

**pui  
audio**™ inc  
a projects unlimited company

## AI-1440-TWT-24V-2-R 14mm Indicator

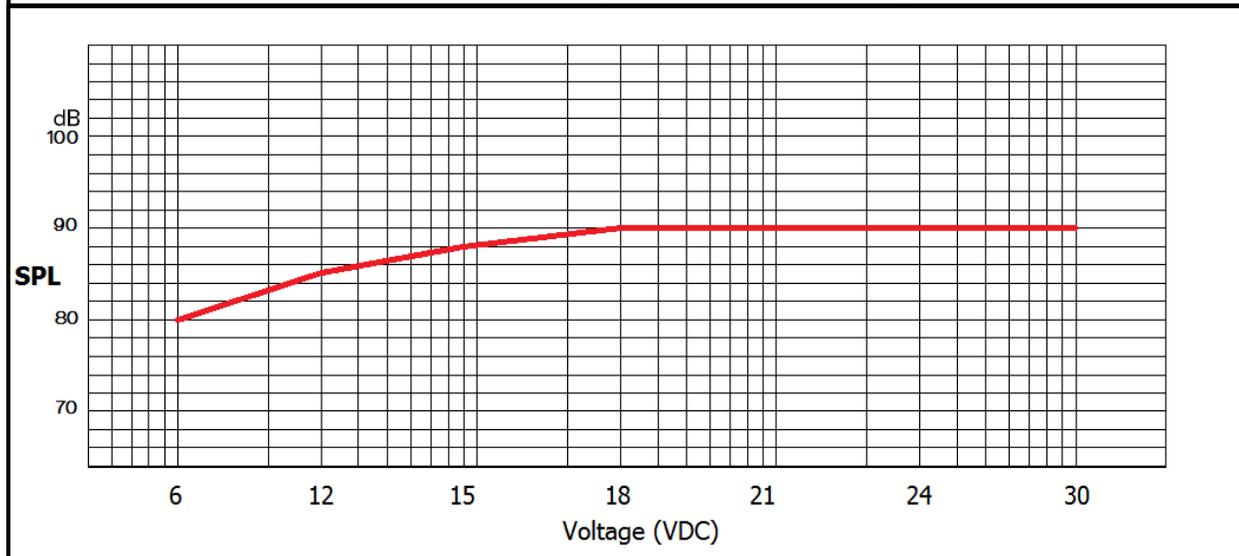
3541 Stop Eight Road • Dayton, Ohio 45414

### Product Overview

- 14mm diameter, 6-30 VDC self-drive indicator
- 87 dBA minimum output (24 VDC @ 10 cm) and 4 kHz continuous tone
- Noryl® housing withstands Wave soldering temperatures
- Removable wash tag preserves performance

