_O	---	---	60	mA
Operating temperature	T_a	-20	---	65	$^\circ\text{C}$

Engineering Data

Load Current vs. Ambient Temperature G3VM-61VY



Safety Precautions

Refer to "Common Precautions" for all G3VM models.