

TENTATIVE

TOSHIBA Photocoupler GaAs Ired+Photo-Triac

TLP763J

Office Machine
Household Use Equipment
Triac Driver
Solid State Relay

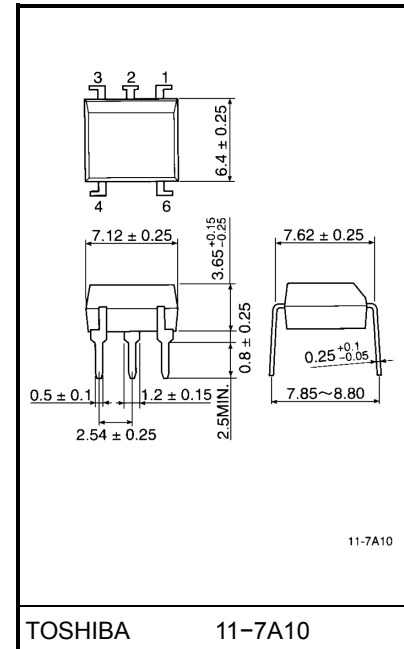
The TOSHIBA TLP763J consists of a GaAs infrared LED optically coupled to a zero voltage crossing turn-on photo-triac in a 6 lead plastic DIP.

- Peak off-state voltage: 600 V (min.)
- Trigger LED current: 10 mA (max.)
- On-state current: 100 mA (max.)
- Isolation voltage: 4000Vrms (min.)
- UL recognized: UL1577, file No. E67349
- BSI approved: BS EN60065: 1994,
Certificate No. 7831
BS EN60065: 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)"**

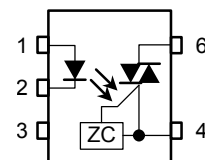
	7.62mm pich <u>TLP763J type</u>	10.16mm pich <u>TLP763JF type</u>
• Creepage distance	: 7.0mm (min.)	8.0mm (min.)
Clearance	: 7.0mm (min.)	8.0mm (min.)
Internal creepage path	: 4.0mm (min.)	4.0mm (min.)
Insulation thickness	: 0.5mm (min.)	0.5mm (min.)

Unit in mm



Weight: 0.42g

Pin Configuration (top view)



- 1 : Anode
- 2 : Cathode
- 3 : Nc
- 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, 120pps)	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 (10s)	T_{sol}	260	°C		
Isolation voltage (AC, 1 min., R.H.≤ 60%)	BV_S	4000	Vrms		

