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!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

OMRON

MOS FET Relays

G3VM-601AY/DY

Compact, General-purpose, Analog-switching MOS FET Relays, with Dielectric Strength of 5 kVAC between I/O Using Optical Isolation.

- Trigger LED forward current of 2 mA (maximum) facilities power saving designs.
- Switches minute analog signals.
- Continuous load current of 90 mA.

RoHS compliant

⚠ Refer to *"Common Precautions"*.

NEW

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

■ Application Examples

- Power meter
- Measurement devices
- Security systems
- Industrial equipment

■ List of Models

Contact form	Terminals	Load voltage (peak value) (See the note.)	Model	Number per stick	Number per tape
SPST-NO	PCB terminals	600 V	G3VM-601AY	100	---
	Surface-mounting terminals		G3VM-601DY		
			G3VM-601DY(TR)	---	1,500

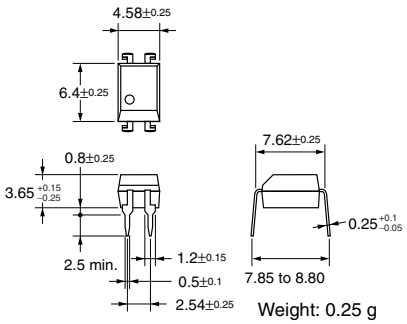
Note: The AC peak and DC value are given for the load voltage.

■ Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3VM-601AY

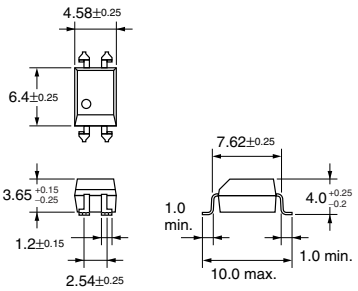
Note: The actual product is marked differently from the image shown here.



Weight: 0.25 g

G3VM-601DY

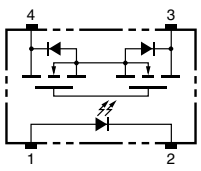
Note: The actual product is marked differently from the image shown here.



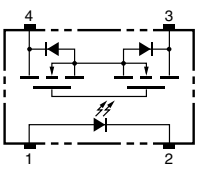
Weight: 0.25 g

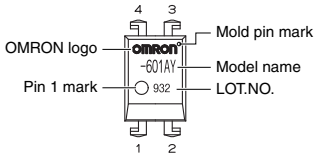
■ Terminal Arrangement/Internal Connections (Top View)

G3VM-601AY



G3VM-601DY

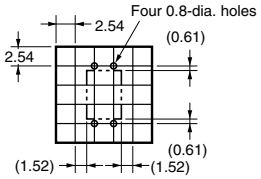




Note: The actual product is marked differently from the image shown here.

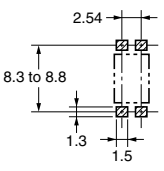
■ PCB Dimensions (Bottom View)

G3VM-601AY



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

G3VM-601DY



■ Absolute Maximum Ratings (Ta = 25°C)

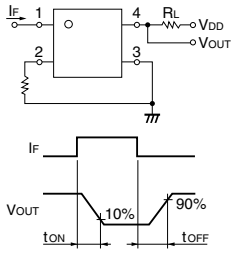
Item		Symbol	Rating	Unit	Measurement Conditions
Input	LED forward current	I_F	30	mA	
	Repetitive peak LED forward current	I_{FP}	1	A	100 μs pulses, 100 pps
	LED forward current reduction rate	Δ I_F/°C	−0.3	mA/°C	Ta ≥ 25°C
	LED reverse voltage	V_R	5	V	
	Connection temperature	T_j	125	°C	
Output	Load voltage (AC peak/DC)	V_{OFF}	600	V	
	Continuous load current (AC peak/DC)	I_O	90	mA	
	ON current reduction rate	Δ I_O/°C	−0.9	mA/°C	Ta ≥ 25°C
	Pulse ON current	I_{op}	0.27	A	t = 100 ms, Duty = 1/10
	Connection temperature	T_j	125	°C	
Dielectric strength between input and output (See note 1.)		V_{I-O}	5,000	Vrms	AC for 1 min
Operating temperature		T_a	−40 to +85	°C	With no icing or condensation
Storage temperature		T_{stg}	−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 (Ta = 25°C)

Item		Symbol	Minimum	Typical	Maximum	Unit	Measurement conditions
Input	LED forward voltage	V_F	1.45	1.63	1.75	V	I_F = 10 mA
	Reverse current	I_R	---	---	10	μA	V_R = 5 V
	Capacity between terminals	C_T	---	40	---	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I_{FT}	---	0.3	2	mA	I_O = 90 mA
Output	Maximum resistance with output ON	R_{ON}	---	30	40	Ω	I_F = 5 mA, I_O = 90 mA, t < 1 s
				45	60		I_F = 5 mA, I_O = 90 mA
	Current leakage when the relay is open	I_{LEAK}	---	---	1.0	μA	V_{OFF} = 600 V
	Capacity between terminals	C_{OFF}	---	75	---	pF	V = 0, f = 1 MHz
Capacity between I/O terminals		C_{I-O}	---	0.8	---	pF	f = 1 MHz, Vs = 0 V
Insulation resistance		R_{I-O}	1,000	---	---	MΩ	V_{I-O} = 500 VDC, RoH ≤ 60%
Turn-ON time		tON	---	0.2	1	ms	I_F = 5 mA, R_L = 200 Ω, V_{DD} = 10 V (See note 2.)
Turn-OFF time		tOFF	---	0.2	1	ms	

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



■ Recommended Operating Conditions

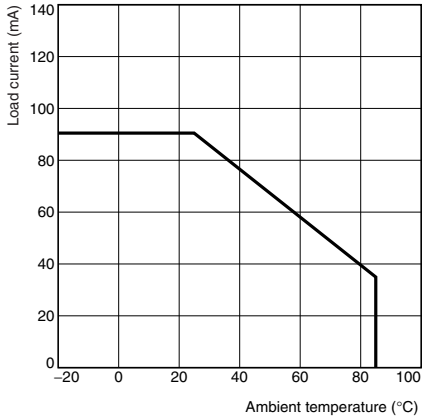
Use the G3VM under the following conditions so that the Relay will operate properly.

Item	Symbol	Minimum	Typical	Maximum	Unit
Load voltage (AC peak/DC)	V_{DD}	---	---	480	V
Operating LED forward current	I_F	3	5	20	mA
Continuous load current (AC peak/DC)	I_O	---	---	90	mA
Operating temperature	T_a	− 20	---	65	°C

■ Engineering Data

Load Current vs. Ambient Temperature

G3VM-601AY(DY)



■ Safety Precautions

Refer to *"Common Precautions"* for all G3VM models.