

TLP3064

- Office Machine
- Household Use Equipment
- Triac Driver
- Solid State Relay

The TOSHIBA TLP3064 consists of a zero voltage crossing turn-on photo-triac optically coupled to a GaAlAs infrared emitting diode in a six lead plastic DIP package.

- Peak off-state voltage: 600V(min.)
- Trigger LED current: 3mA(max.)
- On-state current: 100mA(max.)
- Isolation voltage: 5000Vrms(min.)
- UL recognized: UL1577, file no. E67349
- Option(D4) type

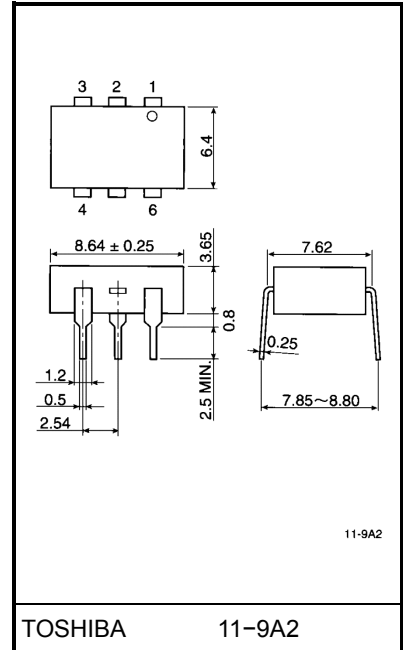
VDE approved: DIN VDE0884 / 06.92,
Certificate no.83649

Maximum operating insulation voltage: 890V_{PK}
Highest permissible over voltage: 8000V_{PK}

(Note) When a VDE0884 approved type is needed, please designate the "Option(D4)"

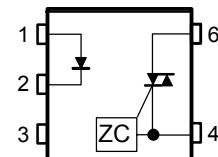
- | | | |
|-----------------------------------|-------------------------------------|----------------------------------|
| | 7.62mm pich <u>standard type</u> | 10.16mm pich <u>(LF2)type</u> |
| • Creepage distance: 7.0mm(min.) | 8.0mm(min.) | 8.0mm(min.) |
| Clearance: 7.0mm(min.) | 8.0mm(min.) | 8.0mm(min.) |
| Insulation thickness: 0.5mm(min.) | 0.5mm(min.) | 0.5mm(min.) |

Unit in mm



Weight: 0.44 g

Pin Configurations(top view)



- 1: ANODE
 - 2: CATHODE
 - 3: N.C.
 - 4: TERMINAL 1
 - 6: TERMINAL 2
- (ZC : Zero-cross Circuit)

Maximum Ratings (Ta = 25°C)

| Characteristic | | Symbol | Rating | Unit |
|---|--|-------------------------------|--------|---------|
| LED | Forward current | I_F | 30 | mA |
| | Forward current derating (Ta ≥ 25°C) | $\Delta I_F / ^\circ\text{C}$ | -0.3 | mA / °C |
| | Peak forward current (100µs pulse, 100pps) | I_{FP} | 1 | A |
| | Reverse voltage | V_R | 5 | V |
| | Junction temperature | T_j | 125 | °C |
| Detector | Off-state output terminal voltage | V_{DRM} | 600 | V |
| | On-state RMS current | Ta=25°C | 100 | mA |
| | | Ta=70°C | 50 | |
| | On-state current derating (Ta ≥ 25°C) | $\Delta I_T / ^\circ\text{C}$ | -1.1 | mA / °C |
| | Peak on-state current (100µs pulse, 120pps) | I_{TP} | 2 | A |
| | Peak nonrepetitive surge current (PW=10ms, DC=10%) | I_{TSM} | 1.2 | A |
| | Junction temperature | T_j | 115 | °C |
| Storage temperature range | T_{stg} | -55~150 | °C | |
| Operating temperature range | T_{opr} | -40~100 | °C | |
| Lead soldering temperature (10s) | T_{sol} | 260 | °C | |
| Isolation voltage (AC, 1min., R.H. ≤ 60%) | BV_S | 5000 | Vrms | |

(Note 1) Device considered a two terminal device=Pins 1, 2 and 3 shorted together and pins 4 and 6 shorted together.