Recommended Operating Conditions

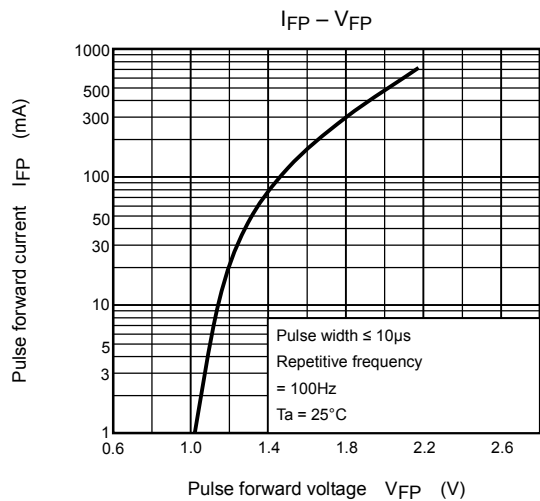
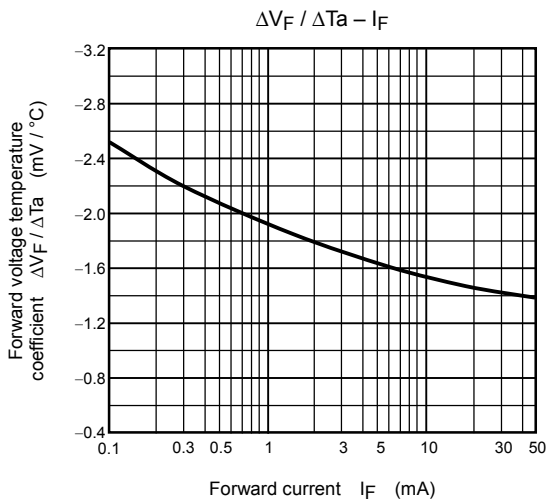
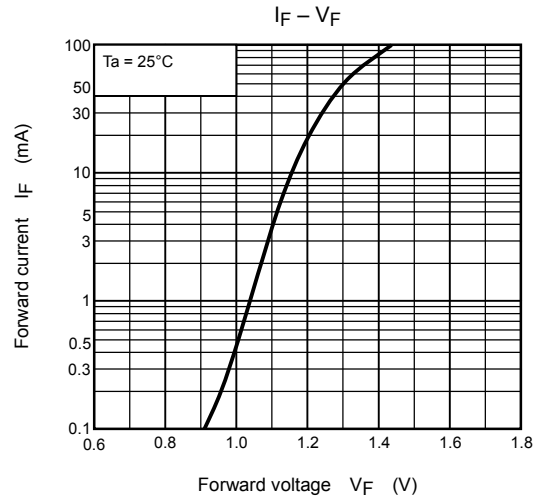
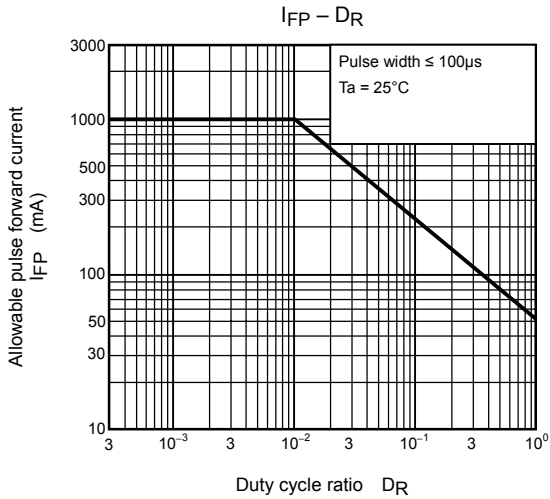
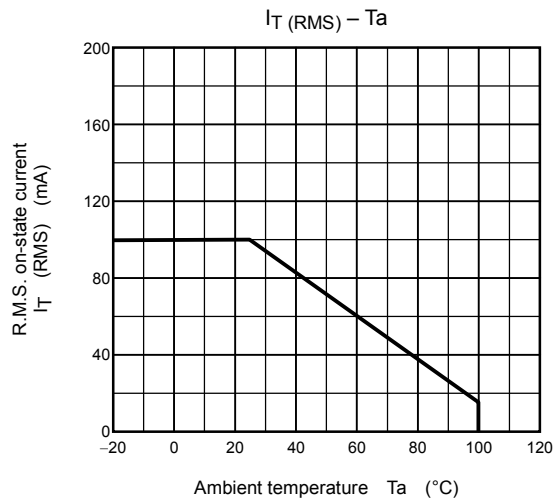
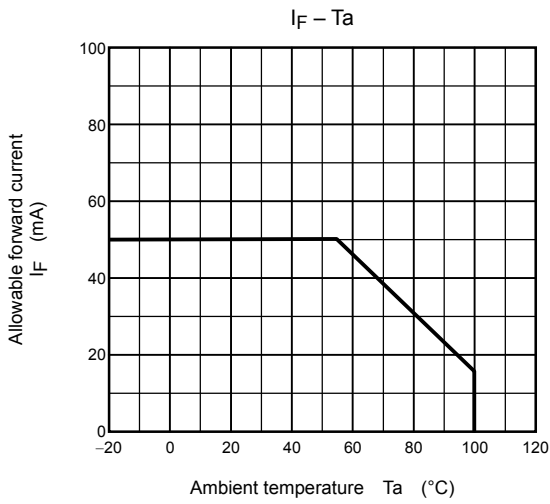
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	V_{AC}	—	—	240	V_{ac}
Forward current	I_F	15	20	25	mA
Peak on-state current	I_{TP}	—	—	1	A
Operating temperature	T_{opr}	-25	—	85	°C

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	—	V/ μs
	Critical rate of rise of commutating voltage	$dv / dt (c)$	$I_T = 15 \text{ mA}$ $V_{in} = 60\text{V}_{rms}$	—	0.2	—	V/ μs

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
Inhibit voltage	V_{IH}	$I_F = \text{rated } I_{FT}$	—	—	50	V
Leakage in inhibited state	I_{IH}	$I_F = \text{rated } I_{FT}$ $V_T = \text{rated } V_{DRM}$	—	200	600	μA
Capacitance (input to output)	C_S	$V_S = 0, f = 1 \text{ MHz}$	—	0.8	—	pF
Isolation resistance	R_S	$V_S = 500 \text{ V}$	1×10^{12}	10^{14}	—	Ω
Isolation voltage	BV_S	AC, 1 minute	4000	—	—	V_{rms}
		AC, 1 second, in oil	—	10000	—	
		DC, 1 minute, in oil	—	10000	—	V_{dc}



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