

TOSHIBA Photocoupler GaAlAs IRED + Photo IC

## TLP701F

Industrial Inverters

Inverter for Air Conditioners

IGBT/Power MOSFET Gate Drive

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.

Absolute 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

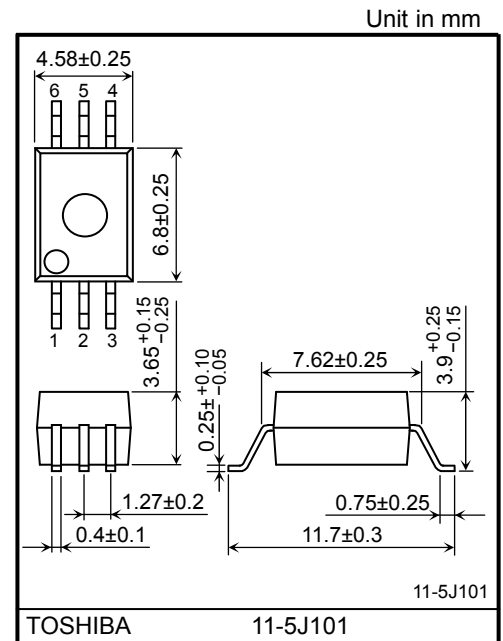
Creepage Distance	8.0 mm (min)
Clearance	8.0 mm (min)
Insulation Thickness	0.4 mm (min)

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

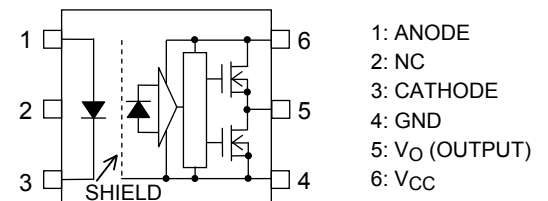
### Truth Table

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

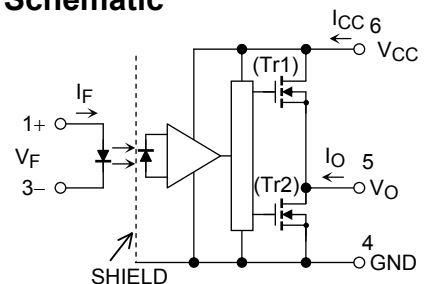


Weight : 0.26 g (typ.)

### Pin Configuration (Top View)



### Schematic



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

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20070701-EN

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