



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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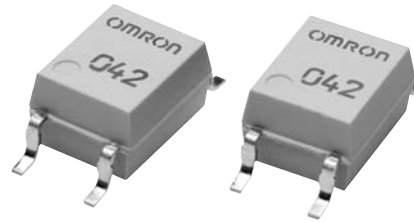
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



### 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**



**NEW**

⚠ Refer to "Common Precautions".

**Note:** The actual product is marked differently from the image 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 terminals	60 V	G3VM-61VY	150	---
				G3VM-61VY(TR)	---	3,000

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

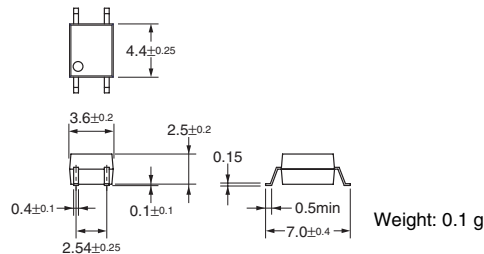
### Dimensions

**Note:** All units are in millimeters unless otherwise indicated.

G3VM-61VY

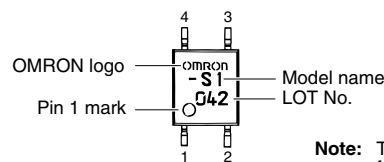
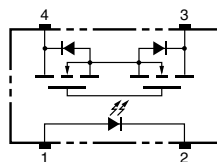


**Note:** The actual product is marked differently from the image shown here.



### Terminal Arrangement/Internal Connections (Top View)

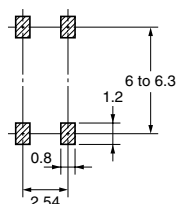
G3VM-61VY



**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<sub>a</sub> = 25°C)**

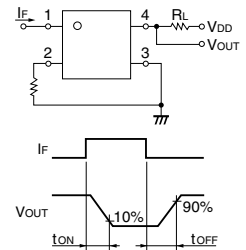
Item	Symbol	Rating	Unit	Measurement Conditions	
Input	LED forward current	I <sub>F</sub>	50	mA	
	Repetitive peak LED forward current	I <sub>FP</sub>	1	A	
	LED forward current reduction rate	Δ I <sub>F</sub> /°C	-0.5	mA/°C	T <sub>a</sub> ≥ 25°C
	LED reverse voltage	V <sub>R</sub>	5	V	
	Connection temperature	T <sub>j</sub>	125	°C	
Output	Load voltage (AC peak/DC)	V <sub>OFF</sub>	60	V	
	Continuous load current (AC peak/DC)	I <sub>O</sub>	70	mA	
	ON current reduction rate	Δ I <sub>O</sub> /°C	-0.7	mA/°C	T <sub>a</sub> ≥ 25°C
	Connection temperature	T <sub>j</sub>	125	°C	
Dielectric strength between input and output (See note 1.)		V <sub>I-O</sub>	3,750	V <sub>rms</sub>	AC for 1 min
Operating temperature		T <sub>a</sub>	-40 to +85	°C	With no icing or condensation
Storage temperature		T <sub>stg</sub>	-55 to +125	°C	With no icing or condensation
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<sub>a</sub> = 25°C)**

Item	Symbol	Minimum	Typical	Maximum	Unit	Measurement conditions	
Input	LED forward voltage	V <sub>F</sub>	1.0	1.15	1.3	V	I <sub>F</sub> = 10 mA
	Reverse current	I <sub>R</sub>	---	---	10	μA	V <sub>R</sub> = 5 V
	Capacity between terminals	C <sub>T</sub>	---	30	---	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I <sub>FT</sub>	---	0.6	2	mA	I <sub>O</sub> = 70 mA
Output	Maximum resistance with output ON	R <sub>ON</sub>	---	25	50	Ω	I <sub>F</sub> = 3 mA, I <sub>O</sub> = 70 mA
	Current leakage when the relay is open	I <sub>LEAK</sub>	---	1	1000	nA	V <sub>OFF</sub> = 60 V
Capacity between I/O terminals		C <sub>I-O</sub>	---	0.4	---	pF	f = 1 MHz, V <sub>s</sub> = 0 V
Insulation resistance		R <sub>I-O</sub>	1,000	---	---	MΩ	V <sub>I-O</sub> = 500 VDC, R <sub>oH</sub> ≤ 60%
Turn-ON time		t <sub>ON</sub>	---	1	5	ms	I <sub>F</sub> = 3 mA, R <sub>L</sub> = 200 Ω, V <sub>DD</sub> = 10 V (See note 2.)
Turn-OFF time		t <sub>OFF</sub>	---	0.5	5	ms	

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



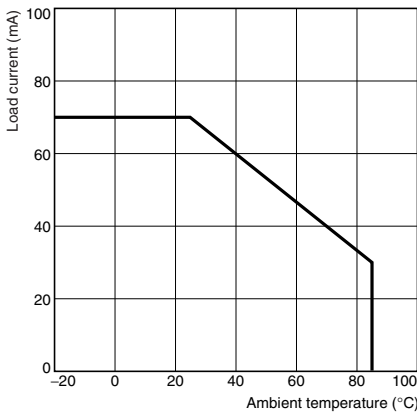
**Recommended Operating Conditions**

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 <sub>DD</sub>	---	---	48	V
Operating LED forward current	I <sub>F</sub>	---	3	25	mA
Continuous load current (AC peak/DC)	I <sub>O</sub>	---	---	60	mA
Operating temperature	T <sub>a</sub>	-20	---	65	°C

**Engineering Data**

**Load Current vs. Ambient Temperature**  
G3VM-61VY



**Safety Precautions**

Refer to "Common Precautions" for all G3VM models.