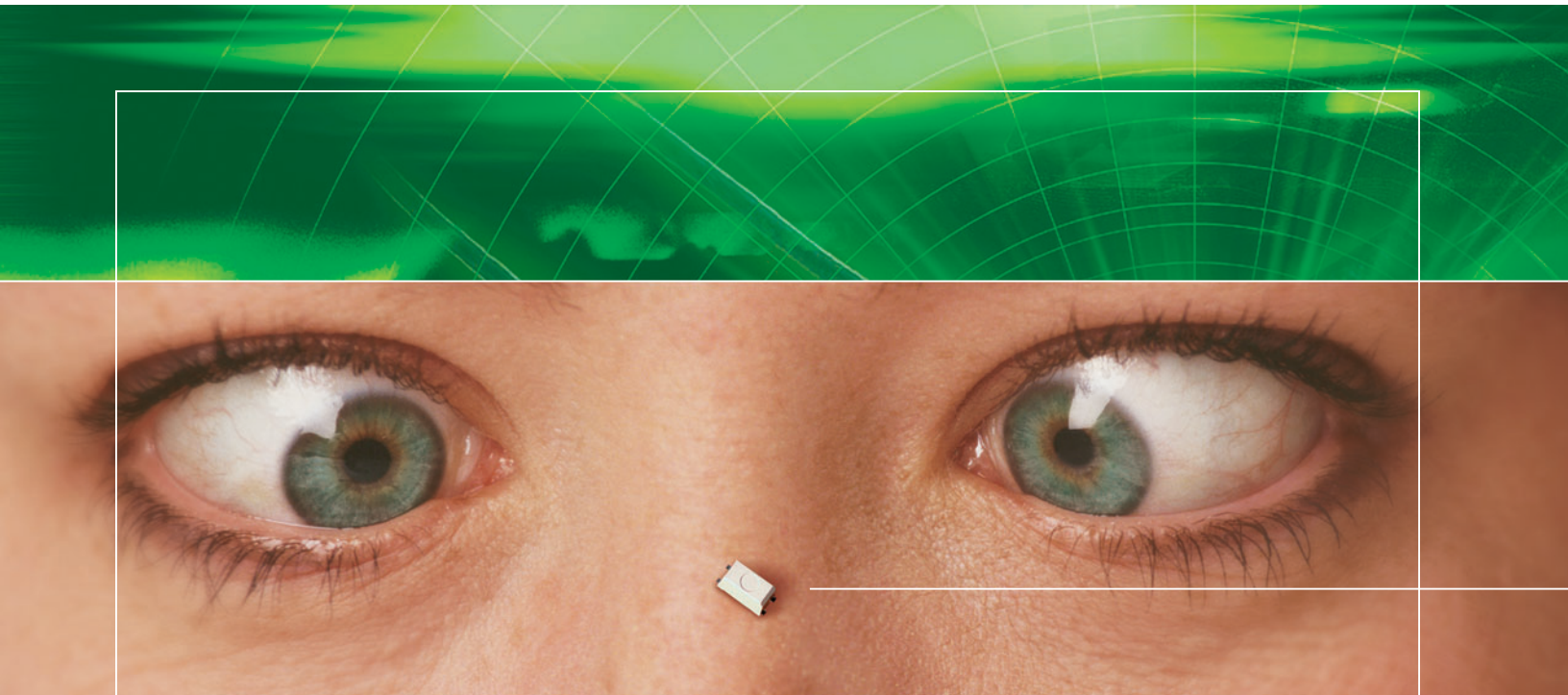


G3VM Series

MOS FET Relays



Look at the biggest thing in MOS FET relays

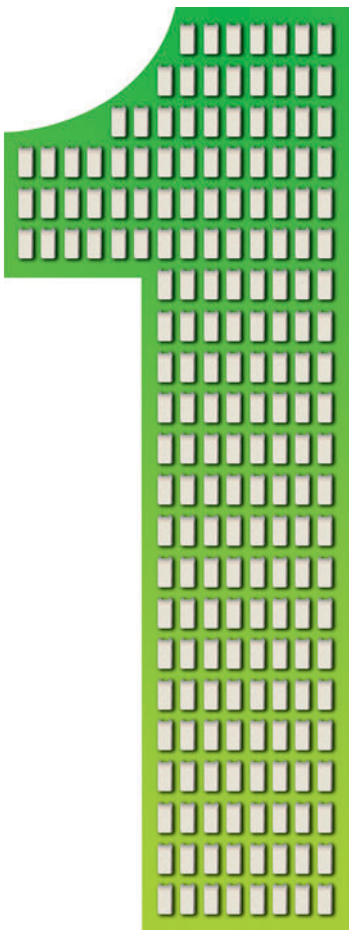
SOLID STATE PERFORMANCE & ACCURACY

SMALLEST SIZE IN THE INDUSTRY

LOWEST POWER REQUIREMENTS

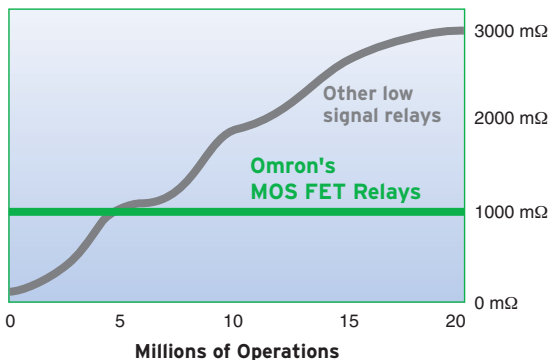
First in Relays

OMRON[®]

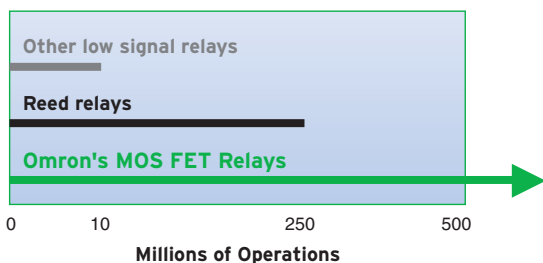


195 RELAYS
ACTUAL SIZE

Contact Resistance



Mechanical Life



ON Resistance: 1 ohm, Output Capacity: 1 pF

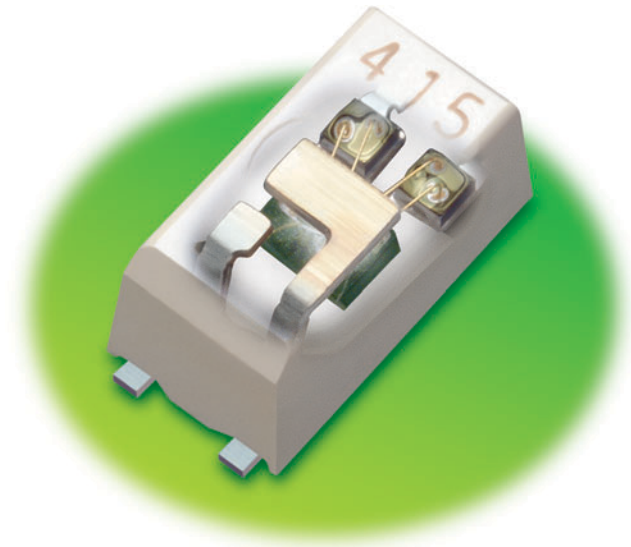
All from the industry's smallest MOS FET relays

Omron's G3VM-LR Series MOS FET relays have an ON-Resistance as low as 1 ohm and an output capacity of 1 pF and even less. This small wonder gives your equipment greater accuracy, reliability and performance. Measuring only 2 mm wide, 4.2 mm long and 1.8 mm high, the G3VM-LR Series gives designers the ability to reduce overall equipment and instrumentation size. That translates into the luxury of adding more features and components in the same amount of space. In addition, Solid State Technology means hundreds of millions of operations. You're saving money while maintaining equipment specifications.

