

TLP722

The TOSHIBA TLP722 consists of a photo-diode optically coupled to a gallium arsenide infrared emitting diode in a four lead plastic DIP (DIP4).

TLP722 : Single circuit

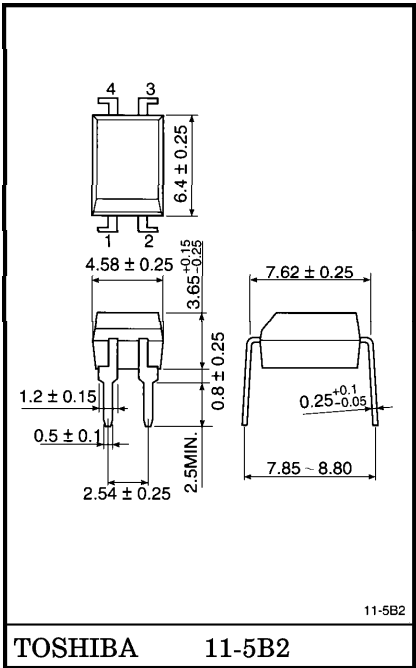
- Cathode-Anode Voltage : 30 V (max)
- Current Transfer Ratio : 0.1% (min)
- Input/Output Isolation Voltage : 4000 V_{rms} (min)
- Operating Temperature Range : -55~100°C
- Storage Temperature Range : -55~125°C
- UL Recognized : UL1577, E67349
- VDE Approved : VDE0884
 - Maximum Operating Insulation Voltage : 890 V_{PK}
 - Maximum Permissible Over Voltage : 8000 V_{PK}

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

- SEMKO Approved Product : SS EN60950,
Approved No. 9808324 / 01
- Construction Mechanical Rating

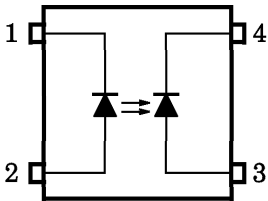
	TLP722 type	TLP722F type
Creepage Distance	7.0 mm	8.0 mm
Clearance	7.0 mm	8.0 mm
Insulation Thickness	0.4 mm	0.4 mm

Unit in mm



Weight : 0.28 g

PIN CONFIGURATIONS (TOP VIEW)



- 1 : LED CATHODE
- 2 : LED ANODE
- 3 : DETECTOR ANODE
- 4 : DETECTOR CATHODE

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		STMBOL	RATING	UNIT
LED	Forward Current	I _F	25	mA
	Forward Current Derating	ΔI _F / °C	-0.45 (Ta ≥ 70°C)	mA / °C
	Pulse Forward Current	I _{FP}	1 (1 μs pulse, 1000 pps)	mA
	Pulse Forward Current	I _{FTP}	1 (100 μs pulse, 1000 pps)	A
	Reverse Voltage	V _R	5	V
DETECTOR	Cathode-Anode Voltage	V _{KAO}	30	V
	Anode-Cathode Voltage	V _{AKO}	0.5	V
	Photodiode Output Current	I _{PB}	100	μA
	Junction Temperature	T _j	125	°C
Storage Temperature Range		T _{stg}	-55~125	°C
Operating Temperature Range		T _{opr}	-55~100	°C
Lead Soldering Temperature (10 s)		T _{sol}	260 (10 s)	°C
Isolation Voltage		BVS	4000 (AC, 1 min., R.H. 60%)	V _{rms}

INDIVIDUAL ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
LED	Forward Voltage	V _F	I _F = 16 mA	—	1.65	1.85	V
	Reverse Current	I _R	V _R = 5 V	—	—	10	μA
	Capacitance	C _T	V = 0, f = 1 MHz	—	30	—	pF
DETECTOR	Cathode-Anode Breakdown Voltage	V (BR) KAO	I _{KA} = 0.1 mA	30	—	—	V
	Anode-Cathode Breakdown Voltage	V (BR) AKO	I _{AK} = 0.1 mA	0.5	—	—	V
	Dark Current	I _{leak}	V _{KA} = 10 V	—	—	50	nA
			V _{KA} = 10 V, Ta = 85°C	—	—	1	μA
	Photodiode Output Current	I _{PB}	V = 10 mA, V _{KA} = 5 V	10	—	50	μA
	Capacitance	C _{AK}	V = 0, f = 1 MHz	—	10	—	pF

ISOLATION CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Capacitance (Input to Output)	C _S	V _S = 0, f = 1 MHz	—	0.8	—	pF
Isolation Resistance	R _S	V _S = 500 V	1 × 10 ¹²	10 ¹⁴	—	Ω
Isolation Voltage	BVS	AC, 1 minute	4000	—	—	V _{rms}
		AC, 1 second, in oil	—	10000	—	
		DC, 1 minute, in oil	—	10000	—	V _{dc}

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