Recommended Operating Conditions

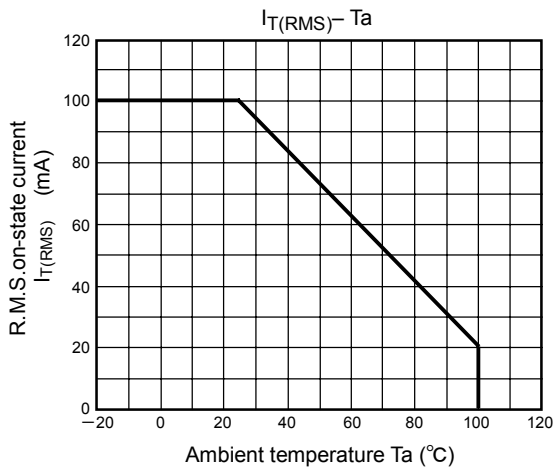
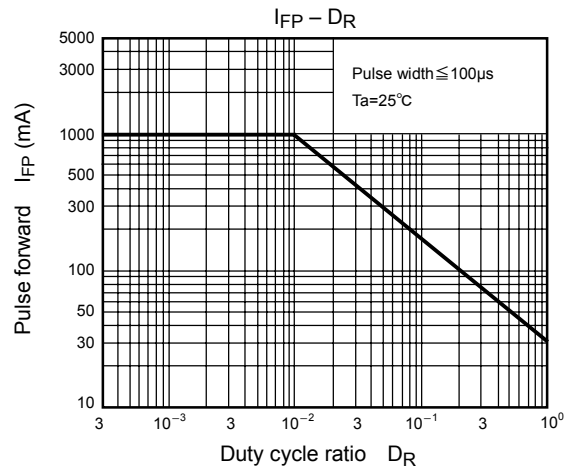
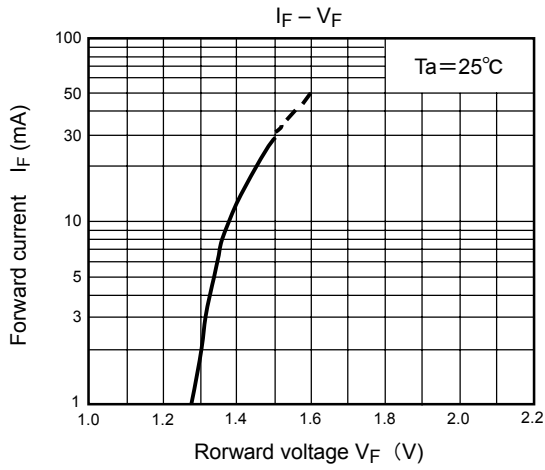
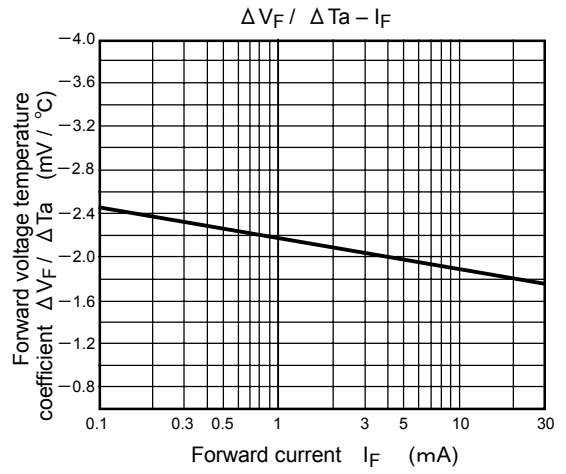
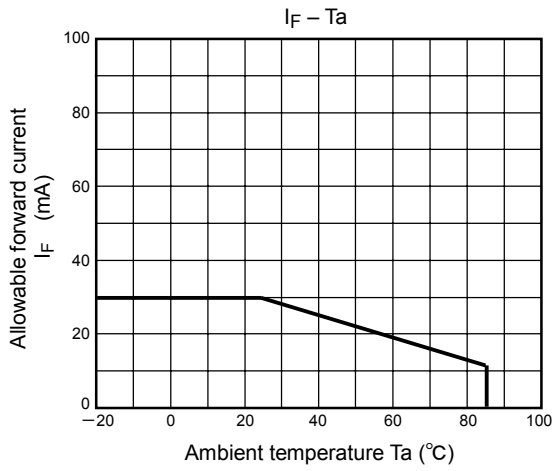
| Characteristic | Symbol | Min. | Typ. | Max. | Unit |
|-----------------------|-----------|------|------|------|------|
| Supply voltage | V_{AC} | — | — | 240 | Vac |
| Forward current | I_F | 4.5 | 6 | 7.5 | mA |
| Peak on-state current | I_{TP} | — | — | 1 | A |
| Operating temperature | T_{opr} | -10 | — | 85 | °C |

