Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!
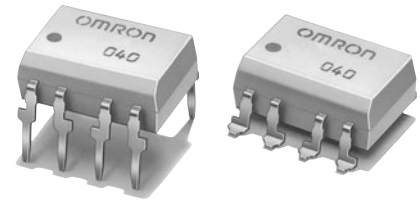
Contact us

G3VM−354C/F

MOS FET Relays

Analog-switching MOS FET Relays with DPST-NC Contact.
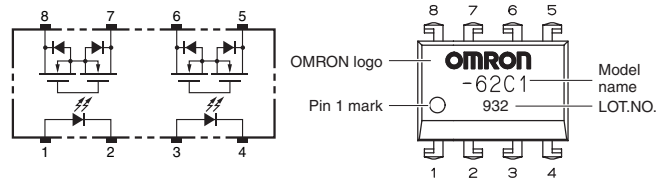
RoHS compliant

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

■ Application Examples

- Communication equipment
- Security systems
- FA systems
- Test & Measurement equipment

■ Terminal Arrangement/Internal Connections

OMRON logo
Pin 1 mark
Model name
LOT.NO.

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

■ List of Models

Package type	Contact form	Terminals	Load voltage (peak value) ✳	Model	Minimum package quantity	
					Number per tube	Number per tape and reel
DIP8	2b (DPST-NC)	PCB Terminals	350 V	G3VM-354C	50	-
		Surface-mounting Terminals		G3VM-354F		
				G3VM-354F (TR)	-	1,500

✳ The AC peak and DC value are given for the load voltage.

■ 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	5	V	
	Connection temperature	T_J	125	°C	
Output	Load voltage (AC peak/DC)	V_{OFF}	350	V	
	Continuous load current (AC peak/DC)	I_O	150	mA	
	ON current reduction rate	$\Delta I_O/°C$	−1.5	mA/°C	Ta ≥ 25°C
	Connection temperature	T_J	125	°C	
Dielectric strength between I/O (See note 1.)		V_{I-O}	2500	Vrms	AC for 1 min
Ambient operating temperature		Ta	−40 to +85	°C	With no icing or condensation
Ambient storage temperature		Tstg	−55 to +125	°C	With no icing or condensation
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.

■ 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 = 5 V
	Capacity between terminals	C_T	-	30	-	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I_{FC}	-	1	3	mA	I_{OFF} = 10 μA
Output	Maximum resistance with output ON	R_{ON}	-	15	25	Ω	I_O = 150 mA
	Current leakage when the relay is open	I_{LEAK}	-	-	1.0	μA	I_F = 5 mA, V_{OFF} = 350 V
	Capacity between terminals	C_{OFF}	-	85	-	pF	V = 0, f = 1 MHz
Capacity between I/O terminals		C_{I-O}	-	0.8	-	pF	f = 1 MHz, V_S = 0 V, I_F = 5 mA
Insulation resistance between I/O terminals		R_{I-O}	1000	-	-	MΩ	V_{I-O} = 500 VDC, RoH ≤ 60%
Turn-ON time		t_{ON}	-	0.1	1.0	ms	I_F = 5 mA, R_L = 200 Ω,
Turn-OFF time		t_{OFF}	-	1.0	3.0	ms	V_{DD} = 20 V(See note 2.)

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


1

G3VM−354C/F
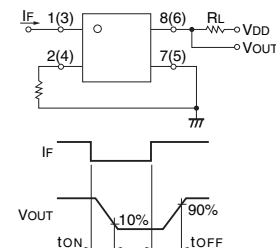
■Recommended Operating Conditions

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

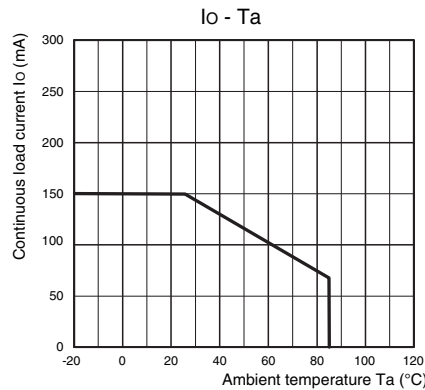| Item	Symbol	Minimum	Typical	Maximum	Unit
Load voltage (AC peak/DC)	V_{DD}	-	-	280	V
Operating LED forward current	I_F	5	-	25	mA
Continuous load current (AC peak/DC)	I_O	-	-	150	mA
Ambient operating temperature	Ta	−20	-	65	°C

