

# Electronic Components

## G3VM Selection Guide



**RELAYS**

**SWITCHES**

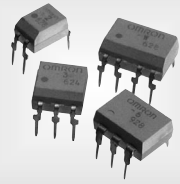

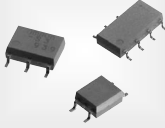

**PHOTOMICROSENSORS**

**MICRO SENSORS**

**CONNECTORS**



# SELECTION GUIDE – MOS FET Relays

MOS FET				
				
	<b>G3VM PCB Mount</b>	<b>G3VM SMT</b>	<b>G3VM SOP</b>	<b>G3VM SSOP</b>
<b>Dimensions mm (in)</b>	Please refer to data sheets for all dimension information	Please refer to data sheets for all dimension information	Please refer to data sheets for all dimension information	4 pin: 3.8 L x 2.04 W x 1.8 H (0.15 x 0.08 x 0.07)
<b>Features</b>	<ul style="list-style-type: none"> <li>• Solid-state relay with MOS FET output and photo-LED input</li> <li>• Ideal for communications (telecom and datacom), computer peripheral, office automation, security, and control applications</li> </ul>	<ul style="list-style-type: none"> <li>• Solid-state relay with MOS FET output and photo-LED input</li> <li>• Ideal for communications (telecom and datacom), computer peripheral, office automation, security, and control applications</li> </ul>	<ul style="list-style-type: none"> <li>• Solid-state relay with MOS FET output and photo-LED input</li> <li>• Ideal for communications (telecom and datacom), computer peripheral, office automation, security, and control applications</li> <li>• Low ON resistance and low output capacitance versions ideal for ATE and Instrumentation</li> </ul>	<ul style="list-style-type: none"> <li>• Solid-state relay with MOS FET output and photo-LED input</li> <li>• Ideal for communications (telecom and datacom), computer peripheral, office automation, security, and control applications</li> <li>• Low ON resistance and low output capacitance versions ideal for ATE and Instrumentation</li> </ul>
<b>Load voltage</b>	60 – 600 V	20 – 600 V	20 – 400 V	20 – 40 V
<b>Contact form</b>	1 Form A, 2 Form A, 1 Form B, 2 Form B, 1 Form A+1 Form B	1 Form A, 2 Form A, 1 Form B, 2 Form B, 1 Form A+1 Form B	1 Form A, 2 Form A, 1 Form B, 2 Form B	1 Form A
<b>Load current</b>	100 – 2000 mA	120 – 2000 mA	80 – 1250 mA	80 – 300 mA
<b>Dielectric strength (50/60 Hz for 1 minute)</b>	1500 VAC, 2500 VAC, 5000 VAC	1500 VAC, 2500 VAC, 5000 VAC	1500 VAC	1500 VAC
<b>Surge withstand (50/60 Hz for 1 second)</b>	3,000 VAC, 5,000 VAC, 10,000 VAC	3,000 VAC, 5,000 VAC, 10,000 VAC	3,000 VAC	3,000 VAC
<b>ON resistance</b>	0.12 – 45 Ohm	0.12 – 35 Ohm	0.15 – 35 Ohm	1.5 – 35 Ohm
<b>Output capacitance</b>	30 – 1400 pF	8 – 1400 pF	2.5 – 1000 pF	1.0 – 14 pF
<b>Packaging</b>	Tube	Tube or tape and reel	Tube or tape and reel	Tape and reel
<b>Additional features</b>	Low ON resistance, current limiting, high I/O isolation	Low ON resistance, current limiting, high I/O isolation	Low ON resistance, low output capacitance	Low ON resistance, low output capacitance

► Normally Open Relays – G3VM Series

Load voltage		20 V	40 V	60 V			80 V	
Number of terminals		4	4	4	6	8	4	6
SPST-NO	Through hole			G3VM-61A1	G3VM-61B1	G3VM-61CR		
	SMD			G3VM-61D1	G3VM-61E1	G3VM-61FR		
	SOP	G3VM-21GR G3VM-21GR1	G3VM-41GR5 G3VM-41GR6	G3VM-61G1	G3VM-61H1		G3VM-81G1	G3VM-81HR
	SSOP	G3VM-21LR G3VM-21LR1	G3VM-41LR5 G3VM-41LR6					

