

MOS FET Relays

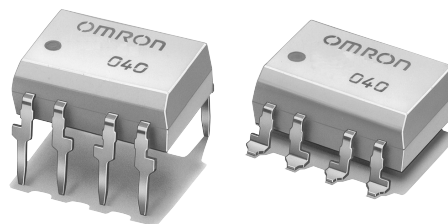
G3VM-355C/F

New MOS FET Relay with Both SPST-NO and SPST-NC Contacts Incorporated in a Single DIP Package

- SPST-NO/SPST-NC models now included in the 350-V load voltage series.
- Continuous load current of 120 mA.
- Dielectric strength of 2,500 Vrms between I/O.
- RoHS Compliant.

Application Examples

- Measurement devices
- Security systems
- Amusement machines



NEW  Approval pending

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

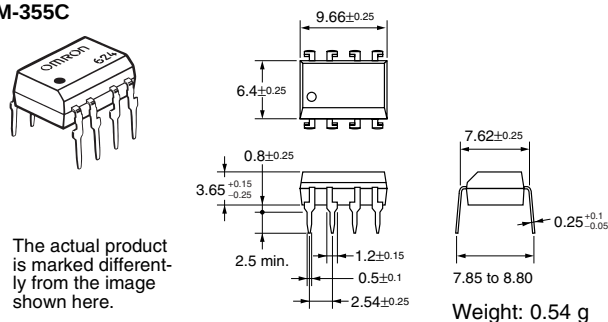
List of Models

Contact form	Terminals	Load voltage (peak value)	Model	Number per stick	Number per tape
SPST-NO/ SPST-NC	PCB terminals	350 VAC	G3VM-355C	50	---
	Surface-mounting terminals		G3VM-355F		
			G3VM-355F(TR)	---	1,500

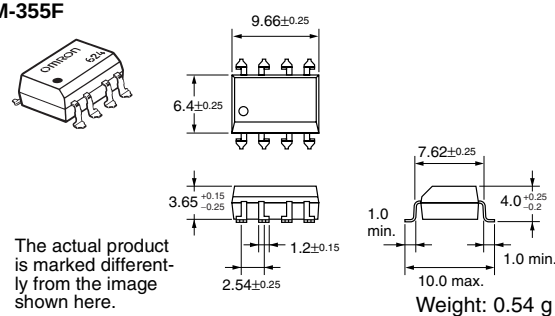
Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3VM-355C

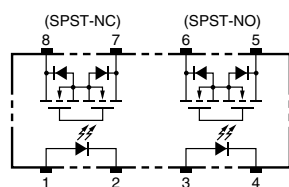


G3VM-355F

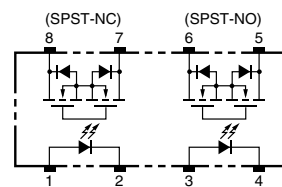


Terminal Arrangement/Internal Connections (Top View)

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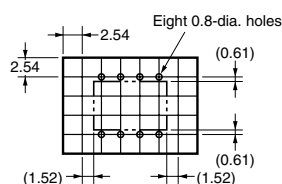


G3VM-355F



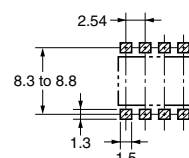
PCB Dimensions (Bottom View)

G3VM-355C



Actual Mounting Pad Dimensions (Recommended Value, Top View)

G3VM-355F



Absolute Maximum Ratings (Ta = 25°C)

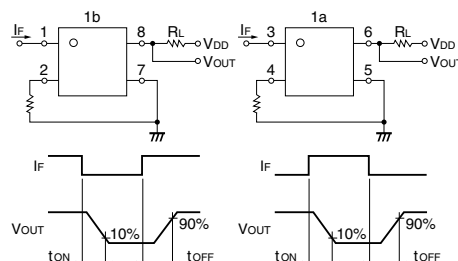
Item	Symbol	Rating	Unit	Measurement conditions
Input	LED forward current	I_F	50	mA
	Repetitive peak LED forward current	I_{FP}	1	A
	LED forward current reduction rate	$\Delta I_F/^\circ\text{C}$	-0.5	mA/°C
	LED reverse voltage	V_R	5	V
	Connection temperature	T_J	125	°C
Output	Output dielectric strength	V_{OFF}	350	V
	Continuous load current	I_O	100	mA
	ON current reduction rate	$\Delta I_{ON}/^\circ\text{C}$	-1.0	mA/°C
	Connection temperature	T_J	125	°C
Dielectric strength between input and output (See note 1.)		V_{LO}	2,500	Vrms
Operating temperature		T_a	-40 to +85	°C
Storage temperature		T_{stg}	-55 to +125	°C
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
	Capacity between terminals	C_T	---	30	---	pF
	Trigger LED forward current	I_{FT}	---	1	3	mA
Output	Maximum resistance with output ON	R_{ON}	---	30	35	Ω
				40	50	
	Current leakage when the relay is open	I_{LEAK}	---	---	1.0	μA
Capacity between I/O terminals		C_{LO}	---	0.8	---	pF
Insulation resistance		R_{LO}	1,000	---	---	M Ω
Turn-ON time	SPST-NO	t_{ON}	---	0.25	1.0	ms
	SPST-NC		---	0.3	1.0	ms
Turn-OFF time	SPST-NO	t_{OFF}	---	0.5	1.0	ms
	SPST-NC		---	0.15	1.0	ms

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



Recommended Operating Conditions

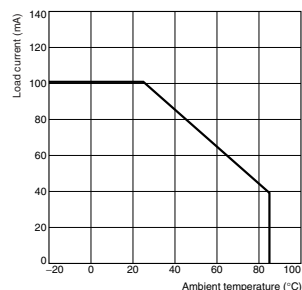
Use the G3VM under the following conditions so that the Relay will operate properly.

Item	Symbol	Minimum	Typical	Maximum	Unit
Output dielectric strength	V_{DD}	---	---	280	V
Operating LED forward current	I_F	5	10	25	mA
Continuous load current	I_O	---	---	100	mA
Operating temperature	T_a	-20	---	65	°C

Engineering Data

Load Current vs. Ambient Temperature

G3VM-355C(F)



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