TOSHIBA Photocoupler GaAs IRed & Photo-Transistor

## TLP421F

Office Equipment

Household Appliances

Solid State Relays

**Switching Power Supplies** 

Various Controllers

Signal Transmission Between Different Voltage Circuits

The TOSHIBA TLP421F consists of a silicone photo–transistor optically coupled to a gallium arsenide infrared emitting diode in a four lead plastic DIP (DIP4) with having high isolation voltage (AC: 5kV<sub>RMS</sub> (min)).

Absolute maximum ratings and electrical characteristics are the same as TLP421 technical datasheet.

• Collector-emitter voltage: 80V (min)

• Current transfer ratio: 50% (min)

Rank GB: 100% (min)

• Isolation voltage: 5000 V<sub>rms</sub> (min)

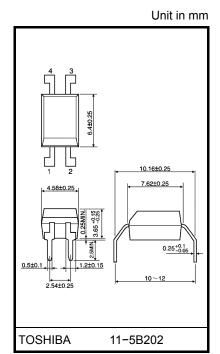
• UL recognized: UL1577

• BSI approved: BS EN60065: 2002

Approved no. 8411 BS EN60950-1: 2002 Approved no. 8412

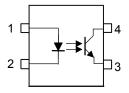
• SEMKO approved: EN60065, EN60950, EN60335

Approved no. 9910249 / 01



Weight: 0.26 g

## Pin Configurations (top view)



1: ANODE

2: CATHODE

3: EMITTER

4: COLLECTOR

• Option (D4) type

TUV approved: DIN EN 60747-5-2

Approved no. 40010944

Maximum operating insulation voltage:  $1130 V_{PK}$  Maximum permissible over voltage:  $8000 V_{PK}$ 

(Note): When an EN 60747-5-2 approved type is needed, please designate the " Option (D4) "

Making VDE application: DIN EN 60747-5-2

• Construction mechanical rating

	10.16mm pitch TLP421F type
Creepage distance	8.0 mm (min)
Clearance	8.0 mm (min)
Insulation thickness	0.4 mm (min)

2

## **RESTRICTIONS ON PRODUCT USE**

20070701-EN

- The information contained herein is subject to change without notice.
- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property.
  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.
- The TOSHIBA products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These TOSHIBA products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury ("Unintended Usage"). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of TOSHIBA products listed in his document shall be made at the customer's own risk.
- The products described in this document shall not be used or embedded to any downstream products of which manufacture, use and/or sale are prohibited under any applicable laws and regulations.
- The information contained herein is presented only as a guide for the applications of our products. No
  responsibility is assumed by TOSHIBA for any infringements of patents or other rights of the third parties which
  may result from its use. No license is granted by implication or otherwise under any patents or other rights of
  TOSHIBA or the third parties.
- 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.
- Please contact your sales representative for product-by-product details in this document regarding RoHS
  compatibility. Please use these products in this document in compliance with all applicable laws and regulations
  that regulate the inclusion or use of controlled substances. Toshiba assumes no liability for damage or losses
  occurring as a result of noncompliance with applicable laws and regulations.

3