

**TENTATIVE**

TOSHIBA Photocoupler GaAs IRed+Photo-Triac

## TLP762J

Office Machine  
Household Use Equipment  
Triac Driver  
Solid State Relay

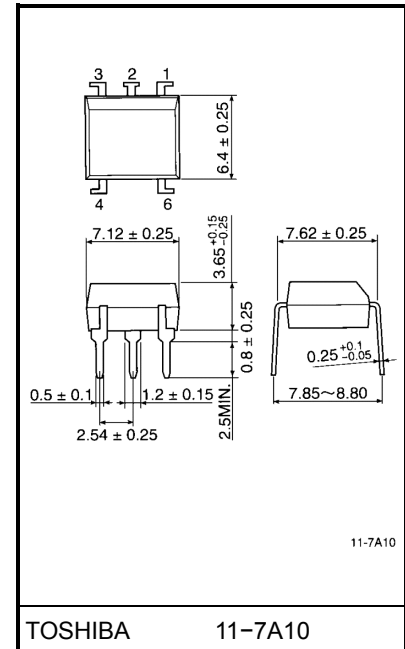
Unit in mm

The TOSHIBA TLP762J consists of a GaAs infrared LED optically coupled to a photo-triac in a 6 lead plastic DIP.

- Peak off-state voltage: 600 V (min.)
- Trigger LED current: 10 mA (max.)
- On-state current: 100 mA (max.)
- Isolation voltage: 4000 Vrms (min.)
- UL recognized: UL1577, file no. E67349
- BSI approved: BS EN60065: 1994,  
Certificate no. 7831  
BS EN60950: 1992,  
Certificate no. 7832
- SEMKO approved: SS EN60065 (EN60065, 1993)  
SS EN60950 (EN60950, 1992)  
SS EN60335 (EN60335, 1988)  
certificate no. 9522145
- Option (D4) type  
VDE approved: DIN VDE0884 / 06.92  
Certificate no. 91803  
Maximum operating insulation voltage: 890 VPK  
Highest permissible over voltage: 6000 VPK

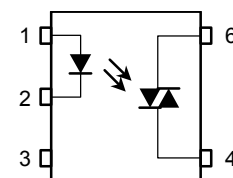
**(Note) When a VDE0884 approved type is needed,  
please designate the "option (D4)"**

	7.62 mm pitch	10.16 mm pitch
	<u>TLP762J type</u>	<u>TLP762JF type</u>
• Creepage distance:	7.0 mm (min.)	8.0 mm (min.)
Clearance:	7.0 mm (min.)	8.0 mm (min.)
Internal creepage path:	4.0 mm (min.)	4.0 mm (min.)
Insulation thickness:	0.5 mm (min.)	0.5 mm (min.)



Weight: 0.42 g

### Pin Configuration (top view)



- 1 : ANODE
- 2 : CATHODE
- 3 : N.C.
- 4 : TRIAC 1
- 6 : TRIAC 2

## Maximum Ratings (Ta = 25°C)

Characteristic		Symbol	Rating	Unit	
LED	Forward current	$I_F$	50	mA	
	Forward current derating (Ta ≥ 53°C)	$\Delta I_F / ^\circ\text{C}$	-0.7	mA / °C	
	Peak forward current (100 μs pulse, 100 pps)	$I_{FP}$	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	$I_{T(RMS)}$	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, 120 pps)	$I_{TP}$	2	A	
	Peak nonrepetitive surge current (PW = 10 ms, DC = 10%)	$I_{TSM}$	1.2	A	
	Junction temperature	$T_j$	115	°C	
Storage temperature range	$T_{stg}$	-55~125	°C		
Operating temperature range	$T_{opr}$	-40~100	°C		
Lead soldering temperature (10 s)	$T_{sol}$	260	°C		
Isolation voltage (AC, 1 min., R.H. ≤ 60%)	$BV_S$	4000	Vrms		

