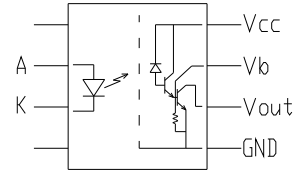


TECHNICAL DATA  
DATA SHEET 4137, REV. B PRELIMINARY

## High CTR Optocoupler

### Features:

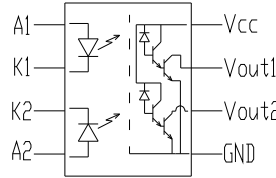
- Hermetic / Ceramic packages
- LSTTL Compatible
- Low Input Current
- Open Collector Output
- High Current Transfer Ratio



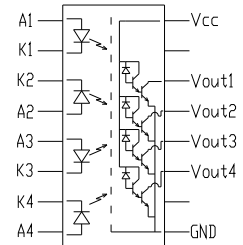
-411 (DIP)

### Applications:

- Low Current Line Receivers
- High Speed Isolation
- Pulse Transformer Replacement
- Polarity Sensing
- Level Shifting



-421 (DIP)



-441 (DIP)

### Absolute Maximum Ratings

PARAMETER		SYMBOL	RATING	UNIT
Input	Forward Current	$I_F$	20	mA
	Peak Forward Current*	$I_{FM}$	40	mA
	Reverse Voltage	$V_R$	6	V
Output	Supply Voltage	$V_{CEO}$	-5 to 18	V
	Output Voltage	$V_{ECO}$	-5 to 18	V
	Current (per channel)	$I_C$	60	mA
	Power Dissipation per channel	$P_C$	100	mW
Isolation Voltage**		$V_{iso}$	5000	$V_{rms}$
Operating Temperature		$T_{opr}$	-55 to +125	°C
Storage Temperature		$T_{stg}$	-55 to +150	°C
Soldering Temperature***		$T_{sol}$	260	°C

