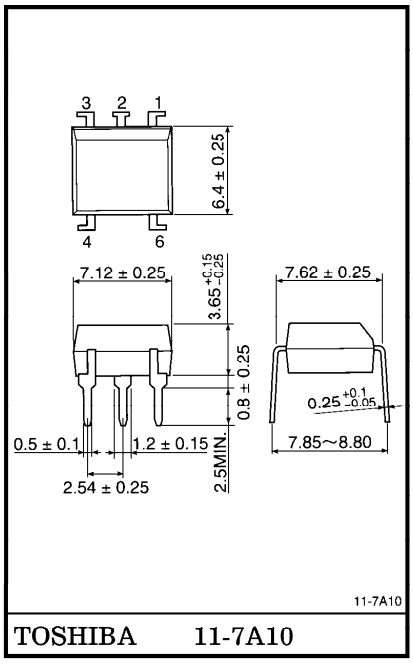
TENTATIVE TOSHIBA PHOTOCOUPLER GaAs IRED + PHOTO-TRIAC

TLP762J

OFFICE MACHINE
HOUSEHOLD USE EQUIPMENT
TRIAC DRIVER
SOLID STATE RELAY

Unit in mm



TOSHIBA 11-7A10

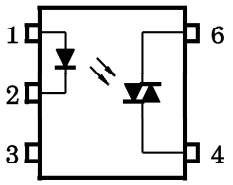
Weight : 0.42g

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 : 600V (MIN.)
- Trigger LED Current : 10mA (MAX.)
- On-State Current : 100mA (MAX.)
- Isolation Voltage : 4000Vrms (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 : 890V_{PK}
  Highest Permissible Over Voltage : 6000V_{PK}

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

PIN CONFIGURATION (TOP VIEW)



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

	7.62mm pich TLP762J type	10.16mm pich TLP762JF type
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.)

961001EAA2

MAXIMUM RATINGS (Ta = 25°C)

	CHARACTERISTIC		SYMBOL	RATING	UNIT
LED	Forward Current		I_F	50	mA
	Forward Current Derating (Ta ≧ 53°C)		ΔI_F / °C	−0.7	mA / °C
	Peak Forward Current (100 μs 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	$I_{T\,(RMS)}$	100	mA
		Ta = 70°C		50	
	On-State Current Derating (Ta = ≧ 25°C)		ΔI_T / °C	−1.1	mA / °C
	Peak On-State Current (100 μs 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}	−55~125	°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

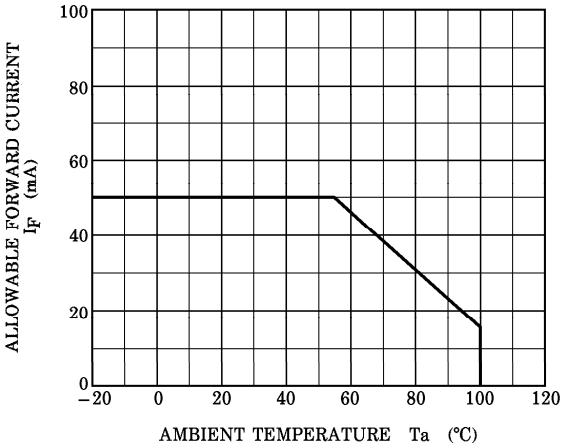
INDIVIDUAL ELECTRICAL CHARACTERISTICS (Ta = 25°C)

	CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
LED	Forward Voltage	V_F	I_F = 10mA	1.0	1.15	1.3	V
	Reverse Current	I_R	V_R = 5V	—	—	10	μA
	Capacitance	C_T	V = 0, f = 1MHz	—	30	—	pF
DETECTOR	Peak Off-State Current	I_{DRM}	V_{DRM} = 600V	—	10	1000	nA
	Peak On-State Voltage	V_{TM}	I_{TM} = 100mA	—	1.7	3.0	V
	Holding Current	I_H	—	—	0.6	—	mA
	Critical Rate of Rise of Off-State Voltage	dv / dt	Vin = 240V, Ta = 85°C	—	500	—	V / μs
	Critical Rate of Rise of Commutating Voltage	dv / dt (C)	I_T = 15mA Vin = 60Vrms	—	0.2	—	V / μs

