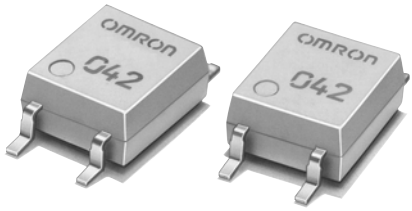
Low 100-mΩ ON Resistance. High-power, 1-A Switching with SOP Package.

- Continuous load current of 1 A.
- ON resistance of 0.1 Ω (typical) suppresses output signal attenuation.
- Dielectric strength of 1,500 Vrms between I/O.
- RoHS compliant



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

■ Application Examples

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

■ List of Models

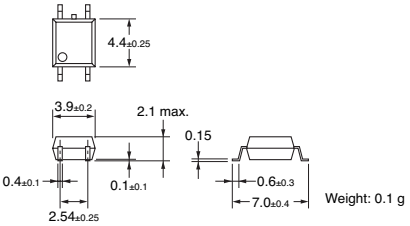
Contact form	Terminals	Load voltage (peak value)	Model	Minimum packaging unit	
				Number per stick	Number per tape
SPST-NO	Surface-mounting terminals	40 VAC	G3VM-41GR8	100	
			G3VM-41GR8(TR)	–	2,500

■ Dimensions

Note. All units are in millimeters unless otherwise indicated.

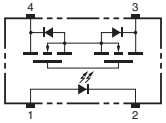
G3VM-41GR8

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



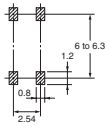
■ Terminal Arrangement/Internal Connections (Top View)

G3VM-41GR8



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

G3VM-41GR8



■ Absolute Maximum Ratings (Ta = 25°C)

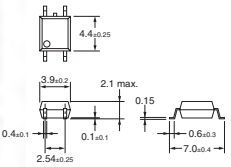
Item		Symbol	Rating	Unit	Measurement Conditions
Input	LED forward current	I_F	30	mA	
	LED forward current reduction rate	ΔI_F/°C	−0.3	mA/°C	Ta ≥ 25°C
	LED reverse voltage	V_R	5	V	
	Connection temperature	T_J	125	°C	
Output	Output dielectric strength	V_{OFF}	40	V	
	Continuous load current	I_O	1,000	mA	
	ON current reduction rate	ΔI_O/°C	−13.3	mA/°C	Ta ≥ 50°C
	Connection temperature	T_J	125	°C	
Dielectric strength between input and output (See note 1.)		V_{I-O}	1,500	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	1.18	1.33	1.48	V	I_F = 10 mA
	Reverse current	I_R	---	---	10	μA	V_R = 5 V
	Capacity between terminals	C_T	---	70	---	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I_{FT}	---	1.0	3	mA	I_O = 100 mA
Output	Maximum resistance with output ON	R_{ON}	---	0.1	0.13	Ω	I_F = 5 mA, I_O = 1 A
	Current leakage when the relay is open	I_{LEAK}	---	---	1	μA	V_{OFF} = 30 V
Capacity between I/O terminals		C_{I-O}	---	0.8	---	pF	f = 1 MHz, Vs = 0 V
Insulation resistance between I/O terminals		R_{I-O}	1,000	---	---	MΩ	V_{I-O} = 500 VDC, RoH ≤ 60%
Turn-ON time		tON	---	1.2	3.0	ms	I_F = 5 mA, R_L = 200 Ω, V_{DD} = 20 V (See note 2.)
Turn-OFF time		tOFF	---	0.2	0.5	ms	

Note 2. Turn-ON and Turn-OFF Times



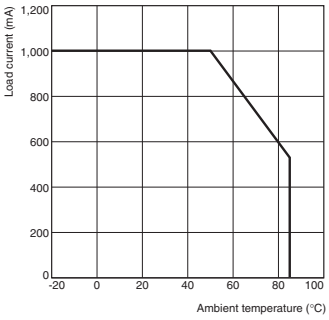
■ Recommended Operating Conditions

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

Item	Symbol	Minimum	Typical	Maximum	Unit
Output dielectric strength	V_{DD}	---	---	32	V
Operating LED forward current	I_F	5	10	20	mA
Continuous load current	I_O	---	---	1,000	mA
Operating temperature	T_a	25	---	60	°C

■ Engineering Data

Load Current vs. Ambient Temperature
G3VM-41GR8



■ Safety Precautions

Refer to “Common Precautions” for all G3VM models.