

TOSHIBA

TLP759(D4)

TOSHIBA PHOTOCOUPLER

TLP759(D4)

ATTACHMENT : SPECIFICATIONS FOR VDE0884 OPTION : (D4)

Types : TLP759, TLP759F

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

Ex. : TLP759 (D4-O) D4 : VDE0884 option
O : CTR rank

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

Ex. TLP759 (D4-O) → TLP759

VDE0884 ISOLATION CHARACTERISTICS

DESCRIPTION		SYMBOL	RATING	UNIT
Application Classification (DIN VDE0109 / 12.83, Table 1) for rated mains voltage $\leq 300 \text{ V}_{\text{RMS}}$ for rated mains voltage $\leq 600 \text{ V}_{\text{RMS}}$			I-IV I-III	—
Climatic Classification (DIN IEC68 Teil 1 / 09.80)			55 / 100 / 21	—
Pollution Degree (DIN VDE0109 / 12.83)			2	—
Maximum Operating Insulation Voltage	TLPxxx	V _{IORM}	890	V _{pk}
	TLPxxxF		1140	
Input to output Test Voltage, Method A $V_{\text{pr}} = 1.5 \times V_{\text{IORM}}$, 100% Production Test $t_{\text{p}} = 60\text{s}$, Partial Discharge $< 5\text{pC}$	TLPxxx	V _{pr}	1335	V _{pk}
	TLPxxxF		1710	
Input to output Test Voltage, Method B $V_{\text{pr}} = 1.875 \times V_{\text{IORM}}$, 100% Production Test $t_{\text{p}} = 1\text{s}$, Partial Discharge $< 5\text{pC}$	TLPxxx	V _{pr}	1670	V _{pk}
	TLPxxxF		2140	
Highest Permissible Overvoltage (Transient Overvoltage, $t_{\text{pr}} = 10\text{s}$)		V _{TR}	6000	V _{pk}
Safety Limiting Values (Max. permissible ratings in case of fault, also refer to thermal derating curve)				
Current (Input current I_{F} , $\text{Psi} = 0$)		Isi	300	mA
Power (Output or Total Power Dissipation)		Psi	500	mW
Temperature		Tsi	150	°C
Insulation Resistance at Tsi, $V_{\text{IO}} = 500\text{V}$		Rsi	$\geq 10^9$	Ω

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INSULATION RELATED SPECIFICATIONS

			 7.62mm pitch TLP759	 10.16mm pitch TLP759F
Minimum Creepage Distance (*)	Cr		6.4mm	8.0mm
Minimum Clearance (*)	Cl		6.4mm	8.0mm
Minimum Insulation Thickness	ti		0.4mm	
Comperative Tracking Index (DIN IEC112 / VDE0303, Part 1)	CTI		175 (VDE0109 / 12.83 Group III a)	

(*) in accordance with DIN VDE0109 / 12.83, 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



Marking Example :

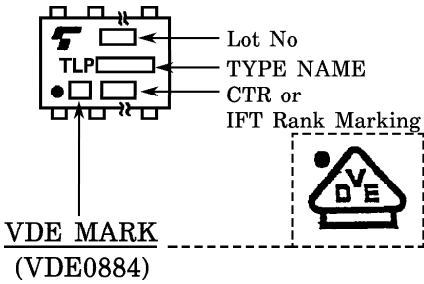


Figure 1 Partial discharge measurement procedure according to VDE0884
Destructive test for qualification and sampling tests.

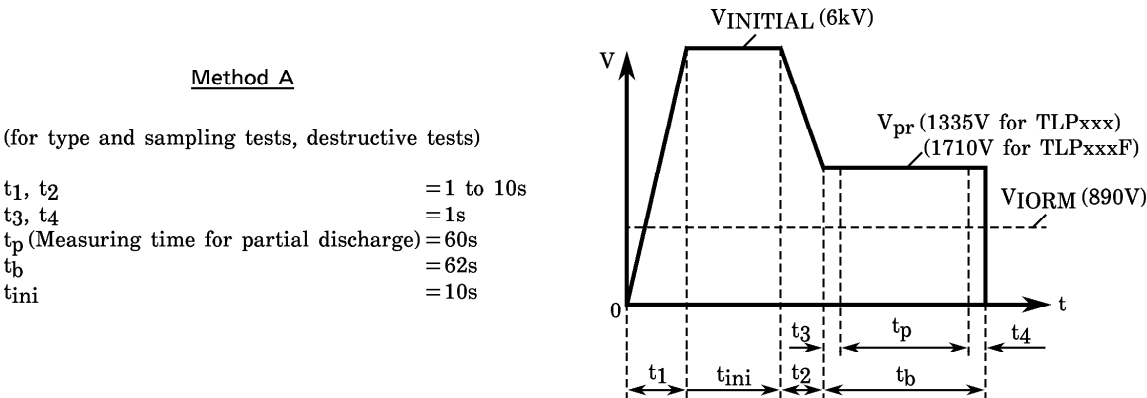


Figure 2 Partial discharge measurement procedure according to VDE0884
Non-destructive test for 100% inspection.

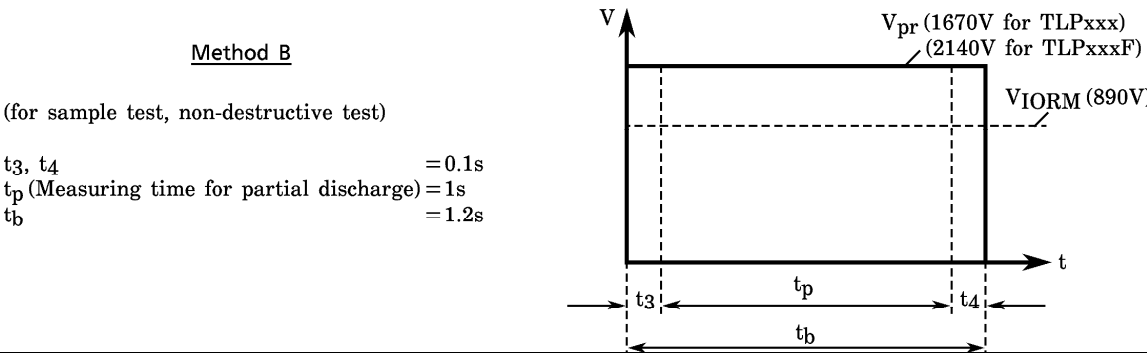


Figure 3 Dependency of maximum safety ratings on ambient temperature

