



**THE DATASHEET OF
G3VM-21GR1**



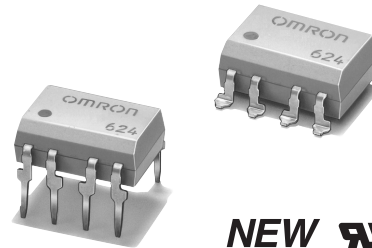
MOS FET Relays G3VM-22CO/FO

New MOS FET Relay Featuring Unique Contact Construction (1 Input Channel Drives 2 Output Channels)

- Ideal for application in line interface and data logging blocks.
- Switches minute analog signals.
- Switching AC and DC.
- RoHS Compliant.

Application Examples

- ADSL modems and routers
- Edge routers
- Data storage devices



NEW Approval pending

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

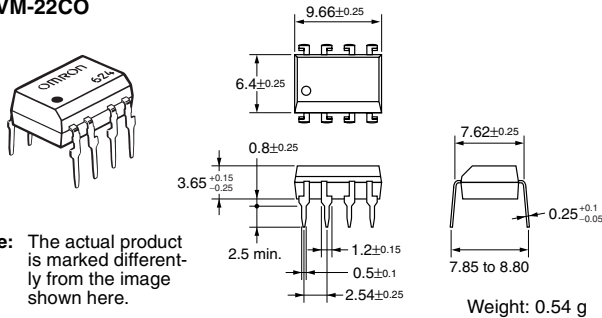
List of Models

Contact form	Terminals	Load voltage (peak value)	Model	Number per stick	Number per tape
DPST-NO	PCB terminals	20 VAC	G3VM-22CO	50	---
	Surface-mounting terminals		G3VM-22FO		
			G3VM-22FO(TR)	---	

Dimensions

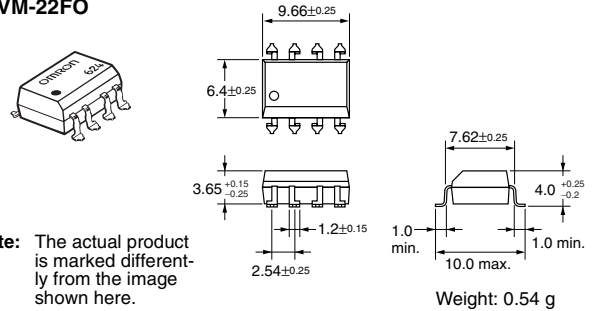
Note: All units are in millimeters unless otherwise indicated.

G3VM-22CO



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

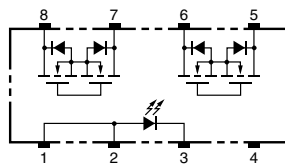
G3VM-22FO



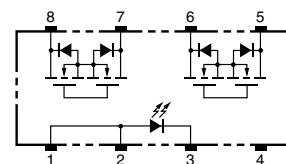
Note: The actual product is marked differently from the image shown here.

Terminal Arrangement/Internal Connections (Top View)

G3VM-22CO

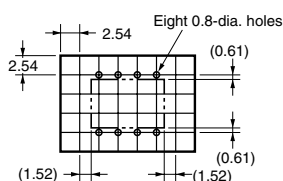


G3VM-22FO



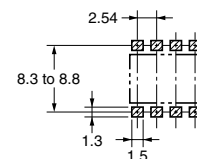
PCB Dimensions (Bottom View)

G3VM-22CO



Actual Mounting Pad Dimensions (Recommended Value, Top View)

G3VM-22FO



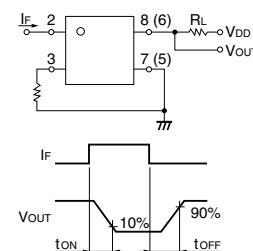
■ Absolute Maximum Ratings (Ta = 25°C)

Item		Symbol	Rating	Unit	Measurement conditions
Input	LED forward current	I_F	50	mA	
	Repetitive peak LED forward current	I_{FP}	1	A	100 μ s pulses, 100 pps
	LED forward current reduction rate	$\Delta I_F/^\circ\text{C}$	-0.5	mA/°C	Ta \geq 25°C
	LED reverse voltage	V_R	6	V	
	Connection temperature	T_j	125	°C	
Output	Output dielectric strength	V_{OFF}	20	V	
	Continuous load current	I_O	150	mA	
	ON current reduction rate	$\Delta I_{ON}/^\circ\text{C}$	-1.5	mA/°C	Ta \geq 25°C
	Connection temperature	T_j	125	°C	
Dielectric strength between input and output		V_{I-O}	2,500	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

■ 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	μ A	$V_R = 5$ V
	Capacity between terminals	C_T	---	15	---	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I_{FT}	---	1.5	5	mA	$I_O = 150$ mA
Output	Maximum resistance with output ON	R_{ON}	---	2	4	Ω	$I_F = 5$ mA, $I_O = 150$ mA
	Current leakage when the relay is open	I_{LEAK}	---	10×10^{-6}	1.0	μ A	$V_{OFF} = 20$ V
Capacity between I/O terminals		C_{I-O}	---	0.8	---	pF	f = 1 MHz, Vs = 0 V
Insulation resistance		R_{I-O}	1,000	---	---	M Ω	$V_{I-O} = 500$ VDC, RoH \leq 60%
Turn-ON time		tON	---	---	1.0	ms	$I_F = 5$ mA, $R_L = 200 \Omega$, $V_{DD} = 20$ V (See note.)
Turn-OFF time		tOFF	---	---	1.0	ms	

Note: Turn-ON and Turn-OFF Times



■ Recommended Operating Conditions

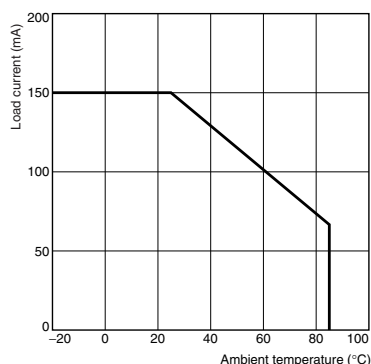
Use the G3VM under the following conditions so that the Relay will operate properly.

Item	Symbol	Minimum	Typical	Maximum	Unit
Output dielectric strength	V_{DD}	---	---	20	V
Operating LED forward current	I_F	5	---	30	mA
Continuous load current	I_O	---	---	150	mA
Operating temperature	T_a	-25	---	65	°C

■ Engineering Data

Load Current vs. Ambient Temperature

G3VM-22CO(FO)



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