

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!



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G3VM-352C/F

MOS FET Relays

General-purpose Series with 350-V Load Voltage. Including Models with 2 Outputs.

- Upgraded G3VM-W Series.
- Continuous load current of 120 mA.
- Dielectric strength of 2,500 Vrms between I/O.

RoHS compliant

■ Application Examples

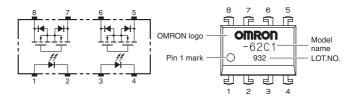
- Test & Measurement equipment
- Security equipment
- Amusement equipment





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

■ Terminal Arrangement/Internal Connections



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■ List of Models

Dealtons tune	Comtact form	Terminals	Load voltage	Model	Minimum package quantity	
Package type	Contact form		(peak value) *	wodei	Number per tube	Number per tape and reel
	2a (DPST-NO)	PCB Terminals		G3VM-352C	50	-
DIP8		Surface-mounting Terminals	350 V	G3VM-352F	50	
	(51 01 110)			G3VM-352F (TR)	-	1,500

 $[\]boldsymbol{\ast}$ The AC peak and DC value are given for the load voltage.

■ Absolute Maximum Ratings (Ta = 25°C)

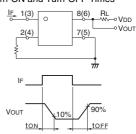
Item		Symbol	Rating	Unit	Measurement conditions
Input	LED forward current	lF	50	mA	
	Repetitive peak LED forward current	IFP	1	Α	100 μs pulses, 100 pps
	LED forward current reduction rate	ΔIF/°C	-0.5	mA/°C	Ta ≥ 25°C
_	LED reverse voltage	VR	5	V	
	Connection temperature	ТJ	125	ô	
	Load voltage (AC peak/DC)	Voff	350	V	
Output	Continuous load current (AC peak/DC)	lo	120	mA	
Ö	ON current reduction rate	Δlo/°C	-1.2	mA/°C	Ta ≥ 25°C
	Connection temperature	ТJ	125	ô	
Diele	ctric strength between I/O (See note 1.)	V _{I-O}	2500	Vrms	AC for 1 min
Ambient operating temperature		Ta	-40 to +85	ô	With no icing or condensation
Ambient storage temperature		Tstg	-55 to +125	ô	With no icing or condensation
Sol	dering temperature	-	260	ô	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
	LED forward voltage	VF	1.0	1.15	1.3	V	IF = 10 mA
Input	Reverse current	lr	-	-	10	μА	VR = 5 V
	Capacity between terminals	Ст	-	30	-	pF	V = 0, f = 1 MHz
	Trigger LED forward current	İFT	-	1	3	mA	lo = 120 mA
	Maximum resistance	Ron	-	25	35	Ω	IF = 5 mA, lo = 120 mA, t<1 s
Output	with output ON		-	35	50	Ω	IF = 5 mA, Io = 120 mA
Out	Current leakage when the relay is open	ILEAK	-	-	1.0	μΑ	Voff = 350 V
	Capacity between terminals	Coff	-	30	-	pF	V = 0, f = 1 MHz
Capacity between I/O terminals		Cı-o	-	0.8	-	pF	f = 1 MHz, Vs = 0 V
Insulation resistance between I/O terminals		Rı-o	1000	-	-	МΩ	V _I -o = 500 VDC, RoH ≤ 60%
Turn-ON time		ton	-	0.3	1.0	ms	IF = 5 mA, RL = 200 Ω ,
Turn-OFF time		toff	-	0.1	1.0	ms	V _{DD} = 20 V(See note 2.)

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



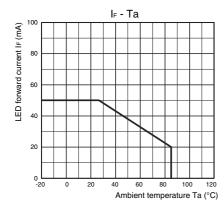
■ Recommended Operating Conditions

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

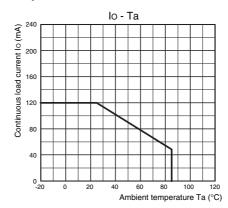
Item	Symbol	Minimum	Typical	Maximum	Unit
Load voltage (AC peak/DC)	V _{DD}	-	-	280	V
Operating LED forward current	lF	5	7.5	25	mA
Continuous load current (AC peak/DC)	lo	-	-	100	mA
Ambient operating temperature	Та	-20	-	65	°C

■ Engineering Data

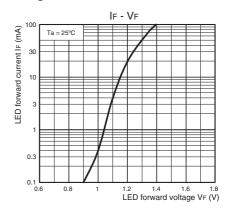
LED forward current vs. Ambient temperature



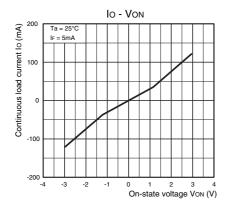
Continuous load current vs. Ambient temperature



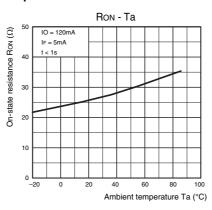
LED forward current vs. LED forward voltage



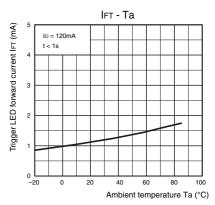
Continuous load current vs. On-state voltage



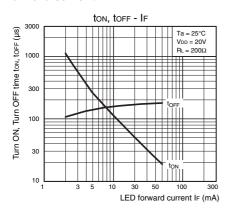
On-state resistance vs. Ambient temperature



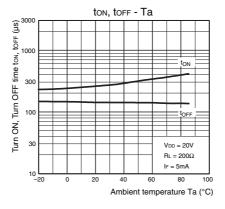
Trigger LED forward current vs. Ambient temperature



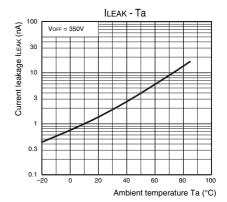
Turn ON, Turn OFF time vs. LED forward current



Turn ON, Turn OFF time vs. Ambient temperature



Current leakage vs. Ambient temperature



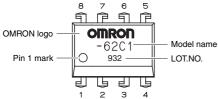
■ Safety Precautions

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

■ Appearance

DIP (Dual Inline Package)

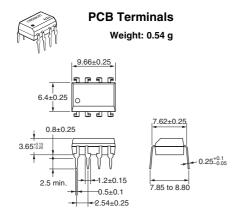
DIP8

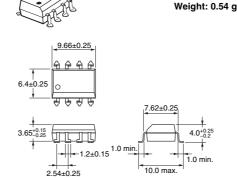


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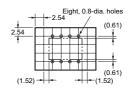
■ Dimensions (Unit:mm)

Surface-mounting Terminals



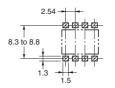


PCB Dimensions (BOTTOM VIEW)



Actual Mounting Pad Dimensions

(Recommended Value, TOP VIEW)



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

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

Contact: www.omron.com/ecb

Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.