Load voltage		200 V		350V		400 V		600 V
Number of terminals		4	6	4	6	4	6	6
SPST-NO	Through hole			G3VM-351A	G3VM-351B	G3VM-401A	G3VM-401B G3VM-401BY	G3VM-601BY
	SMD			G3VM-351D	G3VM-351E	G3VM-401D	G3VM-401E G3VM-401EY	G3VM-601EY
	SOP	G3VM-S5	G3VM-201H1	G3VM-351G	G3VM-351H	G3VM-401G	G3VM-401H	

Load voltage		20 V	60 V	200 V	350 V	400 V
Number of terminals		8	8	8	8	8
DPST-NO	Through hole	G3VM-22C0	G3VM-62C1		G3VM-352C	G3VM-402C
	SMD	G3VM-22F0	G3VM-62F1		G3VM-352F	G3VM-402F
	SOP		G3VM-62J1	G3VM-202J1	G3VM-352J	G3VM-402J

► Normally Closed Relays – G3VM Series

Load voltage		350 V	
Number of terminals		4	6
SPST-NC	Through hole	G3VM-353A	G3VM-353B
	SMD	G3VM-353D	G3VM-353E
	SOP	G3VM-353G	G3VM-353H

Load voltage		350 V
Number of terminals		8
DPST-NC	Through hole	G3VM-354C
	SMD	G3VM-354F
	SOP	G3VM-354J

## ► SPST-NO/SPST-NC Relays – G3VM Series

Load voltage		350 V	
Number of terminals		8	
SPST-NO/ SPST-NC	Through hole	G3VM-355C G3VM-355CR	
	SMD	G3VM-355F G3VM-355FR	
	SOP	G3VM-355J G3VM-355JR	

## ► Current-limiting Relays – G3VM Series

Load voltage		350 V	
Number of terminals		4	6
SPST-NO	Through hole	G3VM-2L	G3VM-3L
	SMD	G3VM-2FL	G3VM-3FL

Load voltage		350 V	
Number of terminals		8	
DPST-NO	Through hole	G3VM-WL	
	SMD	G3VM-WFL	

## MODEL NUMBER STRUCTURE

### ► G3VM Model Number Legend

G3VM-  
 1 2 3 4 5

Note: Some products may have a different model number structure.

#### 1. Load Voltage

2: 20 V  
 4: 40 V  
 6: 60 V  
 8: 80 V  
 10: 100 V  
 20: 200 V  
 25: 250 V  
 35: 350 V  
 40: 400 V  
 60: 600 V

#### 2. Contact Form

1: SPST-NO  
 2: DPST-NO  
 3: SPST-NC  
 4: DPST-NC  
 5: SPST-NO/SPST-NC  
 6: Other form

#### 3. Package Type

A: 4-pin DIP  
 B: 6-pin DIP  
 C: 8-pin DIP  
 D: 4-pin SMD  
 E: 6-pin SMD  
 F: 8-pin SMD  
 G: 4-pin SOP  
 H: 6-pin SOP  
 J: 8-pin SOP  
 K: 18-pin SOP  
 L: 4-pin SSOP

#### 4. Additional Functions

L: Current limit  
 M: Basic multifunction  
 N: Multifunction without diode  
 O: Single input LED  
 P: Special pin arrangement  
 Q: Multifunction with current limiter  
 R: Low ON-resistance  
 S: Slow ON/OFF  
 T: Multifunction with current limiter and without diode  
 Y: Dielectric strength between I/O above 2.5 kV

#### 5. Other Information

When specifications overlap, serial code is added in the recorded order.

Note: 1. The letter "I" is not used because it may be confused with the number "1."

2. For 4-pin SOP models, where the available marking space is insufficient to clearly differentiate model numbers with 6 or more suffix digits, the package type code (3) is omitted.

