

4pin SO6 package photorelays with 110°C max operating temperature

TLP172AM, TLP172GM

Double-mold structure halogen-free products that feature isolation voltage up to 3750 Vrms added to lineup

Toshiba launched two new products to expand its lineup of photorelays for use in measuring equipment, security systems and other applications. The photorelays have 4pin SO6 package that can operate at a maximum temperature of 110°C. The new photorelays are halogen-free*¹ with a double mold structure featuring isolation voltage of up to 3750 Vrms.

“TLP172AM” and “TLP172GM” utilize developed as specification improvement products of TLP172A and TLP172G. The new products are pin-compatible versions of Toshiba existing 2.54SOP package products with the current products. A double-mold structure improves minimum voltage isolation to 3750 Vrms against the 1500 Vrms of the current products.

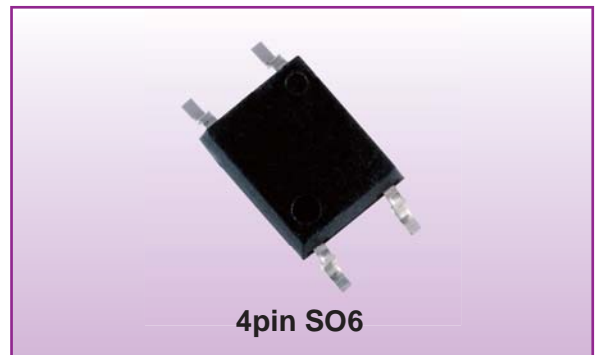
Applications

- Factory Automation (FA) equipment
- Battery Management Systems (BMS)
- Security system
- Thermostat (HVAC*²)
- Communication facilities
- IoT associated equipment
- Replacement of mechanical relay



FA equipment

External View



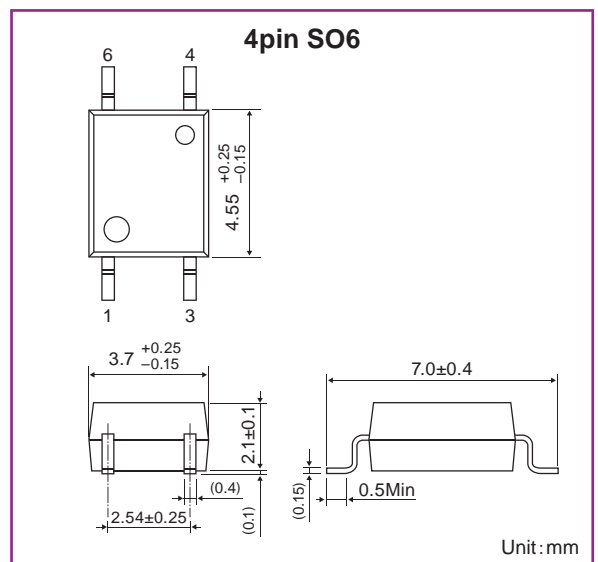
Features

- 4pin SO6 package with a max height of 2.3 mm
- High operating temperature rating: $T_{opr\ max}=110^{\circ}C$
- High isolation voltage: $BV_S=3750\ Vrms\ (min)$
- Halogen-free
- Large ON-state current rating: $I_{ON}=0.5\ A\ (TLP172AM)$

*1: Toshiba Corporation Storage & Electronic Devices Solutions Company defines halogen-free and antimony-free products as those meeting all of the following requirements: (a) containing bromine (Br) and chlorine (Cl) at no more than 900 parts per million (ppm) by weight for each element, and containing bromine and chlorine in an aggregate amount not exceeding 1500 ppm by weight; and (b) containing no more than 1000 ppm antimony (Sb) by weight. For the avoidance of doubt, Halogen-Free/Antimony-Free products may not be entirely free of bromine, chlorine, or antimony, and may contain other element of the halogen family.

*2: Heating, Ventilation, and Air Conditioning (HVAC)

Outline Drawing



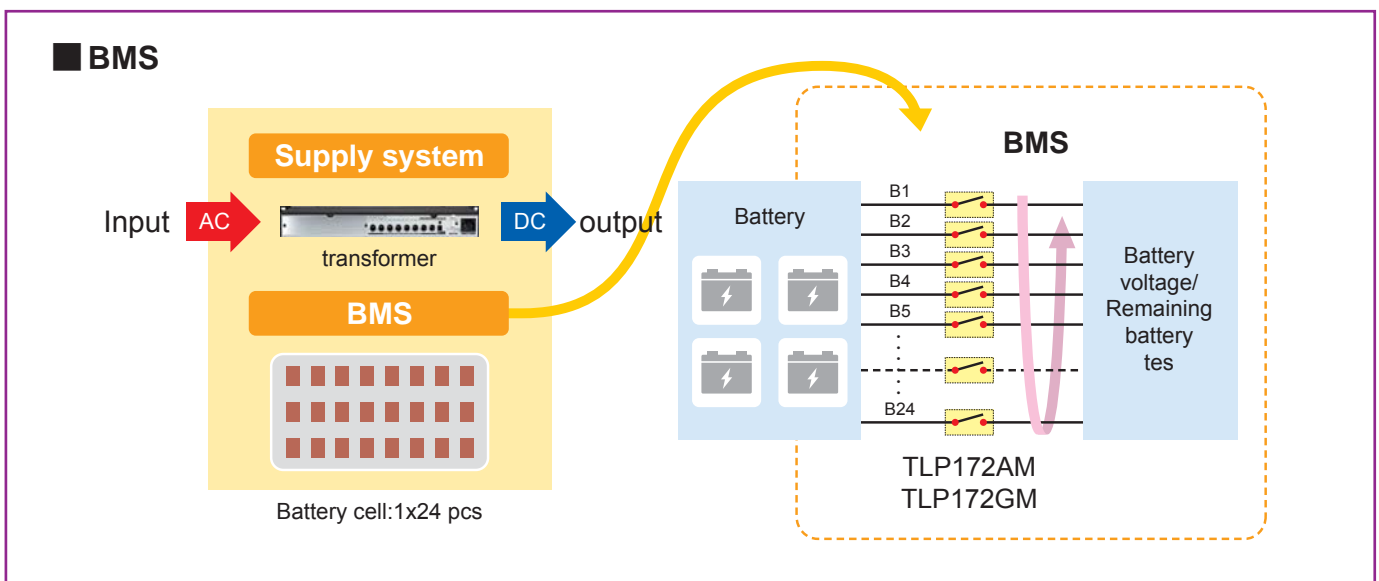
Main Specifications

(@T_a=25°C)

Part number		TLP172A	TLP172AM ^{※3}	TLP172G	TLP172GM ^{※3}
Form		1 Form A			
Package		2.54SOP4	4 pin SO6	2.54SOP4	4 pin SO6
Absolute maximum ratings	Operating temperature T _{opr} (°C)	-40 to 85	-40 to 110	-40 to 85	-40 to 110
	OFF-state output terminal voltage V _{OFF} (V)	60		350	
	ON-state current I _{ON} (A)	0.4	0.5	0.11	
	ON-state current (pulsed) I _{ONP} (A)	1.2	1.5	0.33	
Trigger LED current I _{FT} max (mA)		3			
ON-state resistance R _{ON} max (Ω)		2		50	
Isolation voltage BV _S min (Vrms)		1500	3750	1500	3750
Turn-on time t _{ON} max (ms)		2		1	
Turn-off time t _{OFF} min (ms)		0.5		1	

※3: New product

Circuit Example



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