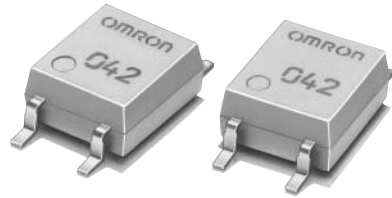## MOSFET Relay with 350-V Load Voltage and SOP Current Limit

- G3VM-351G Current Limit Relays.
- Limit current of 150 to 300 mA.

NEW

■ Application Examples

- Electronic automatic exchange systems
- Multi-functional telephones
- Cordless telephones
- Measurement devices

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

■ List of Models

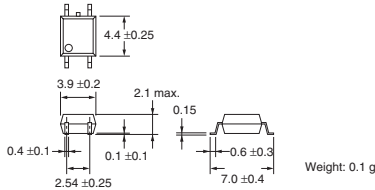| Contact form	Terminals	Load Voltage (peak value)	Model	Current limit	Minimum packaging unit	
					Number per stick	Taping quantity
SPST-NO	Surface-mounting terminals	350 VAC	G3VM-351GL	Yes	100	–
			G3VM-3551GL(TR)		–	2,500

■ Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3VM-351GL

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

4.4 ±0.25
3.9 ±0.2
2.1 max.
0.15
0.4 ±0.1
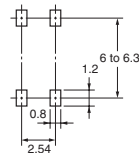0.1 ±0.1
0.6 ±0.3
2.54 ±0.25
7.0 ±0.4
Weight: 0.1 g

■ Terminal Arrangement/Internal Connections (Top View)

G3VM-351GL

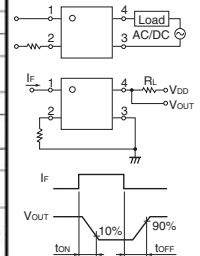## ■ Actual Mounting Pad Dimensions (Recommended Value, Top View)

G3VM-351GL

6 to 6.3
1.2
0.8
2.54

■ 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	$\Delta I_F/°C$	−0.5	mA/°C	Ta ≥ 25°C
	LED reverse voltage	V_R	6	V	
	Connection temperature	T_J	125	°C	
Output	Output dielectric strength	V_{OFF}	350	V	
	Continuous load current	I_O	120	mA	
	ON current reduction rate	$\Delta I_{ON}/°C$	−1.2	mA/°C	Ta ≥ 25°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	1.0	1.15	1.3	V	$I_F = 10$ mA
	Reverse current	I_R	---	---	10	μA	$V_R = 6$ V
	Capacity between terminals	C_T	---	30	---	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I_{FT}	---	1	3	mA	$I_O = 120$ mA
Output	Maximum resistance with output ON	R_{ON}	---	15	35	Ω	$I_F = 5$ mA, $I_O = 120$ mA
	Current leakage when the relay is open	I_{LEAK}	---	---	1.0	μA	$V_{OFF} = 350$ V
Limit current		I_{LIM}	150	---	300	mA	$I_F = 5$ mA, $V_{DD} = 5$ V, t = 5 ms
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	$V_{I-O} = 500$ V DC, $R_{OH} ≤ 60\%$
Turn-ON time		tON	---	0.3	1.0	ms	$I_F = 5$ mA, $R_L = 200$ Ω, $V_{DD} = 20$ V (See note 2.)
Turn-OFF time		tOFF	---	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-351GL

MOSFET Relays