■Engineering Data

LED forward current vs. Ambient temperature

I_F - Ta
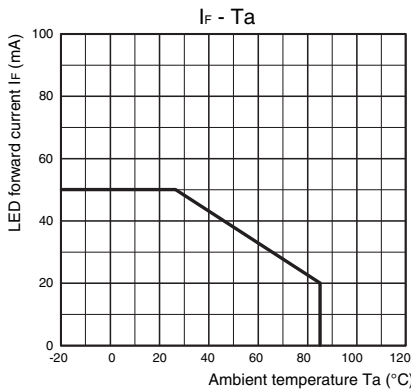
Continuous load current vs. Ambient temperature

I_O - Ta

LED forward current vs. LED forward voltage

I_F - V_F
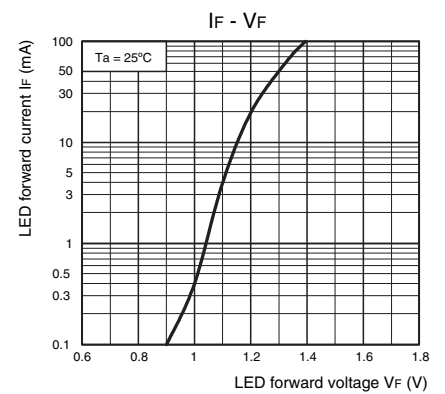
Continuous load current vs. On-state voltage

I_O - V_{ON}
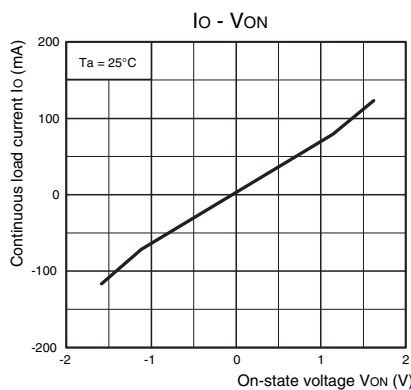
On-state resistance vs. Ambient temperature

R_{ON} - Ta

Trigger LED forward current vs. Ambient temperature

I_{FC} - Ta
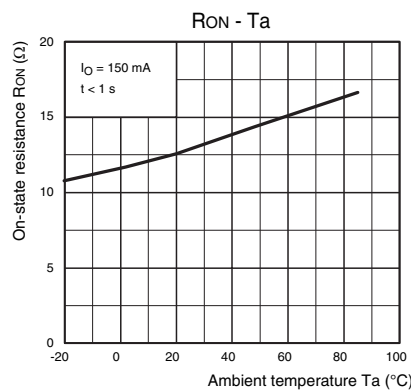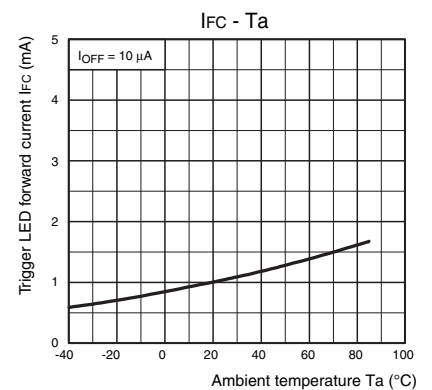
Turn ON, Turn OFF time vs. LED forward current

t_{ON}, t_{OFF} - I_F
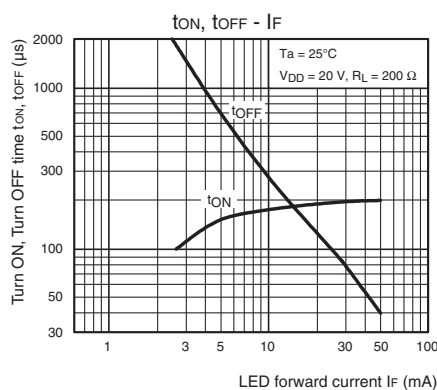
Turn ON, Turn OFF time vs. Ambient temperature