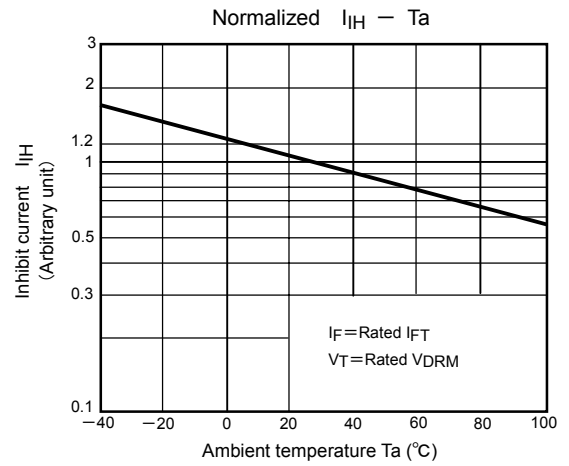
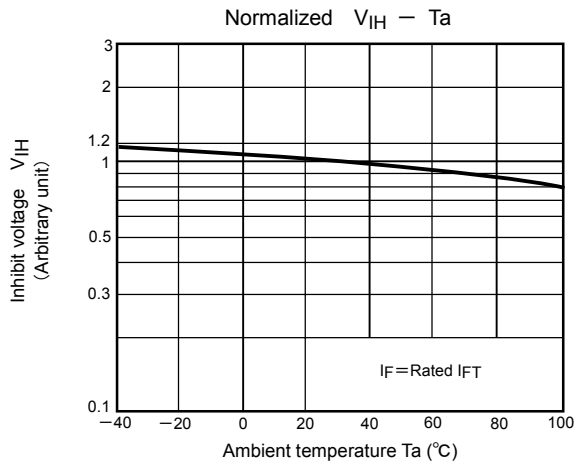
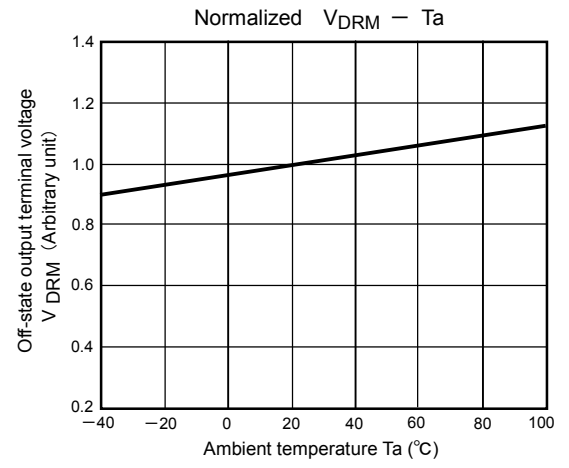
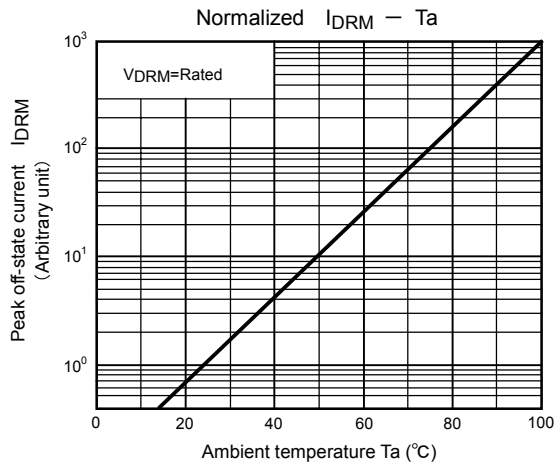
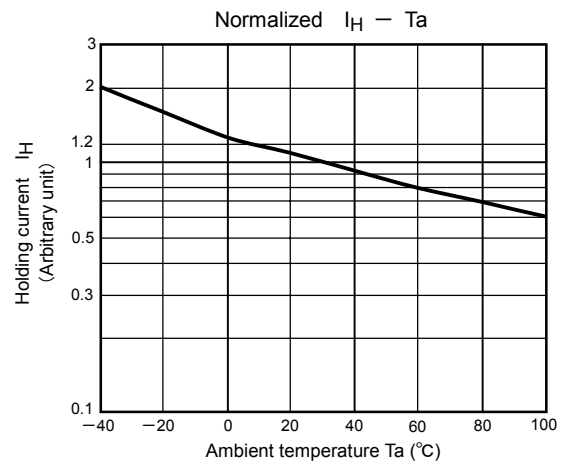
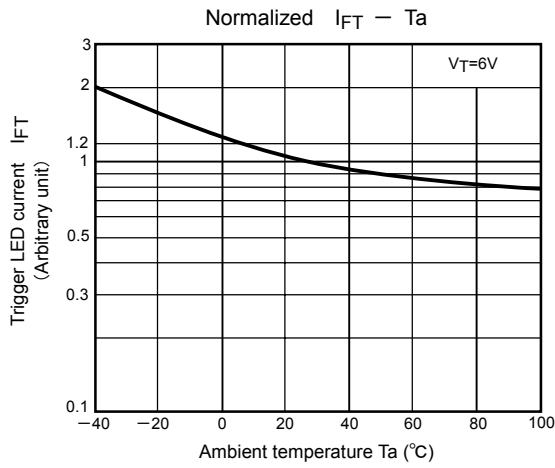
Individual Electrical Characteristics (Ta = 25°C)