## Recommended Operating Conditions

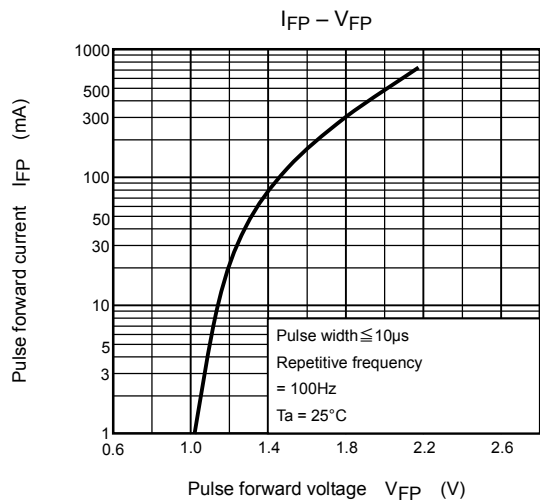
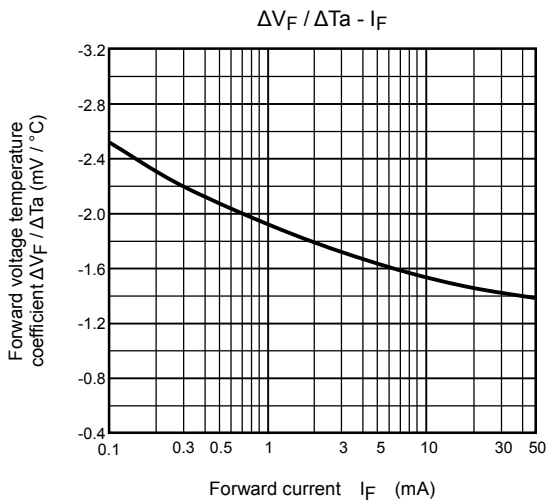
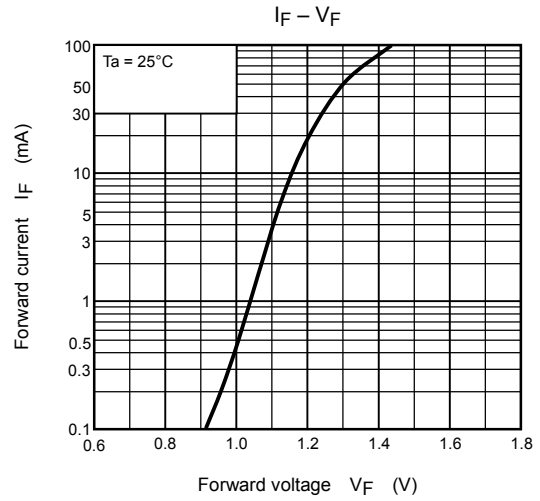
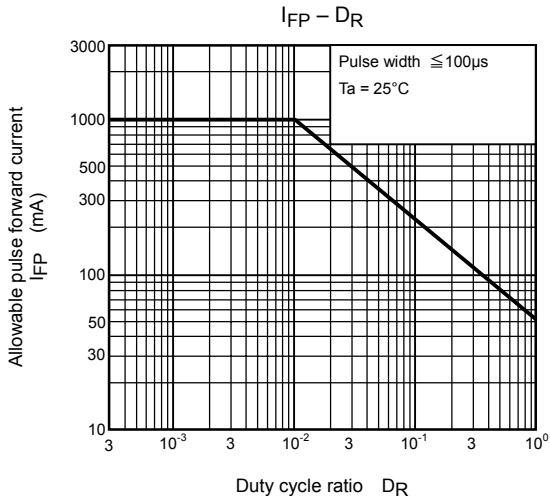
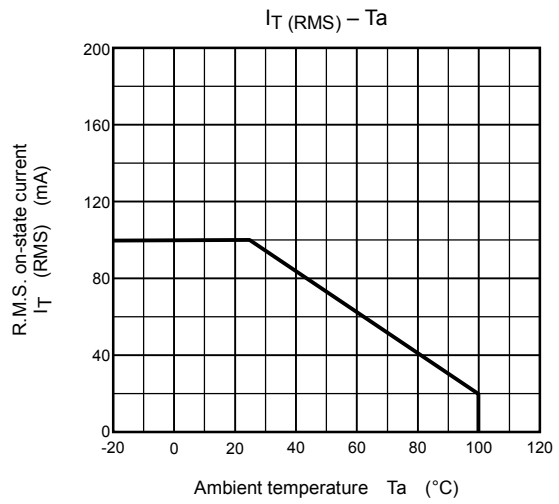
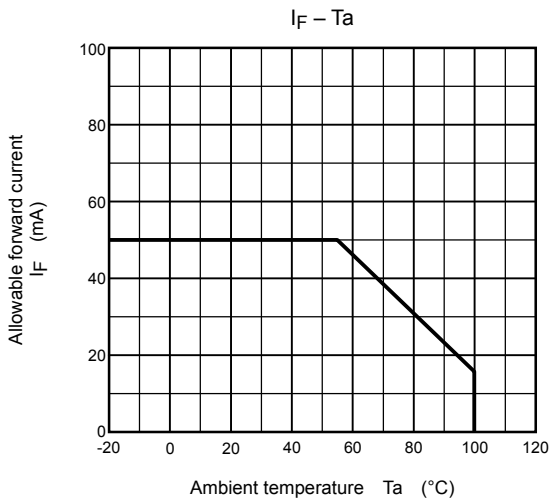
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	$V_{AC}$	—	—	240	$V_{ac}$
Forward current	$I_F$	15	20	25	mA
Peak on-state current	$I_{TP}$	—	—	1	A
Operating temperature	$T_{opr}$	-25	—	85	°C

## Individual Electrical Characteristics (Ta = 25°C)

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
LED	Forward voltage	$V_F$	$I_F = 10 \text{ mA}$	1.0	1.15	1.3	V
	Reverse current	$I_R$	$V_R = 5 \text{ V}$	—	—	10	$\mu\text{A}$
	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	$V_{TM}$	$I_{TM} = 100 \text{ mA}$	—	1.7	3.0	V
	Holding current	$I_H$	—	—	0.6	—	mA
	Critical rate of rise of off-state voltage	$dv / dt$	$V_{in} = 240 \text{ V}, T_a = 85^\circ\text{C}$	—	500	—	$\text{V} / \mu\text{s}$
	Critical rate of rise of commutating voltage	$dv / dt (c)$	$I_T = 15 \text{ mA}$ $V_{in} = 60 \text{ Vrms}$	—	0.2	—	$\text{V} / \mu\text{s}$

## Coupled Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Trigger LED current	$I_{FT}$	$V_T = 6 \text{ V}$	—	—	10	mA
Capacitance (input to output)	$C_S$	$V_S = 0, f = 1 \text{ MHz}$	—	0.8	—	pF
Isolation resistance	$R_S$	$V_S = 500 \text{ V}$	$1 \times 10^{12}$	$10^{14}$	—	$\Omega$
Isolation voltage	$BV_S$	AC, 1 minute	4000	—	—	Vrms
		AC, 1 second, in oil	—	10000	—	
		DC, 1 minute, in oil	—	10000	—	$V_{dc}$



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