t_{ON}, t_{OFF} - Ta
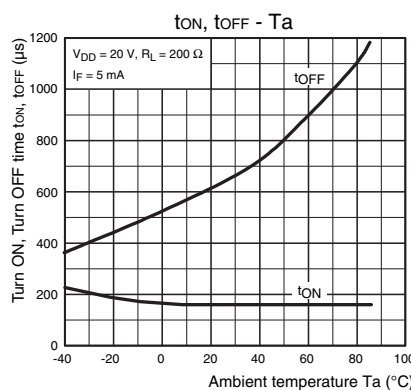
Current leakage vs. Ambient temperature
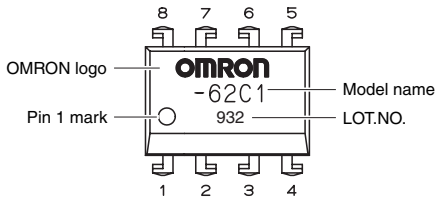

I_{LEAK} - Ta
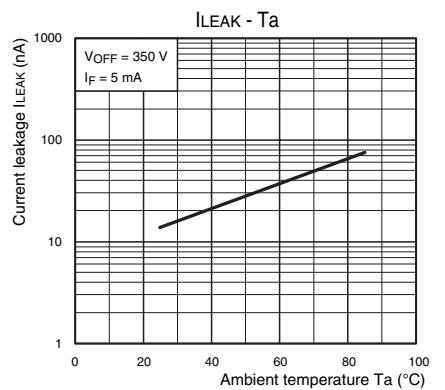
■Safety Precautions

• Refer to **"Common Precautions"** for all G3VM models.

■ Appearance

DIP (Dual Inline Package)
DIP8

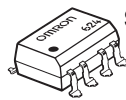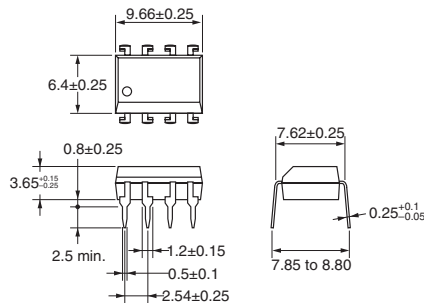Note: The actual product is marked differently from the image shown here.
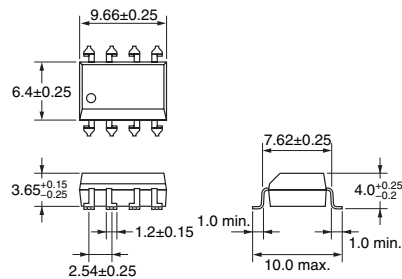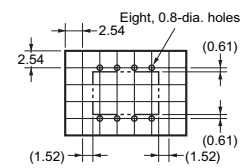
■ Dimensions

PCB Terminals
Weight: 0.54 g

9.66±0.25
6.4±0.25
0.8±0.25
3.65 +0.15 −0.25
7.62±0.25
0.25 +0.1 −0.05
2.5 min.
1.2±0.15
0.5±0.1
2.54±0.25
7.85 to 8.80

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

Surface-mounting Terminals
Weight: 0.54 g

9.66±0.25
6.4±0.25
3.65 +0.15 −0.25
1.2±0.15
2.54±0.25
7.62±0.25
4.0 +0.25 −0.2
1.0 min.
1.0 min.
10.0 max.

PCB Dimensions (BOTTOM VIEW)

Eight, 0.8-dia. holes
2.54
2.54
(0.61)
(0.61)
(1.52)
(1.52)

Actual Mounting Pad Dimensions
(Recommended Value, TOP VIEW)

2.54
8.3 to 8.8
1.3
1.5

Note: Do not use this document to operate the Unit.