► G3VM Series

Load Voltage	Contact Form	Package/ Terminal Shape	No. of Terminals	Part Number	Load Current	Voltage Withstand (1 minute)	ON-resistance (max)	Output Capacitance (typ)	Leakage Current (max)	Additional Features	Page Number
20V	1 Form A	SOP	4	G3VM-21GR	160mA	1,500VAC	8 Ohms	1pF	0.001μA		396
				G3VM-21GR1	300mA	1,500VAC	1.5 Ohms	5pF	0.001μA		398
		SSOP	4	G3VM-21LR	160mA	1,500VAC	8 Ohms	1pF	0.001μA		444
				G3VM-21LR1	450mA	1,500VAC	1.2 Ohms	5pF	0.001μA		446
		DIP	8	G3VM-22C0	150mA	2,500VAC	4 Ohms	8pF	1.0μA		354
SMT	8	G3VM-22F0	150mA	2,500VAC	4 Ohms	8pF	1.0μA		354		
40V	1 Form A	SOP	4	G3VM-41GR5	250mA	1,500VAC	1.5 Ohms	10pF	0.001μA		400
				G3VM-41GR6	120mA	1,500VAC	15 Ohms	1pF	0.001μA		402
		SSOP	4	G3VM-41LR5	300mA	1,500VAC	1.5 Ohms	10pF	0.001μA		448
				G3VM-41LR6	120mA	1,500VAC	15 Ohms	1pF	0.001μA		450
60V	1-Form-A	DIP	4	G3VM-61A1	500mA	2,500VAC	2 Ohms	130pF	1.0μA		356
				G3VM-61B1	500mA	2,500VAC	2 Ohms	130pF	1.0μA		358
				G3VM-61CR	2 Amps	1,500VAC	0.12 Ohms	600pF	0.004μA		360
		SMT	4	G3VM-61D1	500mA	2,500VAC	2 Ohms	130pF	1.0μA		356
				G3VM-61E1	500mA	2,500VAC	2 Ohms	130pF	1.0μA		358
				G3VM-61FR	2 Amps	1,500VAC	0.12 Ohms	600pF	0.004μA		360
	SOP	4	G3VM-61G1	400mA	1,500VAC	2 Ohms	130pF	1.0μA		404	
			G3VM-61H1	400mA	1,500VAC	2 Ohms	130pF	1.0μA		406	
	2-Form-A	8	G3VM-62C1	500mA	2,500VAC	2 Ohms	130pF	1.0μA		362	
			G3VM-62F1	500mA	2,500VAC	2 Ohms	130pF	1.0μA		362	
G3VM-62J1			400mA	1,500VAC	2 Ohms	130pF	1.0μA		408		
80V	1-Form-A	SOP	4	G3VM-81G1	350mA	1,500VAC	1.2 Ohms	---	0.001μA		410
				G3VM-81HR	1.25 Amps	1,500VAC	0.15 Ohms	460pF	0.0015μA		412
200V	1-Form-A	SOP	4	G3VM-S5	150mA	1,500VAC	8 Ohms	100pF	1.0μA		414
				G3VM-201G	50mA	1,500VAC	50 Ohms	15pF	0.01μA		416
				G3VM-201H1	200mA	1,500VAC	8 Ohms	100pF	1.0μA		418
	2-Form-A	SOP	8	G3VM-202J1	200mA	1,500VAC	8 Ohms	100pF	1.0μA		420

Continued on next page.

## ► G3VM Series

Continued from previous page.