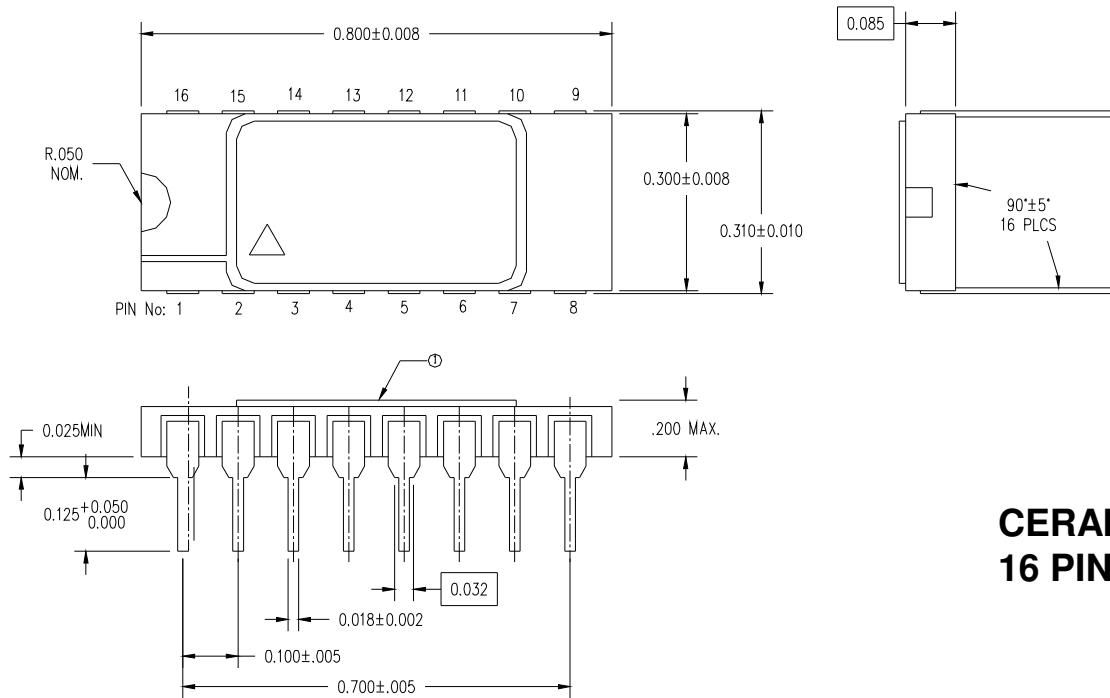
\* < 1 ms duration

\*\* AC for 1 min, 40 to 60% RH

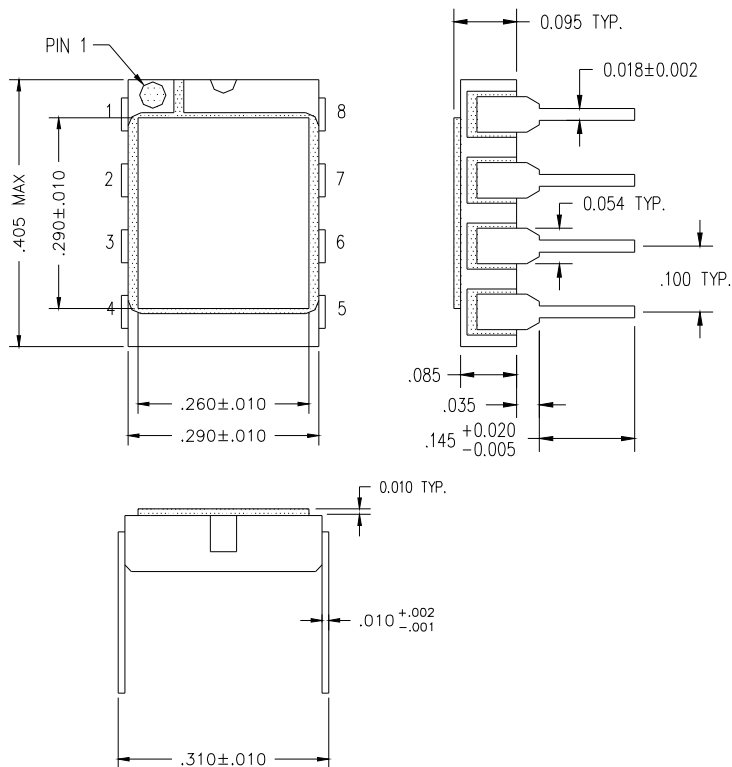
\*\*\* For 10 seconds

**Electro-Optical Characteristics (-55° to 125°C)**

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	$V_F$	$I_F = 1 \text{ mA}$	-	1.5	1.8	V
Reverse Current	$I_R$	$V_R = 4 \text{ V}$	-	-	12	$\mu\text{A}$
Reverse Breakdown Voltage	$BV_R$	$I_R = 15 \mu\text{A}$	6	-	-	V
Logic Low Output Voltage	$V_{OL}$	$I_{OL} = 5 \text{ mA}$	-	-	0.5	V
Logic High Output Current	$I_{OH}$	$V_{CC} = 15\text{V}$	-	-	100	$\mu\text{A}$
Current Transfer Ratio	CTR	$I_F = 1.6\text{mA}$ $V_{CC} = 4.5\text{V}$ $V_O = .4\text{V}$	500	-	3000	%
Isolation Resistance	$R_{ISO}$	500 $V_{DC}$ , 40–60% RH	$4 \times 10^{10}$	$10^{11}$	-	$\Omega$
Supply Current, low (per device)	$I_{SL}$	$I_F = 16\text{mA}$ , $V_{CC} = 15\text{V}$	-	-	3	mA
Supply Current, high (per device)	$I_{SH}$	$I_F = 0\text{mA}$ , $V_{CC} = 15\text{V}$	-	-	25	$\mu\text{A}$
Propagation Delay, low to high	$t_{LH}$	-	-	-	100	$\mu\text{s}$
Propagation Delay, high to low	$t_{HL}$	-	-	-	100	$\mu\text{s}$



**CERAMIC  
16 PIN DIP**



**CERAMIC  
8 PIN DIP**

**TECHNICAL DATA**

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