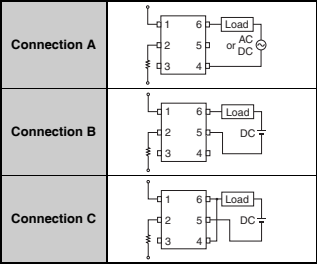


■Absolute Maximum Ratings (Ta = 25°C)

Item		Symbol	G3VM-61A1 G3VM-61D1	G3VM-61B1 G3VM-61E1	G3VM-351A G3VM-351D	G3VM-351B G3VM-351E	G3VM-353A G3VM-353D	G3VM-353B G3VM-353E	G3VM-401A G3VM-401D	G3VM-401B G3VM-401E	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	ΔI _F /°C	-0.5								mA/°C	Ta ≥ 25°C
	LED reverse voltage	V _R	5								V	
	Connection temperature	T _J	125								°C	
Output	Load voltage (AC peak/DC)	V _{OFF}	60		350			400			V	
	Continuous load current (AC peak/DC)	Connection A	500		120		150		120		mA	Connection A: AC peak/DC Connection B and C: DC
		Connection B	—	500	—	120	—	150	—	120		
		Connection C	—	1000	—	240	—	300	—	240		
	ON current reduction rate	Connection A	-5		-1.2		-1.5		-1.2		mA/°C	Ta ≥ 25°C
		Connection B	—	-5	—	-1.2	—	-1.5	—	-1.2		
		Connection C	—	-10	—	-2.4	—	-3	—	-2.4		
	Pulse ON current	I _{OP}	1.5		0.36		0.45		0.36		A	t=100 ms, Duty=1/10
	Connection temperature	T _J	125								°C	
Dielectric strength between I/O (See note 1.)		V _{I-O}	2,500								V _{rms}	AC for 1 min
Ambient operating temperature		T _a	-40 to +85								°C	With no icing or condensation
Ambient storage temperature		T _{stg}	-55 to +125								°C	
Soldering temperature		—	260								°C	10 s

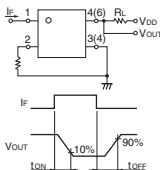
Note: 1. The dielectric strength between the input and output was checked by applying voltage between all pins as a group on the LED side and all pins as a group on the light-receiving side.

Connection Diagram (DIP 6-pin Relays)



3VM-A/D/D/

Note: 3. These values are for Relays with NC contacts



G3VM-A/D/B/E

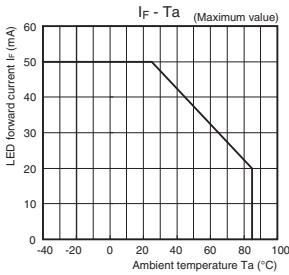
Item		Symbol	G3VM-61A1 G3VM-61D1	G3VM-61B1 G3VM-61E1	G3VM-351A G3VM-351D	G3VM-351B G3VM-351E	G3VM-353A G3VM-353D	G3VM-353B G3VM-353E	G3VM-401A G3VM-401D	G3VM-401B G3VM-401E	Unit
Load voltage (AC peak/DC)	V _{DD}	Maximum	48		280				320		V
Operating LED forward current	I _F	Minimum	5								mA
		Typical	7.5			10	—		7.5		
		Maximum	25								
Continuous load current (AC peak/DC)	I _O	Maximum	500		100		150		100	120	
Ambient operating temperature	T _a	Minimum	-20								°C
		Maximum	65								

■Spacing and Insulation

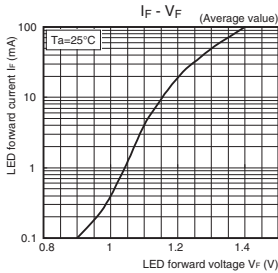
Item	Minimum	Unit
Creepage distances	7.0	mm
Clearance distances	7.0	
Internal isolation thickness	0.4	

■Engineering Data

●LED forward current vs. Ambient temperature

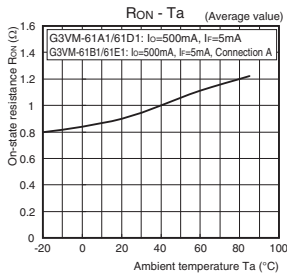


●LED forward current vs. LED forward voltage



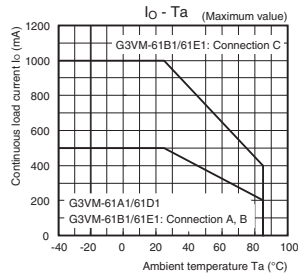
●On-state resistance vs. Ambient temperature

