

TOSHIBA PHOTOCOUPLER

# TLP721(D4)SERIES

ATTACHMENT : SPECIFICATIONS FOR VDE0884 OPTION : (D4)

Types : TLP721, TLP721F

Type designations for 'Option : (D4)', which are tested under VDE0884 requirements.

Ex.	:	TLP721 (D4-GR-LF4)	D4	:	VDE0884 option
			GR	:	CTR rank
			LF4	:	lead bend

Note : Use Toshiba standard type number for safety standard application.



Ex. TLP721 (D4-GR-LF4) → TLP721

VDE0884 ISOLATION CHARACTERISTICS

DESCRIPTION	SYMBOL	RATING	UNIT
Application Classification (DIN VDE0110 Teil 1/01.89, Table 1) for rated mains voltage $\leq 300V_{rms}$ for rated mains voltage $\leq 600V_{rms}$		I-IV I-III	—
Climatic Classification (DIN IEC68 Teil 1/09.80)		40/100/21	—
Pollution Degree (DIN VDE0110 Teil 1/01.89)		2	—
Maximum Operating Insulation Voltage	TLP721	V <sub>IORM</sub>	V <sub>pk</sub>
	TLP721F		
Input to output Test Voltage, Method A V <sub>pr</sub> = 1.5 × V <sub>IORM</sub> , Type and Sample Test t <sub>p</sub> = 60s, Partial Discharge < 5pC	TLP721	V <sub>pr</sub>	V <sub>pk</sub>
	TLP721F		
Input to output Test Voltage, Method B V <sub>pr</sub> = 1.875 × V <sub>IORM</sub> , 100% Production Test t <sub>p</sub> = 1s, Partial Discharge < 5pC	TLP721	V <sub>pr</sub>	V <sub>pk</sub>
	TLP721F		
Highest Permissible Overvoltage (Transient Overvoltage, t <sub>pr</sub> = 10s)	V <sub>TR</sub>	6000	V <sub>pk</sub>
Safety Limiting Values (Max. permissible ratings in case of fault, also refer to thermal derating curve) Current (Input current I <sub>F</sub> , P <sub>si</sub> = 0) Power (Output or Total Power Dissipation) Temperature	I <sub>si</sub>	300	mA
	P <sub>si</sub>	500	mW
	T <sub>si</sub>	150	°C
Insulation Resistance, V <sub>IO</sub> = 500V, T <sub>a</sub> = 25°C V <sub>IO</sub> = 500V, T <sub>a</sub> = T <sub>si</sub>	R <sub>si</sub>	$\geq 10^{12}$ $\geq 10^9$	$\Omega$

- This data sheet refers to TLP721 (D4, M), TLP721F (D4, M) that previously has a white-resin mold and have been changed. When designing new products please use black mold-resin devices.

INSULATION RELATED SPECIFICATIONS

			 7.62mm pitch TLP721	 10.16mm pitch TLP721F
Minimum Creepage Distance	(*)	Cr	7.0mm	8.0mm
Minimum Clearance	(*)	Cl	7.0mm	8.0mm
Minimum Insulation Thickness		ti	0.5mm	
Comperative Tracking Index (DIN IEC112/VDE0303, Part 1)		CTI	175 (VDE0110 Teil 1/01.89 Group IIIa)	

((\*) in accordance with DIN VDE0110 Teil 1/01.89, Table 2, & 4)

(\*1) If a printed circuit is incorporated, the creepage distance and clearance may be reduced below this value (e. g. at a standard distance between soldering eye centres of 7.5mm). If this is not permissible, the user shall take suitable measures.

(\*2) This photocoupler is suitable for 'safe electrical isolation' only within the safety limit data.

Maintenance of the safety data shall be ensured by means of protective circuits.

VDE Test sign : Marking on product  
for VDE0884



Marking on packing  
for VDE0884



0884

Marking Example :

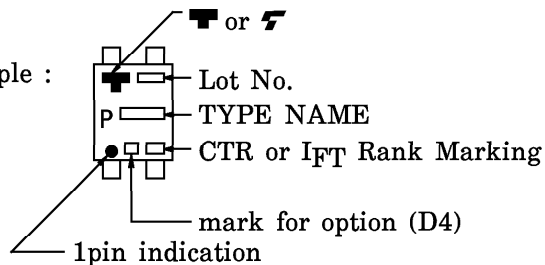


Figure 1 Partial discharge measurement procedure according to VDE0884  
Destructive test for qualification and sampling tests.

