

PhotoMOS CC Series

Solid-State Relays

Capacitive-Coupled Isolation for High-Temp and Small-Size

Panasonic is pleased to introduce the next generation of sub-miniature solid-state relay technology. The PhotoMOS CC Series is a revolution in size and performance. The internal switching mechanism contains an oscillation circuit as well as a built-in Capacitor-Coupled Isolation driver IC. This differs from traditional PhotoMOS products which use an optical coupled isolation.

By replacing the LED circuit, the package size can be substantially decreased, while also lowering power consumption. For high-density mounting applications, the TSON package of the PhotoMOS CC Series requires 46% less board space than SON package types. The temperature performance also increases with guaranteed performance up to 105C, for industrial applications. This robust performance is enhanced with a fast switching speed, which is afforded by a voltage driven input circuit. LED based models use a current driven method, which inherently has a slower response.

Feature	Benefit
Sub-Miniature TSON Package (0.8 x 1.95 x 1.8 mm)	Saves Space and Facilitated High-Density Mounting
Low-Current Consumption of 0.2A Max.	Energy Savings
High-Temp Performance, Guaranteed up to 105C	Robust Performance in Industrial Applications
Voltage Driven Input Circuit	Faster Switching Speeds

Market Sectors / Industries	Applications
Test & Measurement	IC Tester, Probe Card, Board Tester
Telecommunications	Network Switches, Modems, Multiplexers
Industrial Electronics	Electric and Gas Meters
Security	Cameras, Fire Alarms, Smoke/Heat Detectors

How it Works:

When signal voltage is applied to the input terminal, the oscillation circuit in the driver IC operates. The oscillating input signal is converted to DC voltage by the rectifier circuit after passing through the isolation capacitor in the driver IC. The DC voltage that was converted then passes through the control circuit in the driver IC and charges the MOSFET gate on the output side. When the gate voltage of MOSFET supplied from the driver IC reaches a preset voltage value, the MOSFET begins to conduct and turns on the load.

