OMRON

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
- Continuous load current of 70 mA.

RoHS compliant

Refer to "Common Precautions".

NEW

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

■ 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	60 V	G3VM-61VY	150	
		terminals		G3VM-61VY(TR)		3,000

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

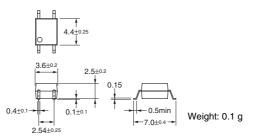
■ Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3VM-61VY

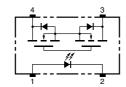


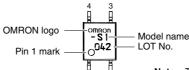
Note: The actual product is marked differently from the image shown here.



■ Terminal Arrangement/Internal Connections (Top View)

G3VM-61VY

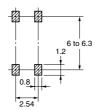




Note: The actual product is marked differently from the image shown here.

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

G3VM-61VY



■ Absolute Maximum Ratings (T_a = 25°C)

<u> </u>		Symbol	Rating Unit		Measurement Conditions	
Input LED forward current		IF	50	mA		
	Repetitive peak LED forward current		1	Α	100 μs pulses, 100 pps	
	LED forward current reduction rate	Δ I _F /°C	-0.5	mA/°C	T _a ≥ 25°C	
	LED reverse voltage	V _R	5	٧		
	Connection temperature	Tj	125	°C		
Output	Load voltage (AC peak/DC)	V _{OFF}	60	٧		
	Continuous load current (AC peak/DC)	I _O	70	mA		
	ON current reduction rate	Δ I _O /°C	-0.7	mA/°C	T _a ≥ 25°C	
	Connection temperature	Tj	125	°C		
Dielectri output (\$	c strength between input and See note 1.)	V _{I-O}	3,750	V _{rms}	AC for 1 min	
Operatir	Operating temperature		-40 to +85	°C	With no icing or condensation	
Storage	Storage temperature		-55 to +125	°C	With no icing or condensation	
Solderin	Soldering temperature (10 s)		260	°C	10 s	

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°C)

ltem		Symbol	Mini- mum	Typical	Maxi- mum	Unit	Measurement conditions	
Input	LED forward voltage	V_{F}	1.0	1.15	1.3	٧	I _F = 10 mA	
	Reverse current	I _R			10	μΑ	V _R = 5 V	
	Capacity between terminals	C _T		30		pF	V = 0, f = 1 MHz	
	Trigger LED forward current	I _{FT}		0.6	2	mA	I _O = 70 mA	
Output	Maximum resistance with output ON	R _{ON}		25	50	Ω	I _F = 3 mA, I _O = 70 mA	
	Current leakage when the relay is open	I _{LEAK}		1	1000	nA	V _{OFF} = 60 V	
Capacity between I/O terminals		C _{I-O}		0.4		pF	f = 1 MHz, Vs = 0 V	
Insulation resistance		R _{I-O}	1,000			ΜΩ	V_{I-O} = 500 VDC, $R_{oH} \le 60\%$	
Turn-ON time		t _{ON}		1	5	ms	I_F = 3 mA, R_L = 200 Ω , V_{DD} = 10 V (See note 2.)	
Turn-OFF time		t _{OFF}		0.5	5	ms		

Note:

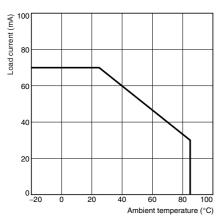
■ Recommended Operating Conditions

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)	Io			60	mA
Operating temperature	Ta	- 20		65	°C

■ Engineering Data

Load Current vs. Ambient Temperature G3VM-61VY



■ Safety Precautions

Refer to "Common Precautions" for all G3VM models.

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