

TOSHIBA PHOTOCOUPLER GaAlAs IRED & PHOTO-IC

# TLP706F

## Intelligent power module signal isolation

### Industrial inverters

### Motor drive

The Toshiba TLP706F consists of a GaAlAs light-emitting diode and an integrated high-gain, high-speed photodetector. The TLP706F is suitable for isolating input control signals to intelligent power modules. This unit is a 6-pin SDIP. The TLP706F is 50% smaller than the 8-PIN DIP and meets the reinforced insulation class requirements of international safety standards. Therefore the mounting area can be reduced in equipment requiring safety standard certification.

The detector has a totem pole output stage to provide both source and sink driving. The detector IC has an internal shield that provides a guaranteed common-mode transient immunity of 10 kV/μs.

The TLP706F is buffer logic type. For inverter logic type, the TLP702F is in line-up.

Absolute Maximum ratings and electrical characteristics are the same as The TLP706 technical data sheets.

- Buffer logic type ( totem pole output )
- Pb Free
- Guaranteed performance over temperature : -40~100°C
- Power supply voltage : 4.5~20 V
- Input current:  $I_{FHL} = 5 \text{ mA (max.)}$
- Switching time (  $t_{pLH} / t_{pHL}$  ) : 600 ns (max.)
- Common-mode transient immunity :  $\pm 10 \text{ kV}/\mu\text{s}$  (min)
- Isolation voltage : 5000 Vrms (min)
- UL Recognized :UL1577, File No.E67349
- Option (D4)

TÜV Approved : DIN EN60747-5-2

No.R50033433

Maximum Operating Insulation Voltage : 1140V<sub>PK</sub>

Highest Permissible Over Voltage : 8000V<sub>PK</sub>

**(Note) : When a EN60747-5-2 approved type is needed,**

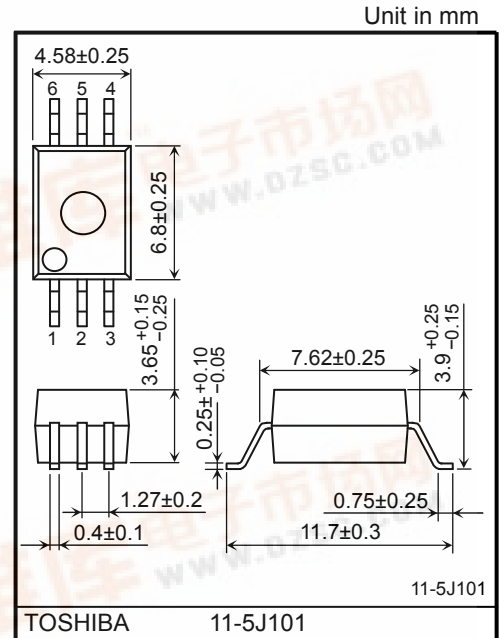
**Please designate "Option(D4)"**

- Construction Mechanical Rating

Creepage Distance	8.0 mm (min)
Clearance	8.0 mm (min)
Insulation Thickness	0.4 mm (min)

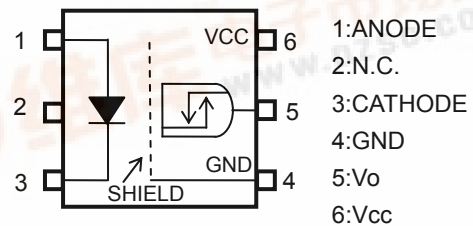
### Truth Table

Input	LED	Tr1	Tr2	Output
H	ON	ON	OFF	H
L	OFF	OFF	ON	L

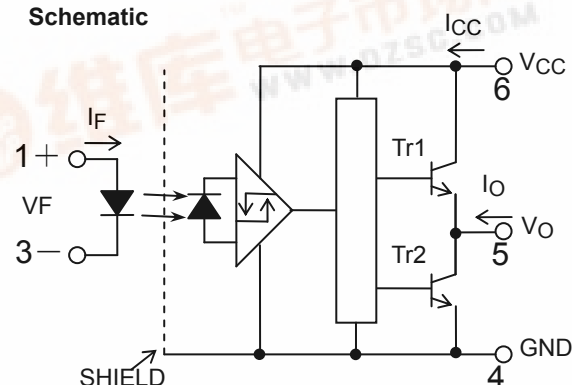


Weight: 0.26 g (typ.)

### Pin Configuration (Top View)



### Schematic



0.1 μF bypass capacitor must be connected between pins 6 and 4. (Note 4)



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20070701-EN

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