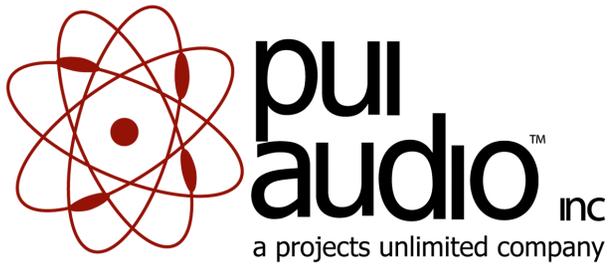


**SPL vs Voltage (measured @10 cm)**



RoHS Compliant





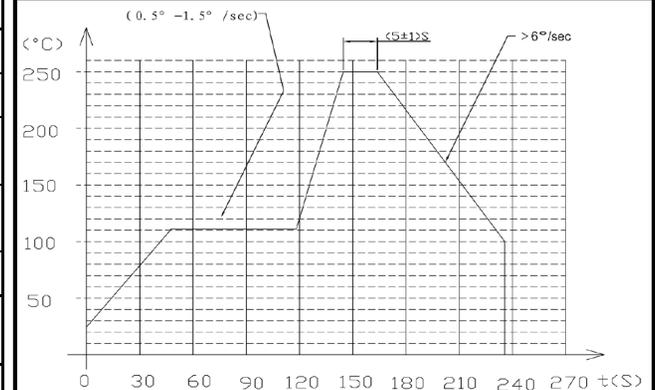
# AI-1440-TWT-24V-2-R 14mm Indicator

## Mechanical and Environment Testing

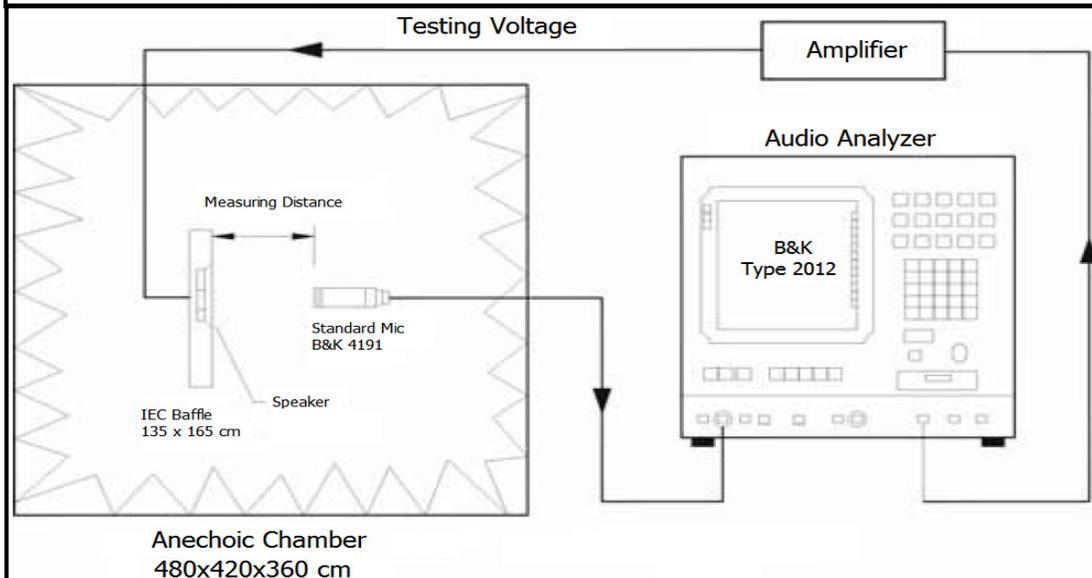
Test Description	Test Condition
High Temperature	85°C (±2°C) with random humidity for 96 hours
Low Temperature	-30°C (±2°C) with random humidity for 96 hours
Humidity	40°C (±2°C) with 90% to 95% relative humidity for 96 hours
Vibration	0.75 mm movement modulated at 10-55 Hz for 3 hours
Drop Test	100 cm free fall onto wood board, 10 cycles
Temperature Cycle Test	-30°C to 80°C, 100 cycles

After tests, part shall rest for 2 hours. Parts are then tested for clean, pure tones.