| Characteristic | | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|----------------|--|------------|--|------|------|------|-------------------|
| LED | Forward voltage | V_F | $I_F=10\text{mA}$ | 1.2 | 1.4 | 1.7 | V |
| | Reverse current | I_R | $V_R=3\text{V}$ | — | — | 10 | μA |
| | Capacitance | C_T | $V=0, f=1\text{MHz}$ | — | 30 | — | pF |
| Detector | Peak off-state current | I_{DRM} | $V_{DRM}=600\text{V}$ | — | 10 | 1000 | nA |
| | Peak on-state voltage | V_{TM} | $I_{TM}=100\text{mA}$ | — | — | 3.0 | V |
| | Holding current | I_H | — | — | 0.6 | — | mA |
| | Critical rate of rise of off-state voltage | dv/dt | $V_{in}=240\text{rms}$ $T_a=85^\circ\text{C}$ | 200 | 500 | — | V / μs |
| | Critical rate of rise of commutating voltage | $dv/dt(c)$ | $V_{in}=60\text{Vrms}$ $I_T=15\text{mA rms}$ | — | 0.2 | — | V / μs |

Coupled Electrical Characteristics (Ta = 25°C)

| Characteristics | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|-----------------------------|----------|---|--------------------|-----------|------|---------------|
| Trigger LED current | I_{FT} | $V_T=6\text{V}$, resistive load | — | — | 3 | mA |
| Inhibit voltage | V_{IH} | $I_F=\text{rated } I_{FT}$ | — | — | 50 | V |
| Leakage in inhibited state | I_{IH} | $I_F=\text{rated } I_{FT}$ $V_T=\text{rated } V_{DRM}$ | — | — | 600 | μA |
| Capacitance input to output | C_S | $V_S=0, f=1\text{MHz}$ | — | 0.8 | — | pF |
| Isolation resistance | R_S | $V_S=500\text{V}$, R.H. $\leq 60\%$ | 1×10^{12} | 10^{14} | — | Ω |
| Isolation voltage | BV_S | AC, 1 minute | 5000 | — | — | Vrms |
| | | AC, 1 second, in oil | — | 10000 | — | Vrms |
| | | DC, 1 minute, in oil | — | 10000 | — | Vdc |





RESTRICTIONS ON PRODUCT USE

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