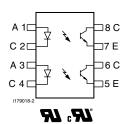


Vishay Semiconductors

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

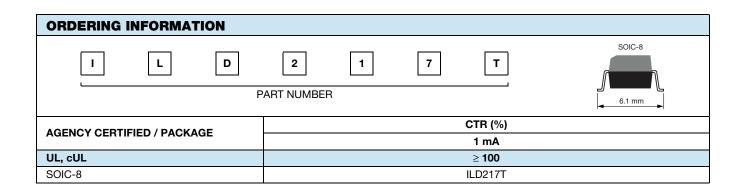
- Two channel coupler
- SOIC-8 surface mountable package
- Standard lead spacing of 0.05"
- Available only on tape and reel option (conforms to EIA standard 481-2)



- Isolation test voltage, 4000 V_{RMS}
- Compatible with dual wave, vapor phase and IR reflow soldering
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

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	Α			
Continuous forward current per channel		l _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	-	%



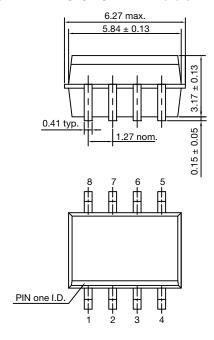
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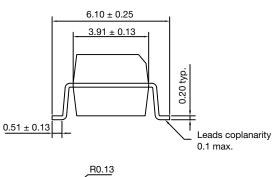
SAFETY AND INSULATION RATINGS							
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT	
Climatic classification	According to IEC 68 part 1		-	55 / 100 / 21	-		
Comparative tracking index		CTI	175	-	399		
V _{IOTM}			6000	-	-	V	
V _{IORM}			560	-	ı	V	
P _{SO}			-	-	350	mW	
I _{SI}			-	-	150	mA	
T _{SI}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

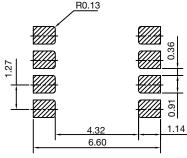
Note

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

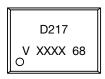








PACKAGE MARKING (Example)



Notes

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





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