Current Technology	vs. The Advantages of Omron's MOS FET Relays
Reed Relays	G3VM Series offers: <ul style="list-style-type: none"> Longer life Lower pick-up power Smaller size/less board space Faster switching speed Greater resistance to shock/vibration Higher isolation voltages
Photocouplers	G3VM Series offers: <ul style="list-style-type: none"> Linear ON-resistance High isolation voltage and increased sensitivity The ability to switch AC and DC loads Voltage control up to 600 V
Electromechanical Relays	G3VM Series offers: <ul style="list-style-type: none"> Longer life Lower pick-up power Lower profile and smaller footprint High-speed operation Greater resistance to shock and vibration Higher isolation voltages
Solid State Relays with Thyristor Output	G3VM Series offers: <ul style="list-style-type: none"> Linear ON-resistance The ability to switch AC and DC loads The ability to control high frequency loads No signal distortion
Solid State Relays with BJT Output	G3VM Series offers: <ul style="list-style-type: none"> Lower ON-state offset voltages Minimal leakage current Better voltage control No signal distortion
Solid State Relays with Triac Output	G3VM Series offers: <ul style="list-style-type: none"> Minimal leakage current Increased protection, eliminating the need for a snubber circuit No signal distortion

100,000 hours and still going

An independent firm ran tests on the only part of the G3VM that might possibly waver in performance – the LED chip. They simulated operation for a total of 100,000 hours (equivalent to more than 11 years!) and the G3VM was still operating successfully.



One bad relay = one bad board

Reduce waste and save money. Circuit boards covered with relays, such as reed relays, require replacement if just one relay fails. That's waste, which means lost dollars and productivity for end users. Omron's G3VM Series MOS FET relays eliminate the need for such repair operations allowing you to design equipment that is reliable and accurate.

60% smaller than reed relays and still outperforms the competition

The G3VM delivers design flexibility without sacrificing accuracy or performance. It's now possible for designers to give their products more functionality and reduce overall machine size.

Omron's MOS FET relays are perfectly suited for use in:

- Automated test equipment
- Instrumentation
- Medical ultrasound equipment
- Automated meter reading
- Hospital bed controls
- Automotive diagnostic equipment
- Communications
- Security

G3VM-LR Series (SSOP MOS FET Relays)



Specifications (1 Form A)

Part Number	R _{ON} (typ.)	C _{OUT} (typ.)	C×R (pF×Ω)	Output Voltage
G3VM-21LR	5	1	5	20V
G3VM-21LR1	0.8	5	5	20V
G3VM-41LR3	25	0.6	15	40V
G3VM-41LR4	2	5	10	40V
G3VM-41LR5	1	10	10	40V
G3VM-41LR6	10	1	10	40V

G3VM-GR Series (SOP MOS FET Relays)



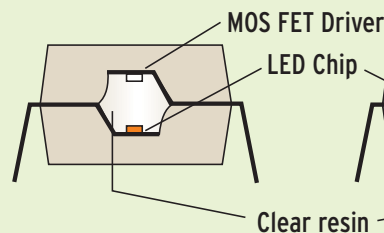
Specifications (1 Form A)

Part Number	R _{ON} (typ.)	C _{OUT} (typ.)	C×R (pF×Ω)	Output Voltage
G3VM-21GR	5	1	5	20V
G3VM-21GR1	1	5	5	20V
G3VM-41GR3	25	0.6	15	40V
G3VM-41GR4	2	5	10	40V
G3VM-41GR5	1	10	10	40V
G3VM-41GR6	10	1	10	40V

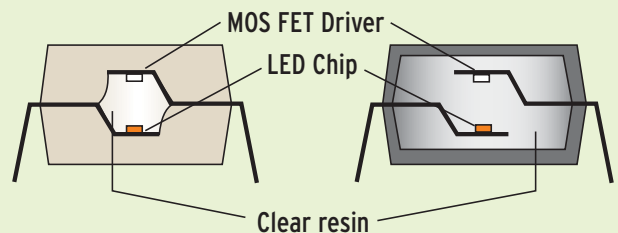
See the entire line of MOS FET relays at:
www.knowledge.omron.com SEARCH: G3VM

