

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

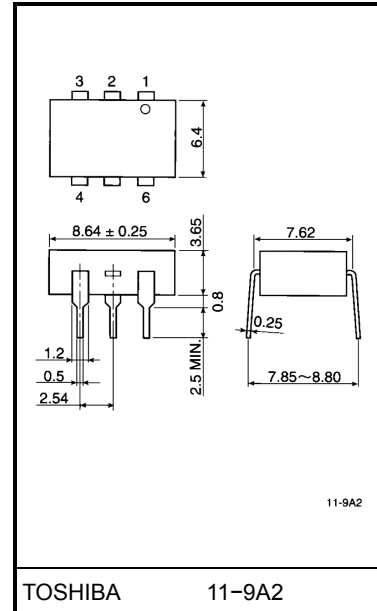
VDE approved: DIN VDE0884 / 06.92,
Certificate no.83649

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)"

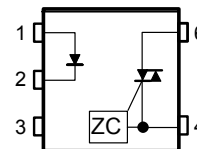
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|-----------------------------------|----------------------|------------------|
| | 7.62mm pich | 10.16mm pich |
| | <u>standard type</u> | <u>(LF2)type</u> |
| • Creepage distance: 7.0mm(min.) | 8.0mm(min.) | 8.0mm(min.) |
| Clearance: 7.0mm(min.) | 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%) (Note 1)		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

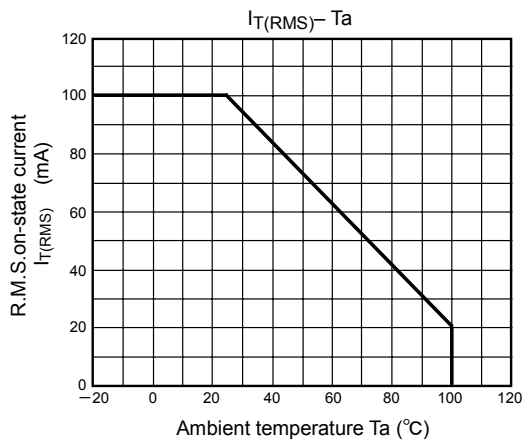
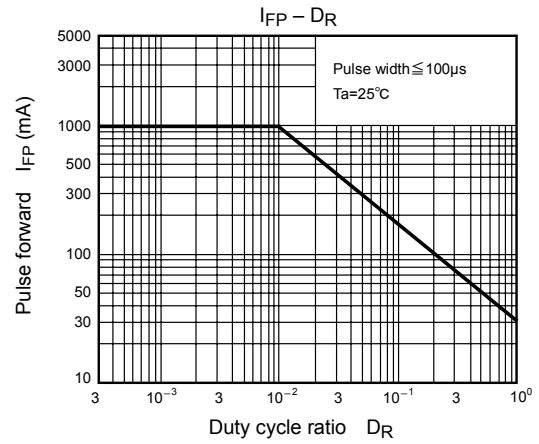
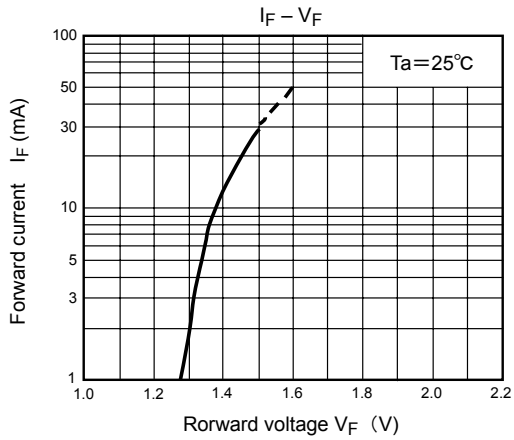
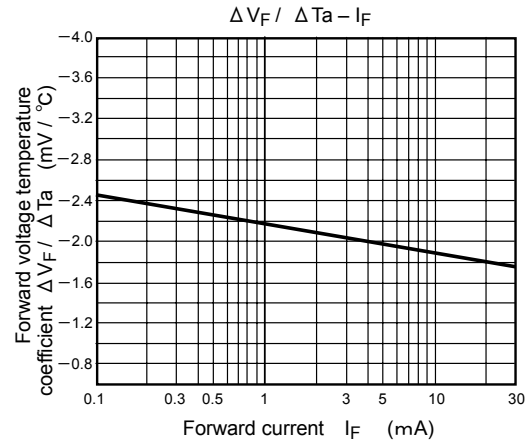
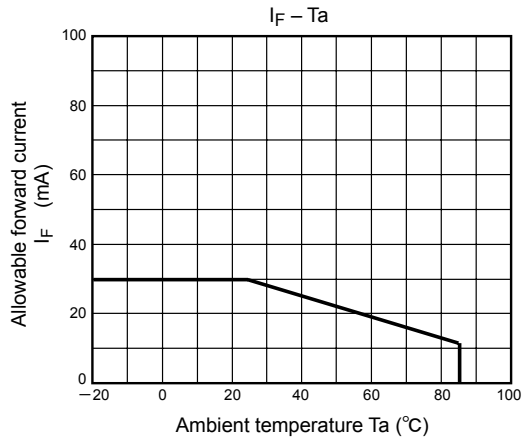
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	V_{AC}	—	—	240	Vac
Forward current	I_F	4.5	6	7.5	mA
Peak on-state current	I_{TP}	—	—	1	A
Operating temperature	T_{opr}	-10	—	85	°C