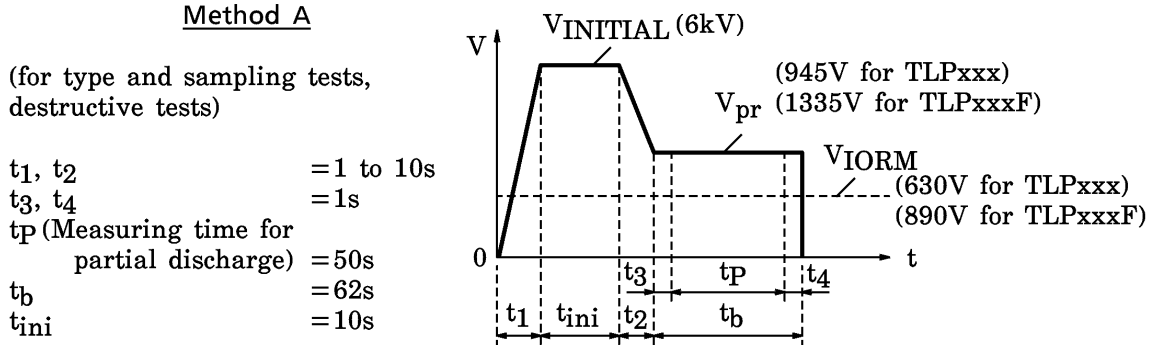


Figure 2 Partial discharge measurement procedure according to VDE0884  
Non-destructive test for 100% inspection.

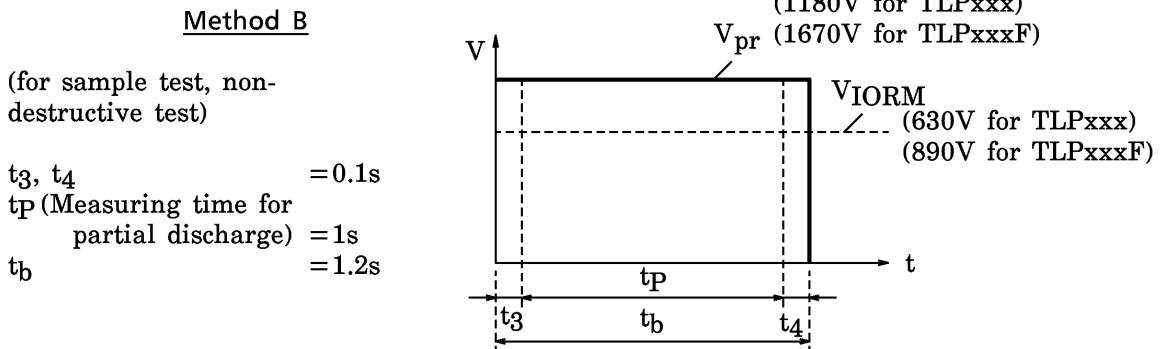
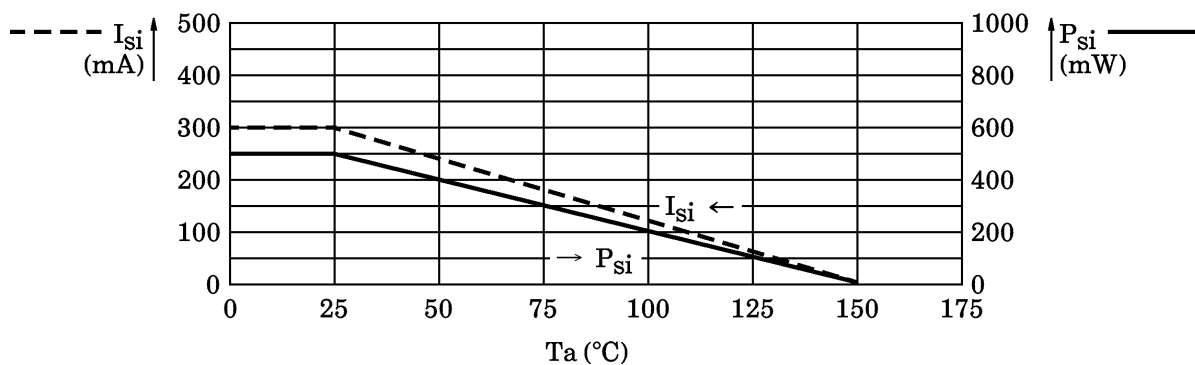


Figure 3 Dependency of maximum safety ratings on ambient temperature



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000707EBC

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