

TENTATIVE

TOSHIBA PHOTOCOUPLER PHOTO-DIODE

TLP722

Unit in mm

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

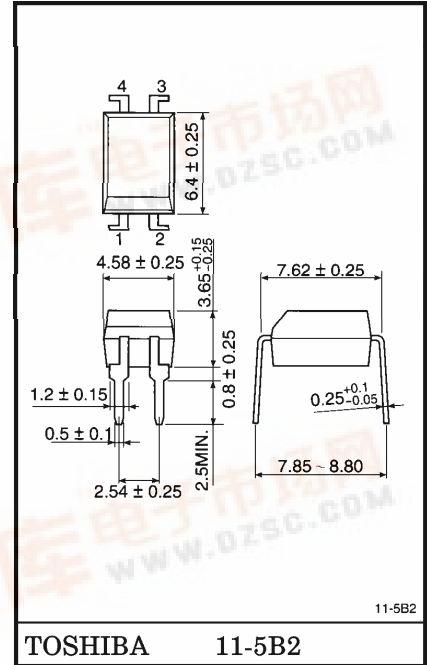
TLP722 : Single circuit

- 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)"

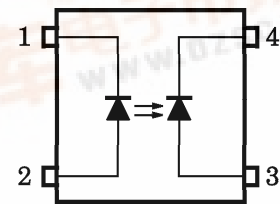
- SEMKO Approved Product : SS EN60950,
 Approved No. 9808324 / 01
- Construction Mechanical Rating

	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



Weight : 0.28 g

PIN CONFIGURATIONS (TOP VIEW)



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

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● Gallium arsenide (GaAs) is a substance used in the products described in this document. GaAs dust and fumes are toxic. Do not break, cut or pulverize the product, or use chemicals to dissolve them. When disposing of the products, follow the appropriate regulations. Do not dispose of the products with other industrial waste or with domestic garbage.

● The products described in this document are subject to the foreign exchange and foreign trade laws.

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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}