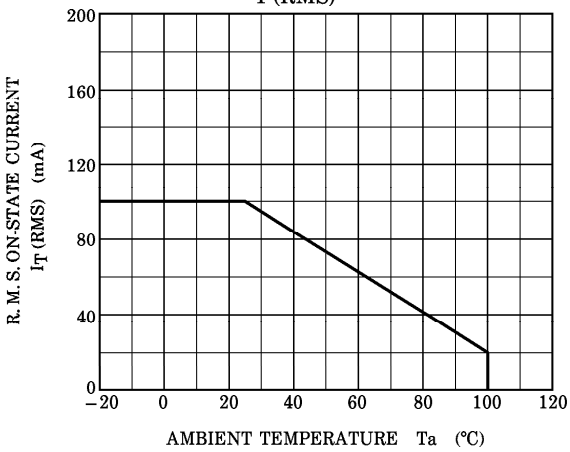
COUPLED ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Trigger LED Current	I_{FT}	V_T = 6V	—	—	10	mA
Capacitance (Input to Output)	C_S	V_S = 0, f = 1MHz	—	0.8	—	pF
Isolation Resistance	R_S	V_S = 500V	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}

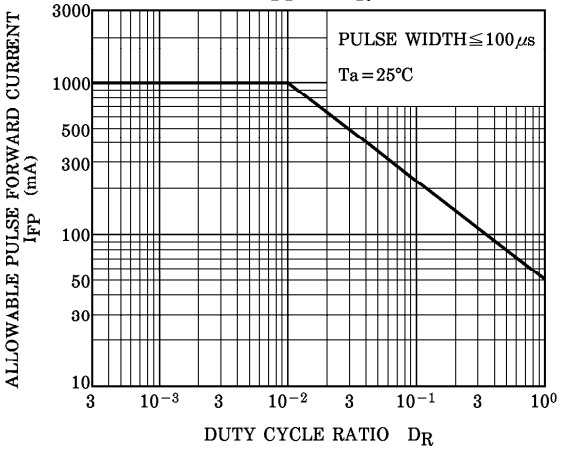
I_F – Ta



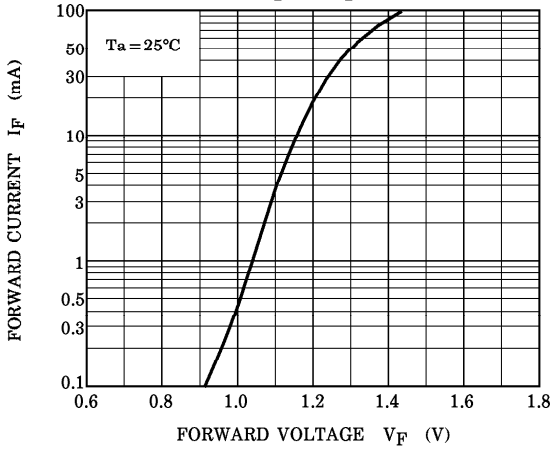
$I_{T\,(RMS)}$ – Ta



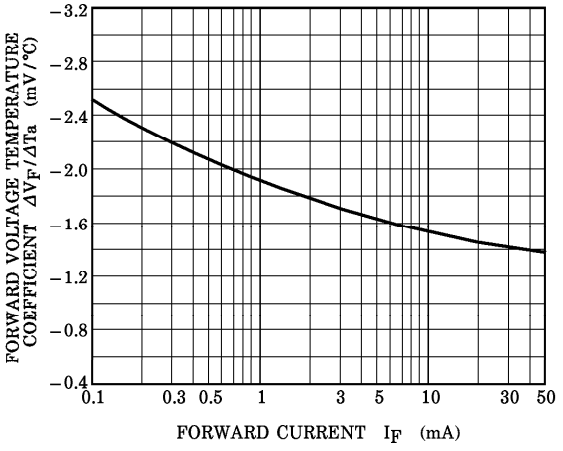
I_{FP} – D_R



I_F – V_F



$\Delta V_F / \Delta Ta$ – I_F



I_{FP} – V_{FP}