For greatest accuracy—it has to be white resin

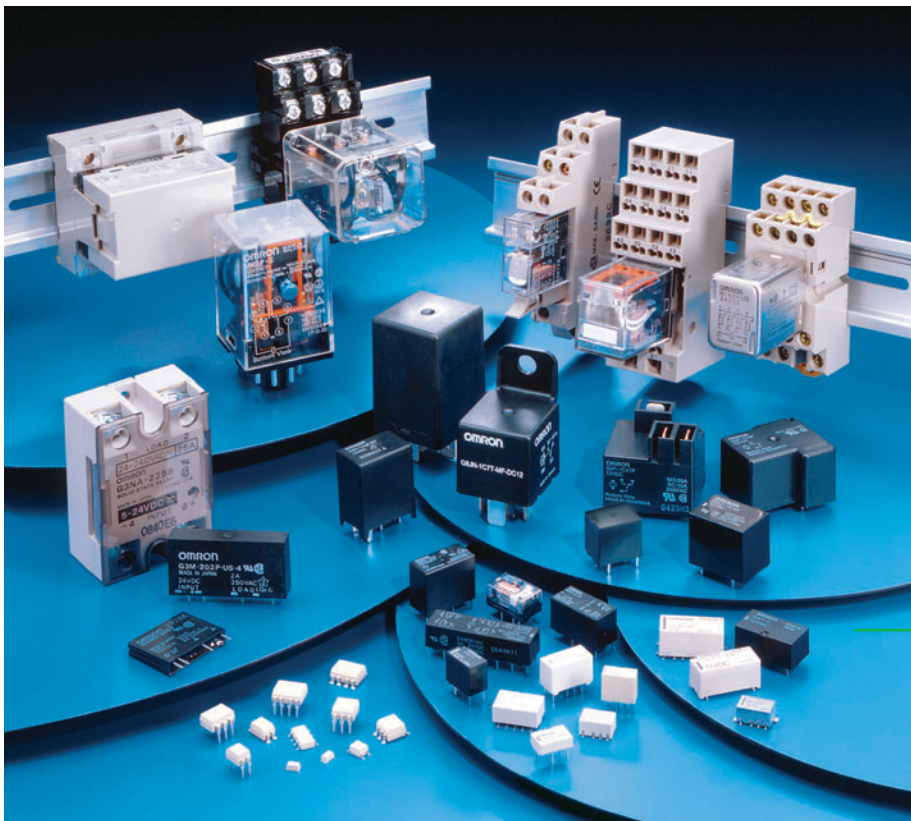
Omron's White Mold Resin



Competitor's Black Mold Resin



For maximum performance and accuracy, the G3VM is cast in white resin, which reflects more light from the LED chip to the MOS FET driver than black resin, which absorbs light. White resin also helps the relay dissipate heat more effectively. This means relays can be placed closer together on circuit boards with no worry of overheating, and no loss of accuracy or function.



We invite you to examine
the full range of Omron
products including the
entire MOS FET line up at
www.omron.com/oei

Low Signal Relays

Get the best reliability, the lowest power, high surge-withstand capability, and the most options in PCB and SMT packages. Omron has developed the smallest electromechanical relays (EMR) in overall size and the industry's most efficient and innovative armature.

Power PCB Relays

Regardless of space constraints, Omron's power PCB relays deliver high capacity power switching (3-30 A) in a PCB-mounted component. Our models offer a variety of sizes and options to meet the many spacing and high ambient temperature requirements of any application.

General Purpose Relays

With a large selection of mounting styles and product features plus their ability to handle high current, Omron's general purpose relays are ideal for a wide range of control applications. They offer an operating amperage range of 5-200 A, and operate at 50/60 Hz with multiple coil voltages available.

Solid State Relays

Whether you have to switch a 1 A load or a 150 A load, eliminate contact bounce or arcing, or need high I/O isolation, Omron has the solid state relay for you. Our broad product line includes models with integrated heat sinks, color coded I/O modules, and equivalent EMR footprints.

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