OMRON

勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-34970699 胜特力电子(深圳) 86-755-83298787

Http://www.100y.com.tw

G3VM-101LR

MOS FET Relays

World's Smallest SSOP Package MOS FET Relays with High Load Voltage of 100 V.

- · Leakage current of 200 pA max. when output relay is open.
- Information correct as of May 2007, according to data obtained by OMRON.

RoHS compliant

/ Refer to "Common Precautions".

■ Application Examples

- Semiconductor inspection tools
- · Measurement devices
- · Broadband systems
- Data loggers



Note: The actual product is marked differently from the image

shown here.

■ List of Models

Contact form	Terminals	Load voltage (peak value)	Model	Minimum packaging unit	
1007	T.M.TW	W 1. 100 1. CON	1.7.	Number per tape	
SPST-NO	Surface-mounting	100 VAC	G3VM-101LR	100 J. OM	
TINW.100	terminals	MINN.10 CO	G3VM-101LR (TR)	1,500	

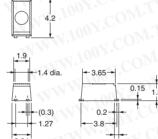
■ Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3VM-101LR



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

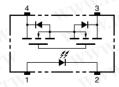


Note: A tolerance of ±0.1 mm applies to all dimensions unless otherwise

Weight: 0.03 g

■ Terminal Arrangement/Internal Connections (Top View)

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■ Actual Mounting Pad Dimensions (Recommended Value, Top View)

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■ Absolute Maximum Ratings (Ta = 25°C)

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	Item		Symbol Rating Unit		Measurement Conditions	
Input	LED forward current	l _F	50	mA	V 100	
	LED forward current reduction rate	Δ I _F /°C	-0.5	mA/°C	Ta ≥ 25°C	
	LED reverse voltage	V_R	5	V		
Mon.	Connection temperature	T_j	125	°C	I.WW.I	
Outpu	Output dielectric strength	V _{OFF}	100	٧	44.	
\mathbf{CON}	Continuous load current	Io	80	mA	W WWW	
	ON current reduction rate	Δ I _O /°C	-0.8	mA/°C	Ta ≥ 25°C	
	Connection temperature	Tj	125	°C	M. M.	
	tric strength between input and (See note 1.)	V _{I-O}	1,500	Vrms	AC for 1 min	
Ambie	nt operating temperature	Ta	-20 to +85	°C	With no icing or condensation	
Storag	Storage temperature		-40 to +125	°C	With no icing or condensation	
Solder	ing temperature	41/1	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)

100	Item	Symbol	Mini- mum	Typical	Maxi- mum	Unit	Measurement conditions
Input	LED forward voltage	V_{F}	1.0	1.15	1.3	V	I _F = 10 mA
	Reverse current	I _R	7.10	=- CC	10	μΑ	V _R = 5 V
	Capacity between terminals	C _T	10	15	N.	pF	V = 0, f = 1 MHz
	Trigger LED forward current	I _{FT}	77.	1	5	mA	I _O = 80 mA
Output	Maximum resistance with output ON	R _{ON}	$M_{M^{-1}}$	8	14	Ω	I _F = 10 mA, I _O = 80 mA, t = 10 ms
	Current leakage when the relay is open	I _{LEAK}	411	. 00)	200	pA	V _{OFF} = 80 V
	Capacity between terminals	C _{OFF}		6	8,00	pF	V = 0, f = 100 MHz, t < 1 s
Capacity	y between I/O terminals	C _{I-O}		0.6		pF	f = 1 MHz, Vs = 0 V
Insulation resistance between I/O terminals		R _{I-O}	1,000	W.10	J. J.	МΩ	V _{I-O} = 500 VDC, RoH ≤ 60%
Turn-ON time		tON	///	0.1	0.3	ms	$I_F = 5$ mA, $R_L = 200 \Omega$,
Turn-OFF time		tOFF		0.1	0.3	ms	$V_{DD} = 20 \text{ V (See note 2.)}$

2. Turn-ON and Turn-OFF R∟ -W--•VDD WWW.100Y.COM.TW

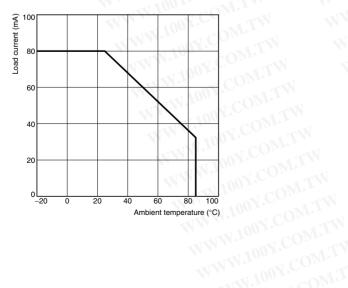
■ Recommended Operating Conditions

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}		V	80	٧
Operating LED forward current	I _F	10	CHI W	30	mA
Continuous load current	lo Ma			80	mA
Operating temperature	Ta	25	7// //	60	°C

■ Engineering Data

Load Current vs. Ambient Temperature G3VM-101LR



■ Safety Precautions

Refer to "Common Precautions" for all G3VM models.

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