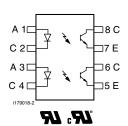
COMPLIANT



Vishay Semiconductors

Optocoupler, Phototransistor Output, Dual Channel, SOIC-8 Package





LINKS TO ADDITIONAL RESOURCES













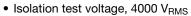
DESCRIPTION

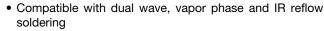
The ILD217T are optically coupled pairs with a GaAs infrared LED and a silicon NPN phototransistor. Signal information, including a DC level, can be transmitted by the device while maintaining a high degree of electrical isolation between input and output. The ILD217T come in a standard SOIC-8 small outline package for surface mounting which makes it ideally suited for high density applications with limited space. In addition to eliminating through-holes requirements, this package conforms to standards for surface mounted devices.

The high BV_{CEO} of 70 V gives a higher safety margin compared to the industry standard of 30 V.

FEATURES

- Two channel coupler
- SOIC-8 surface mountable package
- Standard lead spacing of 0.05"
- Available only on tape and reel option (conforms to EIA standard 481-2)

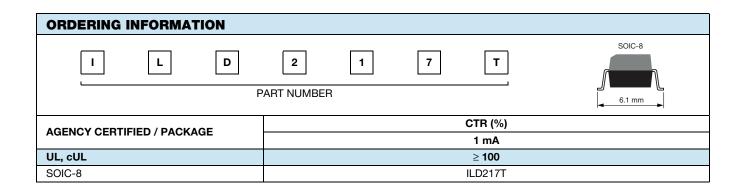






AGENCY APPROVALS

- UL
- cUL





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ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)								
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT				
INPUT								
Peak reverse voltage		V_{R}	6	V				
Peak pulsed current	1 µs, 300 pps		1	А				
Continuous forward current per channel		I _F	30	mA				
Power dissipation		P _{diss}	50	mW				
OUTPUT								
Collector emitter breakdown voltage		BV _{CEO}	70	V				
Emitter collector breakdown voltage		BV _{ECO}	7	V				
Power dissipation per channel		P _{diss}	125	mW				
COUPLER								
Isolation test voltage	t = 1 s	V_{ISO}	4000	V_{RMS}				
Total package dissipation ambient (2 LEDs and 2 detectors, 2 channels)		P _{tot}	350	mW				
Storage temperature		T _{stg}	-55 to +150	°C				
Operating temperature		T _{amb}	-55 to +100	°C				
Soldering time from 260 °C ⁽¹⁾		T _{sld}	10	S				

Notes

- Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. Functional operation of the device is not
 implied at these or any other conditions in excess of those given in the operational sections of this document. Exposure to absolute
 maximum ratings for extended periods of the time can adversely affect reliability.
- (1) Refer to reflow profile for soldering conditions for surface mounted devices

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
INPUT						
Forward voltage	I _F = 10 mA	V_{F}	-	1.2	1.55	V
Reverse current	V _R = 6 V	I _R	-	0.1	100	μΑ
Capacitance	$V_R = 0 V$	Co	-	25	-	pF
OUTPUT						
Collector emitter breakdown voltage	I _C = 10 μA	BV _{CEO}	70	-	-	V
Emitter collector breakdown voltage	I _E = 10 μA	BV _{ECO}	7	-	-	V
Collector emitter leakage current	$V_{CE} = 10 \text{ V}, I_F = 0 \text{ A}$	I _{CEO}	-	5	50	nA
Collector emitter capacitance	V _{CE} = 0 V	C _{CE}	-	10	-	pF
COUPLER						
Collector emitter saturation voltage	$I_F = 10 \text{ mA}, I_C = 2.5 \text{ mA}$	V _{CEsat}	-	-	0.4	V
Capacitance (input to output)		C _{IO}	-	0.5	-	pF
Resistance (input to output)		R _{IO}	-	100	-	GΩ

Note

Minimum and maximum values were tested requirements. Typical values are characteristics of the device and are the result of engineering
evaluations. Typical values are for information only and are not part of the testing requirements.

CURRENT TRANSFER RATIO (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
I _C /I _F	$V_{CE} = 5 \text{ V}, I_F = 1 \text{ mA}$	CTR	100	120	-	%



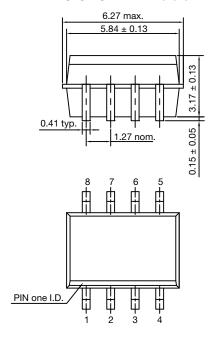
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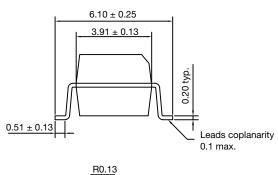
SAFETY AND INSULATION RATINGS						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Climatic classification	According to IEC 68 part 1		-	55 / 100 / 21	-	
Comparative tracking index		CTI	175	-	399	
V _{IOTM}			6000	-	-	V
V _{IORM}			560	-	-	V
P _{SO}			-	-	350	mW
I _{SI}			-	-	150	mA
T _{SI}			-	-	165	°C
Creepage distance			4	-	-	mm
Clearance distance			4	-	-	mm
Insulation thickness			0.2	-	-	mm

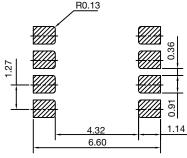
Note

• As per IEC 60747-5-5, §7.4.3.8.2, this optocoupler is suitable for "safe electrical insulation" only within the safety ratings. Compliance with the safety ratings shall be ensured by means of protective circuits.

PACKAGE DIMENSIONS in millimeters

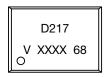








PACKAGE MARKING (Example)



Notes

- XXXX = LMC (lot marking code)
- Tape and reel suffix (T) is not part of the package marking



Legal Disclaimer Notice

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