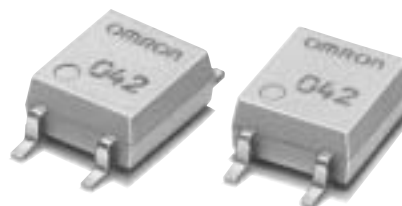


MOS FET Relays

G3VM-351G

Slim, 2.1-mm High Relay Incorporating a MOS FET Optically Coupled with an Infrared LED in a Miniature, Flat SOP Package

- Upgraded G3VM-S2 Series.
- Continuous load current of 110 mA.
- Dielectric strength of 1,500 Vrms between I/O.



NEW

■ Application Examples

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

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

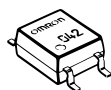
■ List of Models

Contact form	Terminals	Load voltage (peak value)	Model	Number per stick	Number per tape
SPST-NO	Surface-mounting terminals	350 VAC	G3VM-351G	100	---
			G3VM-351G(TR)	---	2,500

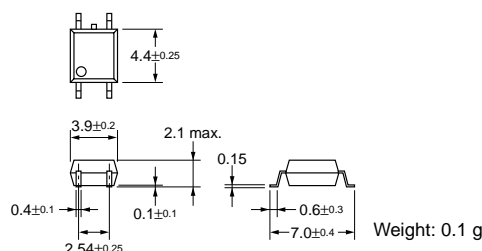
■ Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3VM-351G

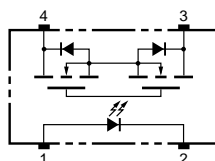


Note: The actual product is marked differently from the image shown here.



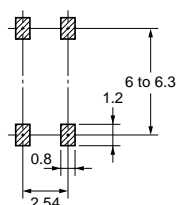
■ Terminal Arrangement/Internal Connections (Top View)

G3VM-351G



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

G3VM-351G



■ Absolute Maximum Ratings (Ta = 25°C)

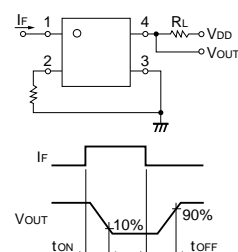
Item		Symbol	Rating	Unit	Measurement Conditions
Input	LED forward current	I _F	50	mA	
	Repetitive peak LED forward current	I _{FP}	1	A	100 μs pulses, 100 pps
	LED forward current reduction rate	Δ I _F /°C	-0.5	mA/°C	T _a ≥ 25°C
	LED reverse voltage	V _R	5	V	
	Connection temperature	T _j	125	°C	
Output	Output dielectric strength	V _{OFF}	350	V	
	Continuous load current	I _O	110	mA	
	ON current reduction rate	Δ I _{ON} /°C	-1.1	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	-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	1.0	1.15	1.3	V
	Reverse current	I_R	---	10	μA	$V_R = 5\text{ V}$
	Capacity between terminals	C_T	---	30	pF	$V = 0, f = 1\text{ MHz}$
	Trigger LED forward current	I_{FT}	---	1	3	mA
Output	Maximum resistance with output ON	R_{ON}	---	25	35	Ω
			---	35	50	Ω
	Current leakage when the relay is open	I_{LEAK}	---	1.0	μA	$V_{OFF} = 350\text{ V}$
Capacity between I/O terminals		C_{I-O}	---	0.8	pF	$f = 1\text{ MHz}, V_s = 0\text{ V}$
Insulation resistance		R_{I-O}	1,000	---	MΩ	$V_{I-O} = 500\text{ VDC}, R_{oH} \leq 60\%$
Turn-ON time		t_{ON}	---	0.3	1.0	ms
Turn-OFF time		t_{OFF}	---	0.1	1.0	ms

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



■ Recommended Operating Conditions

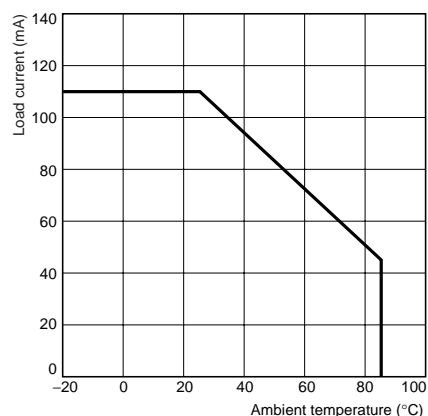
Use the G3VM under the following conditions so that the Relay will operate properly.

Item	Symbol	Minimum	Typical	Maximum	Unit
Output dielectric strength	V_{DD}	---	---	280	V
Operating LED forward current	I_F	5	7.5	25	mA
Continuous load current	I_O	---	---	100	mA
Operating temperature	T_a	-20	---	65	°C

■ Engineering Data

Load Current vs. Ambient Temperature

G3VM-351G



■ Safety Precautions

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