G3VM-61A1/61D1/61B1/61E1



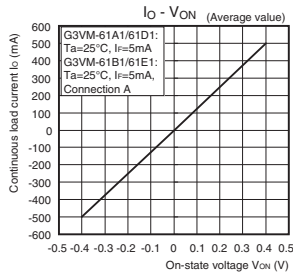
●Continuous load current vs. Ambient temperature

G3VM-61A1/61D1/61B1/61E1

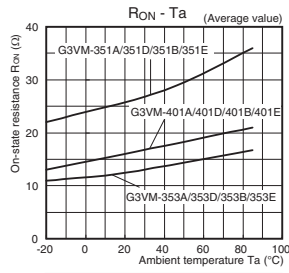


●Continuous load current vs. On-state voltage

G3VM-61A1/61D1/61B1/61E1

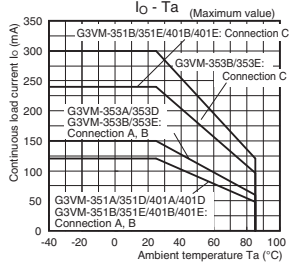


G3VM-351A/351D/351B/351E
G3VM-353A/353D/353B/353E
G3VM-401A/401D/401B/401E

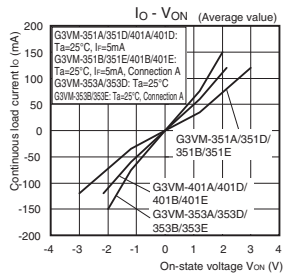


G3VM-351A/351D/401A/401D:
I_o=120mA, I_r=5mA, t_c1s
G3VM-351B/351E/401B/401E:
I_o=120mA, I_r=5mA, t_c1s, Connection A
G3VM-353A/353D:
I_o=150mA, t_c1s
G3VM-353B/353E:
I_o=150mA, t_c1s, Connection A

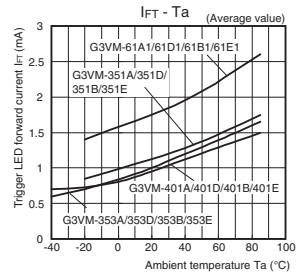
G3VM-351A/351D/351B/351E
G3VM-353A/353D/353B/353E
G3VM-401A/401D/401B/401E



G3VM-351A/351D/351B/351E
G3VM-353A/353D/353B/353E
G3VM-401A/401D/401B/401E



●Trigger LED forward current vs. Ambient temperature



G3VM-61A1/61D1/351A/351D/401A/401D:
I_o=Continuous Load Current Ratings, t_c1s
G3VM-61B1/61E1/351B/351E/401B/401E:
I_o=Continuous Load Current Ratings, t_c1s, Connection A
G3VM-353A/353D: I_o=10μA
G3VM-353B/353E: I_o=10μA, Connection A

Introduction
General purpose
High-voltage
Multi-contact pair
Low-on-state resistance
High-current and high-voltage
Small and high-strength
High dielectric strength
Current limiting
Low on-state resistance and low on-state voltage
Small and high-voltage
Certified models with standards certification

DIP
SOP
SSOP
USOP
VSON

G3VM-□A□/□D□/□B□/□E□

G3VM-□A□/□D□/□B□/□E□

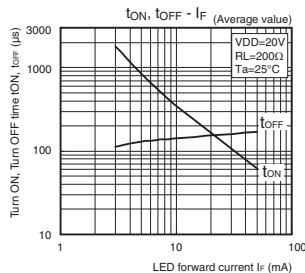
MOS FET Relays

■Engineering Data

●Turn ON, Turn OFF time vs.