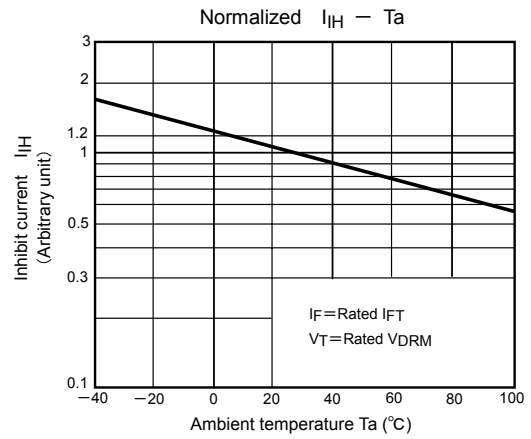
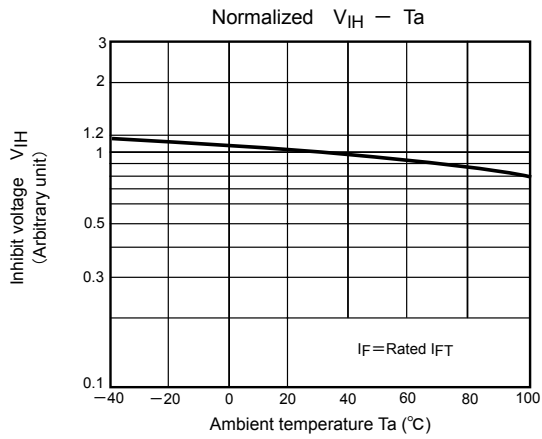
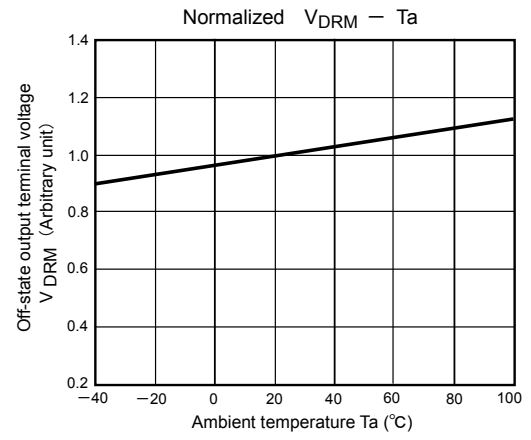
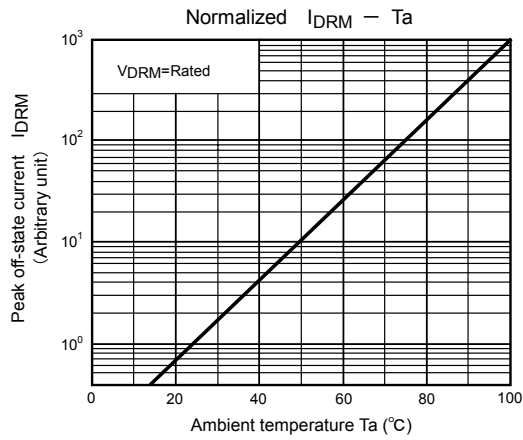
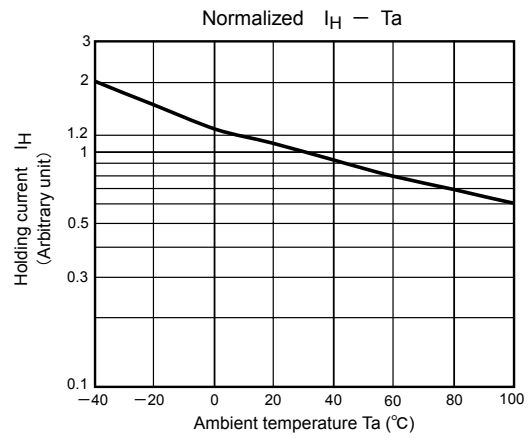
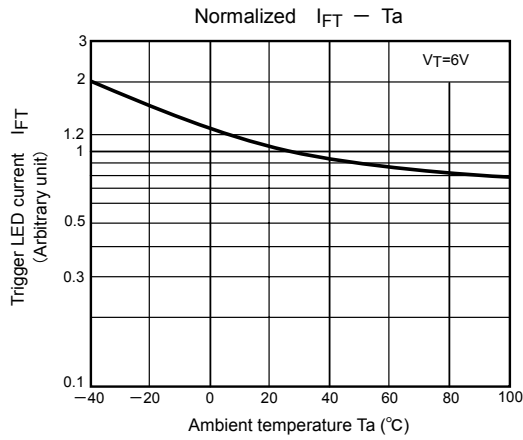
Individual Electrical Characteristics (Ta = 25°C)

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	—	
		DC, 1 minute, in oil	—	10000	—	Vdc





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