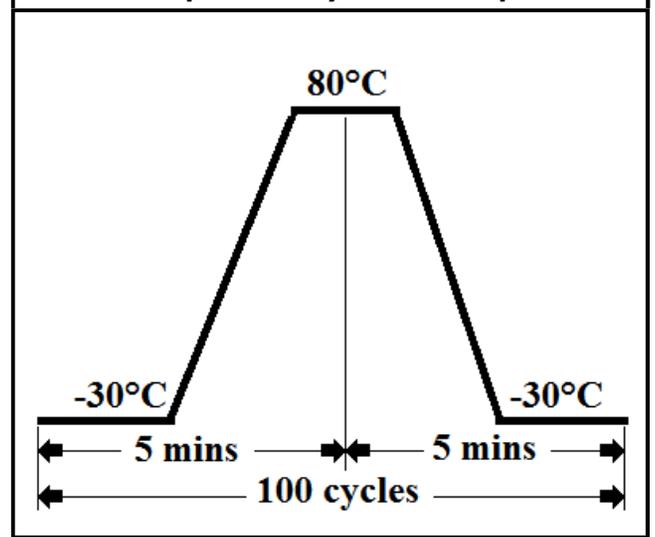
## Wave Solder Profile



## Frequency Response and SPL Measurement Setup



## Temperature Cycle Test Graph



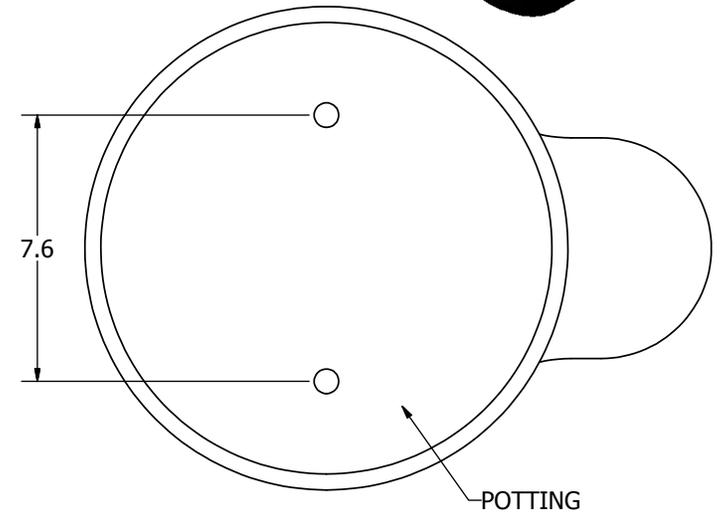
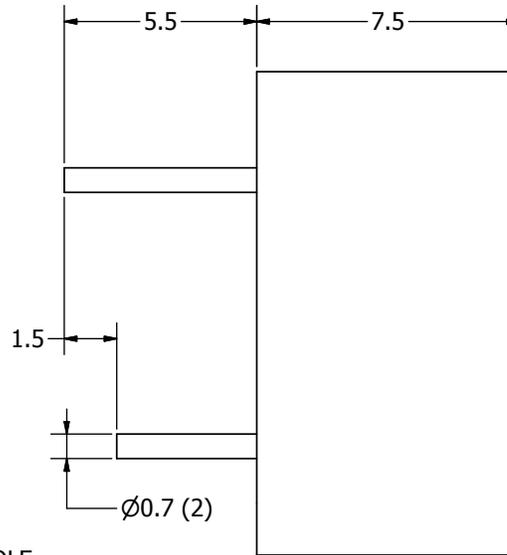
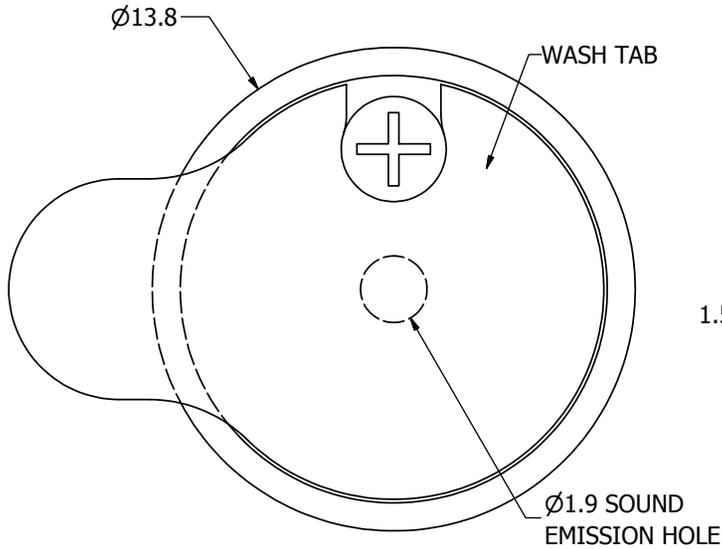
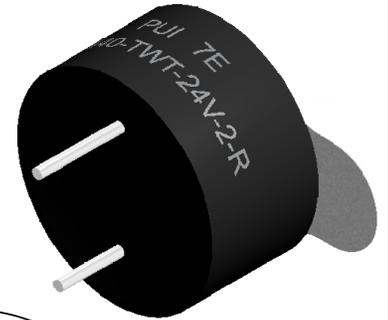
# SPECIFICATIONS

PARAMETERS	VALUES	UNITS
RATED VOLTAGE	24	Vdc
OPERATING VOLTAGE RANGE	6 ~ 30	Vdc
RATED CURRENT (MAX)	18	mA
MINIMUM SPL @ 10 CM	87	dBA
RESONANT FREQUENCY	4,000 ± 500	Hz
TONE OR PULSE RATE	CONTINUOUS	0 pulse /sec
OPERATING TEMPERATURE	-20 ~ +70	°C
STORAGE TEMPERATURE	-30 ~ +80	°C
HOUSING MATERIAL	NORYL	-
TERMINAL MATERIAL	Sn PLATED COPPER	-
WEIGHT	1	grams

THIS DOCUMENT CONTAINS DATA PROPRIETARY TO PROJECTS UNLIMITED, INC. ANY USE OR REPRODUCTION, IN ANY FORM, WITHOUT PRIOR WRITTEN PERMISSION OF PROJECTS UNLIMITED, INC. IS PROHIBITED.  
©2003, Projects Unlimited Inc.

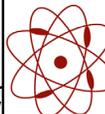
# REVISION HISTORY

LTR	DESCRIPTION	DATE	APPROVED
-	RELEASED FROM ENGINEERING	10/18/2006	
A	REVISED TO INVENTOR 3-D DRAWING TEMPLATE	11/16/2007	B.R.



### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
3. THIS PART IS RoHS 2002/95/EC COMPLIANT.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS, TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°.	SIZE <b>A3</b>	Designed by	Date	Checked by	Date	Approved by	Date	Drawn Date
		J.D.	10/18/2006	B.R.	10/18/2006	R.W.	10/18/2006	11/15/2007
AI-1440-TWT-24V-2-R.idw		 <b>pui audio</b> a projects unlimited company		<b>AI-1440-TWT-24V-2-R</b>			Indicator	
						Edition	Sheet	
						-	1 / 1	