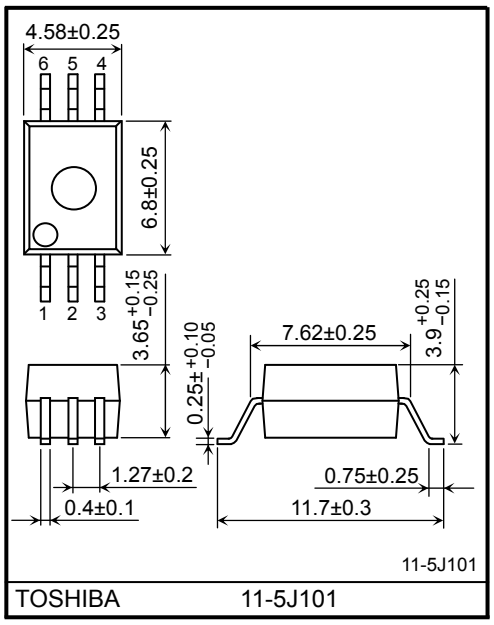
TOSHIBA Photocoupler GaAℓAs IRED + Photo IC

# TLP705F

Plasma Display Panel
Industrial Inverter
IGBT/Power MOSFET Gate Drive

Unit in mm




Weight : 0.26 g (typ.)

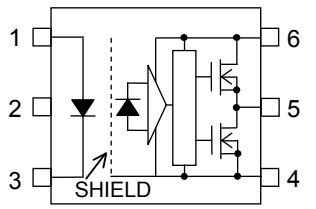
TLP705F consists of a GaAℓAs light emitting diode and a integrated photodetector.
This unit is 6-lead SDIP package. TLP705F is 50% smaller than 8PIN DIP and has suited the safety standard reinforced insulation class.
So mounting area in safety standard required equipment can be reduced.
TLP705F is suitable for gate driving circuit of IGBT or power MOS FET.
Especially TLP705F is capable of “direct” gate drive of lower Power IGBTs.
Absolute Maximum ratings and electrical characteristics are the same as The TLP705 technical data sheets.

- Peak output current : ±0.45 A (max)
- Operating frequency : 250kHz (max)
- Guaranteed performance over temperature : −40 to 100°C
- Supply current : 3mA (max)
- Power supply voltage : 10 to 20 V
- Threshold input current : $I_{FLH}$ = 8 mA (max)
- Switching time ($t_{pLH}$ / $t_{pHL}$) : 200 ns (max)
- Common mode transient immunity : ±10 kV/μs(min)
- Isolation voltage : 5000 Vrms(min)
- UL Recognized :UL1577, File No.E67349
- Construction Mechanical Rating

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

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

## Pin Configuration (top view)

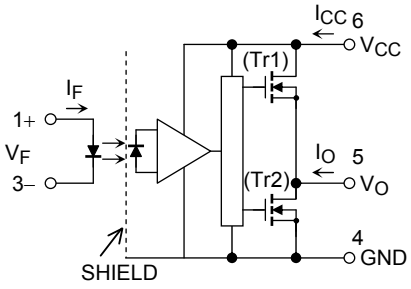



1: Anode
2: NC
3: Cathode
4: GND
5: $V_O$ (output)
6: $V_{CC}$

## Truth Table

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

## Schematic




A 0.1 μF bypass capacitor must be connected between pin 6 and 4. (See Note 6)

## RESTRICTIONS ON PRODUCT USE

20070701-EN

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  In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the “Handling Guide for Semiconductor Devices,” or “TOSHIBA Semiconductor Reliability Handbook” etc.
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- GaAs(Gallium Arsenide) is used in this product. The dust or vapor is harmful to the human body. Do not break, cut, crush or dissolve chemically.
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