

**Preliminary**

TOSHIBA Photocoupler GaAlAs IRED + Photo IC

## TLP701F

INDUSTRIAL INVERTERS

INVERTER FOR AIR CONDITIONERS

IGBT/POWER MOS FET GATE DRIVE

The TOSHIBA TLP701F consists of a GaAlAs light-emitting diode and an integrated photodetector.

This unit is 6-lead SDIP package. The TLP701F 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 TLP701F is suitable for gate driving circuits for IGBTs or power MOSFETs. In particular, the TLP701F is capable of "direct" gate driving of low-power IGBTs.

Maximum ratings and electrical characteristics are the same as The TLP701 technical data sheets.

- Peak output current :  $\pm 0.6$  A (max)
- Guaranteed performance over temperature :  $-40$  to  $100^{\circ}\text{C}$
- Supply current : 2 mA (max)
- Power supply voltage : 10 to 30 V
- Threshold input current :  $I_{FLH} = 5$  mA (max)
- Switching time ( $t_{PLH} / t_{PHL}$ ) : 700 ns (max)
- Common mode transient immunity :  $\pm 10$  kV/ $\mu\text{s}$  (min)
- Isolation voltage : 5000 Vrms (min)
- Construction mechanical rating

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

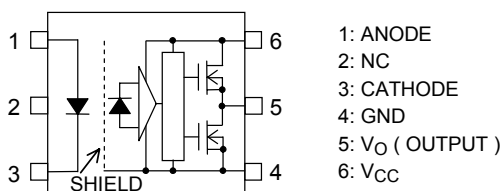
- UL Recognized : UL1577, File No. E67349
- Option (D4)  
TÜV approved : EN60747-5-2  
Certificate No. R50033433  
Maximum operating insulation voltage : 1140 Vpk  
Highest permissible over voltage : 8000 Vpk

( Note ) When a EN60747-5-2 approved type is needed,  
please designate the "Option(D4)"

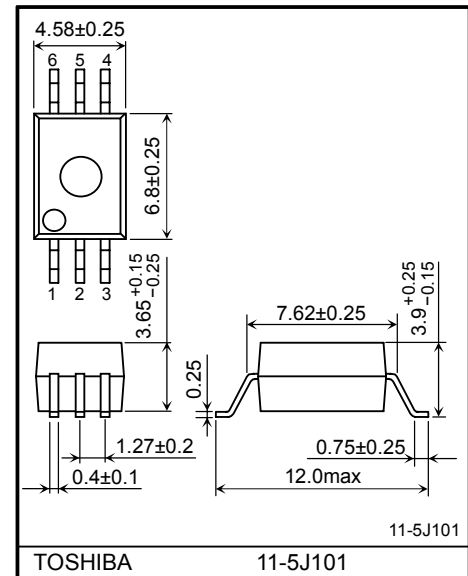
### Truth Table

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

### Pin Configuration (Top View)

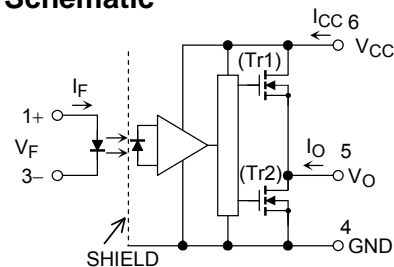


Unit in mm



Weight: 0.26 g (typ.)

### Schematic



A 0.1- $\mu\text{F}$  bypass capacitor must be connected between pins 6 and 4. (See Note 6.)

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