

TENTATIVE

TOSHIBA Photocoupler GaAs IRed+Photo-Triac

TLP762J

Office Machine
Household Use Equipment
Triac Driver
Solid State Relay

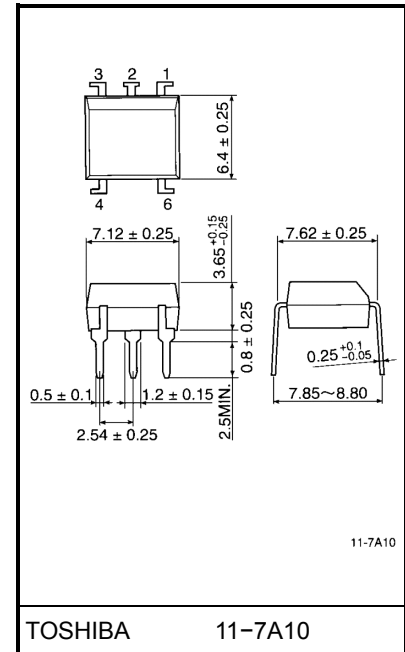
Unit in mm

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

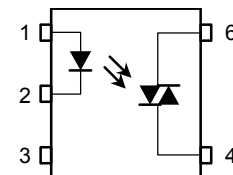
**(Note) When a VDE0884 approved type is needed,
please designate the "option (D4)"**

	7.62 mm pich	10.16 mm pich
	<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	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

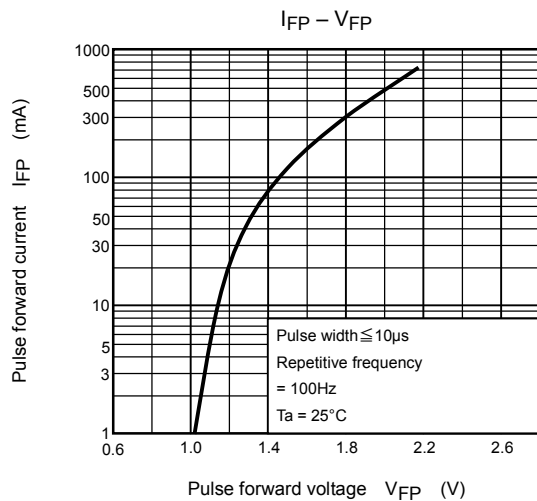
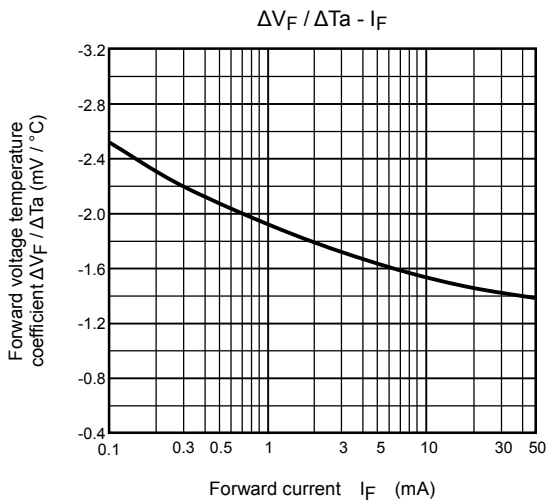
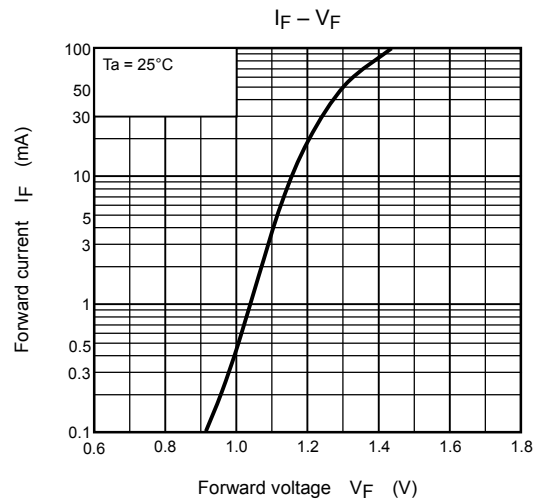
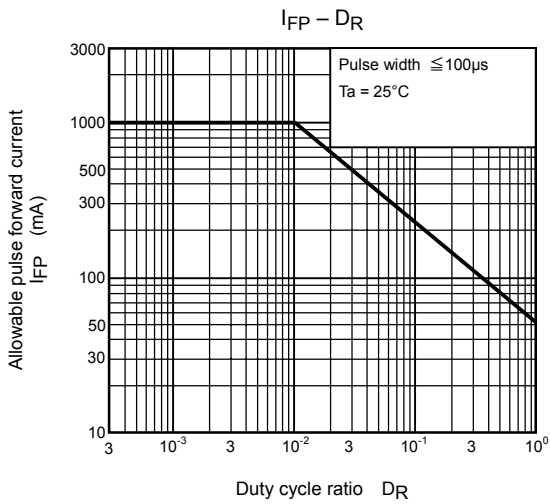
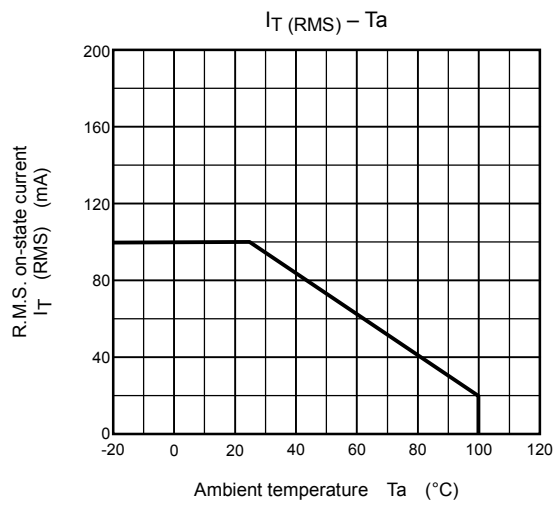
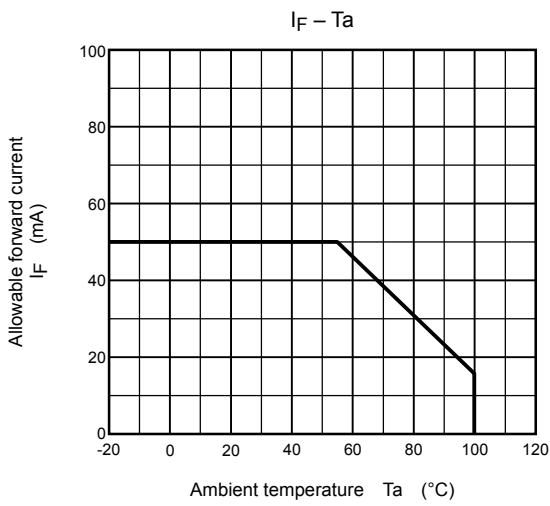
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	V_{AC}	—	—	240	V_{ac}
Forward current	I_F	15	20	25	mA
Peak on-state current	I_{TP}	—	—	1	A
Operating temperature	T_{opr}	-25	—	85	°C

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	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}	$I_{TM} = 100 \text{ mA}$	—	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	$V_S = 500 \text{ V}$	1×10^{12}	10^{14}	—	Ω
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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