Load Voltage	Contact Form	Package/Terminal Shape	No. of Terminals	Part Number	Load Current	Voltage Withstand (1 minute)	ON-resistance (max)	Output Capacitance (typ)	Leakage Current (max)	Additional Features	Page Number	
350V	1 Form A	DIP	4	G3VM-351A	120mA	2,500VAC	35 Ohms	30pF	1.0μA		364	
				G3VM-2L	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	366	
			6	G3VM-351B	120mA	2,500VAC	35 Ohms	30pF	1.0μA		370	
				G3VM-3L	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	372	
		SMT	4	G3VM-351D	120mA	2,500VAC	35 Ohms	30pF	1.0μA		364	
				G3VM-2FL	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	366	
			6	G3VM-351E	120mA	2,500VAC	35 Ohms	30pF	1.0μA		370	
				G3VM-3FL	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	372	
		SOP	4	G3VM-351G	110mA	1,500VAC	35 Ohms	30pF	1.0μA		422	
			6	G3VM-351H	110mA	1,500VAC	35 Ohms	30pF	1.0μA		426	
		2 Form A	DIP	8	G3VM-352C	120mA	2,500VAC	35 Ohms	30pF	1.0μA		376
					G3VM-WL	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	378
	SMT		8	G3VM-352F	120mA	2,500VAC	35 Ohms	30pF	1.0μA		376	
				G3VM-WFL	120mA	2,500VAC	35 Ohms	40pF	1.0μA	Current limiting	378	
	SOP	8	G3VM-352J	110mA	1,500VAC	35 Ohms	30pF	1.0μA		430		
	1 Form B	DIP	4	G3VM-353A	150mA	2,500VAC	25 Ohms	85pF	1.0μA		368	
			6	G3VM-353B	150mA	2,500VAC	25 Ohms	85pF	1.0μA		374	
		SMT	4	G3VM-353D	150mA	2,500VAC	25 Ohms	85pF	1.0μA		368	
			6	G3VM-353E	150mA	2,500VAC	25 Ohms	85pF	1.0μA		374	
		SOP	4	G3VM-353G	120mA	1,500VAC	25 Ohms	65pF	1.0μA		424	
			6	G3VM-353H	120mA	1,500VAC	25 Ohms	65pF	1.0μA		428	
	2 Form B	DIP	8	G3VM-354C	150mA	2,500VAC	25 Ohms	85pF	1.0μA		380	
		SMT	8	G3VM-354F	150mA	2,500VAC	25 Ohms	85pF	1.0μA		380	
		SOP	8	G3VM-354J	120mA	1,500VAC	25 Ohms	65pF	1.0μA		432	
	1 A + 1 B	DIP	8	G3VM-355C	100mA	2,500VAC	35 Ohms	30pF	1.0μA		382	
				G3VM-355CR	120mA	2,500VAC	25 Ohms	65pF	1.0μA		384	
		SMT	8	G3VM-355F	100mA	2,500VAC	35 Ohms	30pF	1.0μA		382	
				G3VM-355FR	120mA	2,500VAC	25 Ohms	65pF	1.0μA		384	
SSOP		8	G3VM-355J	90mA	1,500VAC	35 Ohms	30pF	1.0μA		434		
			G3VM-355JR	120mA	1,500VAC	25 Ohms	65pF	1.0μA		436		
400V	1-Form-A	DIP	4	G3VM-401A	120mA	2,500VAC	35 Ohms	---	1.0μA		386	
			6	G3VM-401B	120mA	2,500VAC	35 Ohms	40pF	1.0μA		388	
				G3VM-401BY	120mA	5,000VAC	35 Ohms	40pF	1.0μA		390	
		SMT	4	G3VM-401D	120mA	2,500VAC	35 Ohms	---	1.0μA		386	
				G3VM-401E	120mA	2,500VAC	35 Ohms	40pF	1.0μA		388	
			G3VM-401EY	120mA	5,000VAC	35 Ohms	40pF	1.0μA		390		
		SOP	4	G3VM-401G	120mA	1,500VAC	35 Ohms	70pF	1.0μA		438	
			6	G3VM-401H	120mA	1,500VAC	35 Ohms	70pF	1.0μA		440	
		DIP	8	G3VM-402C	120mA	2,500VAC	35 Ohms	---	1.0μA		394	
				G3VM-402F	120mA	2,500VAC	35 Ohms	---	1.0μA		394	
				G3VM-402J	120mA	1,500VAC	35 Ohms	70pF	1.0μA		442	
		600V	1 Form A	DIP	6	G3VM-601BY	100mA	5,000VAC	35 Ohms	120pF	1.0μA	
G3VM-601EY	100mA					5,000VAC	35 Ohms	120pF	1.0μA		392	

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**OMRON ELECTRONIC  
COMPONENTS LLC**

55 E. Commerce Drive, Suite B  
Schaumburg, IL 60173

**847-882-2288**

**OMRON CANADA, INC.**

885 Milner Avenue  
Toronto, Ontario M1B 5V8

**416-286-6465**

**OMRON ON-LINE**

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