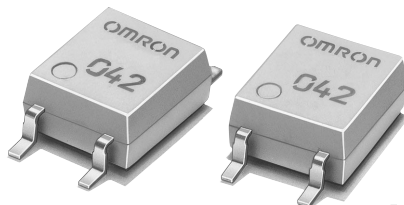


MOS FET Relays

G3VM-41GR6

New MOS FET Relay with Low Output Capacitance and ON Resistance ($C \times R = 10 \text{ pF} \cdot \Omega$) in a 40-V Load Voltage Model

- Output capacitance of 1 pF (typical) allows high-frequency applications.
- Leakage current of 1.0 nA max. when output relay is open.



NEW 

■ Application Examples

- Semiconductor inspection tools
- Measurement devices
- Broadband systems
- Data loggers

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

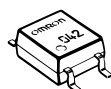
■ List of Models

Contact form	Terminals	Load voltage (peak value)	Model	Number per stick	Number per tape
SPST-NO	Surface-mounting terminals	40 VAC	G3VM-41GR6	100	---
			G3VM-41GR6(TR)	---	2,500

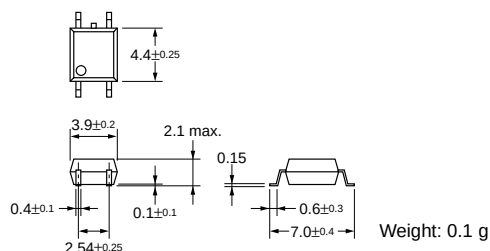
■ Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3VM-41GR6

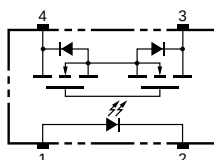


Note: The actual product is marked differently from the image shown here.



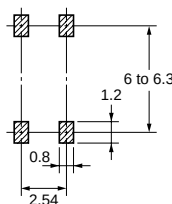
■ Terminal Arrangement/Internal Connections (Top View)

G3VM-41GR6



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

G3VM-41GR6



Absolute Maximum Ratings (Ta = 25°C)

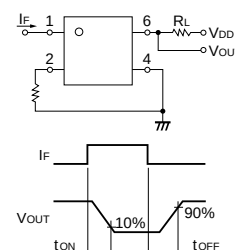
Item		Symbol	Rating	Unit	Measurement Conditions
Input	LED forward current	I _F	50	mA	
	Repetitive peak LED forward current	I _{FP}	1	A	100 μs pulses, 100 pps
	LED forward current reduction rate	Δ I _F /°C	-0.5	mA/°C	T _a ≥ 25°C
	LED reverse voltage	V _R	5	V	
	Connection temperature	T _J	125	°C	
Output	Output dielectric strength	V _{OFF}	40	V	
	Continuous load current	I _O	120	mA	
	ON current reduction rate	Δ I _{ON} /°C	-1.2	mA/°C	T _a ≥ 25°C
	Connection temperature	T _J	125	°C	
Dielectric strength between input and output (See note 1.)		V _{I-O}	1,500	V _{rms}	AC for 1 min
Operating temperature		T _a	-20 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	1.0	1.15	1.3	V
	Reverse current	I _R	---	10	μA	V _R = 5 V
	Capacity between terminals	C _T	---	15	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I _{FT}	---	4	mA	I _O = 100 mA
Output	Maximum resistance with output ON	R _{ON}	---	10	15	Ω
	Current leakage when the relay is open	I _{LEAK}	---	1.0	nA	V _{OFF} = 30 V, Ta = 50°C
	Capacity between terminals	C _{OFF}	---	1.0	2.0	pF
Capacity between I/O terminals		C _{I-O}	---	0.8	pF	f = 1 MHz, V _s = 0 V
Insulation resistance		R _{I-O}	1,000	---	MΩ	V _{I-O} = 500 VDC, RoH ≤ 60%
Turn-ON time		t _{ON}	---	0.5	ms	I _F = 10 mA, R _L = 200 Ω, V _{DD} = 20 V (See note 2.)
Turn-OFF time		t _{OFF}	---	0.5	ms	

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



Recommended Operating Conditions

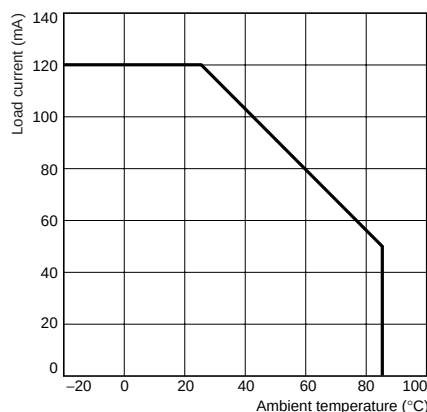
Use the G3VM under the following conditions so that the Relay will operate properly.

Item	Symbol	Minimum	Typical	Maximum	Unit
Output dielectric strength	V _{DD}	---	---	32	V
Operating LED forward current	I _F	10	---	30	mA
Continuous load current	I _O	---	---	120	mA
Operating temperature	T _a	25	---	60	°C

Engineering Data

Load Current vs. Ambient Temperature

G3VM-41GR6



Safety Precautions

Refer to page 6 for precautions common to all G3VM models.