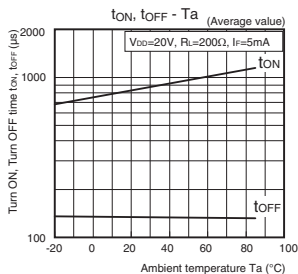
LED forward current

G3VM-61A1/61D1/61B1/61E1



●Turn ON, Turn OFF time vs. Ambient temperature

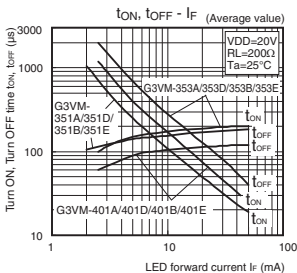
G3VM-61A1/61D1/61B1/61E1



G3VM-351A/351D/351B/351E

G3VM-353A/353D/353B/353E

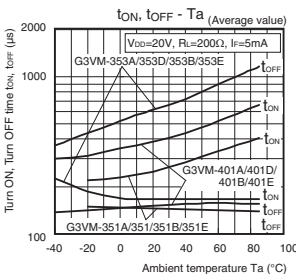
G3VM-401A/401D/401B/401E



G3VM-351A/351D/351B/351E

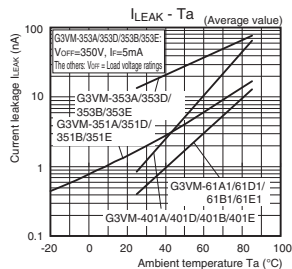
G3VM-353A/353D/353B/353E

G3VM-401A/401D/401B/401E



●Current leakage vs.

Ambient temperature

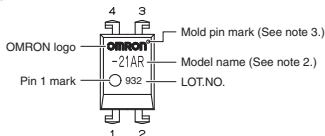


■Appearance / Terminal Arrangement / Internal Connections

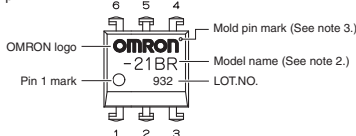
●Appearance

DIP (Dual Inline Package)

DIP 4-pin

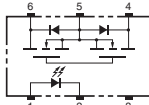
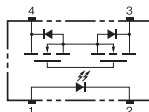


DIP 6-pin



●Terminal Arrangement/Internal Connections

(Top View)



Note: 1. The actual product is marked differently from the image shown here.

Note: 2. "G3VM" does not appear in the model number on the Relay.

Note: 3. The indentation in the corner diagonally opposite from the pin 1 mark is from a pin on the mold.

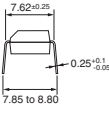
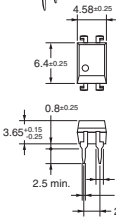
■Dimensions (Unit: mm)

DIP4



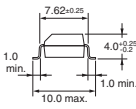
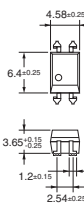
PCB Terminals

Weight: 0.25 g

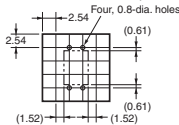


Surface-mounting Terminals

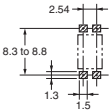
Weight: 0.25 g



PCB Dimensions (BOTTOM VIEW)



Actual Mounting Pad Dimensions (Recommended Value, Top View)



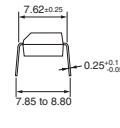
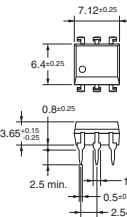
Note: The actual product is marked differently from the image shown here.

DIP6



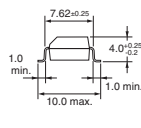
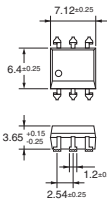
PCB Terminals

Weight: 0.4 g

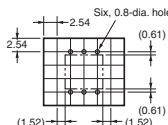


Surface-mounting Terminals

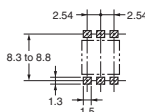
Weight: 0.4 g



PCB Dimensions (BOTTOM VIEW)



Actual Mounting Pad Dimensions (Recommended Value, Top View)



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

■Approved Standards

UL recognized

Model				Approved Standards	Contact form	File No.
G3VM-61A1	G3VM-61D1	G3VM-61B1	G3VM-61E1	UL (recognized)	1a (SPST-NO)	E80555
G3VM-351A	G3VM-351D	G3VM-351B	G3VM-351E			
G3VM-401A	G3VM-401D	G3VM-401B	G3VM-401E			
G3VM-353A	G3VM-353D	G3VM-353B	G3VM-353E		1b (SPST-NC)	

Models Certified by BSI for EN/IEC Standards

Model	Approved Standards	Contact form	File No.
G3VM-351A	EN 60950/EN 60065 (BSI certified)	1a (SPST-NO)	8816
G3VM-351D			8817

■Safety Precautions

- Refer to the *Common Precautions for All MOS FET Relays* for precautions that apply to all MOS FET Relays.

Introduction
General purpose
High-voltage
Multi-contact pair
Low-ohmic-resistance
High-current and
High-voltage
Small and high-
dielectric-strength
High-dielectric-
strength
Current-limiting
Low-ohmic-resistance
and low-ohmic-resistance
Small and high-
voltage
Certified Models with
standards certification
DIP
SOP
SSOP
USOP
VSON