



# LUME

*Photocell Transducer*

## Operation and Use

When powered by more than +2 volts DC, LUME provides a positive output voltage signal proportional to incident light over the visible to near infra red spectrum. Containing a miniature silicon photodiode, the slender stainless steel probe can be easily mounted to do a wide variety of useful jobs such as monitoring transmitted, reflected or interrupted light beams.

The sketch below displays the wiring connections for WPI's 8-pin connector. This connector is compatible with **Transbridge** (WPI #TBM4M), a four-channel transducer amplifier manifold, or **Bridge-8** (rack-mountable amplifier modules). If the user wishes to rewire the transducer to a different plug, the color-coded wires should be connected to conform to the required DC voltage, polarity and signal output connections as shown.

## Specifications

**Positive supply voltage, maximum**  
+50 V

**Light Voltage**  
50 mV minimum  
(per 5 mW/cm<sup>2</sup> with 2870°K source)

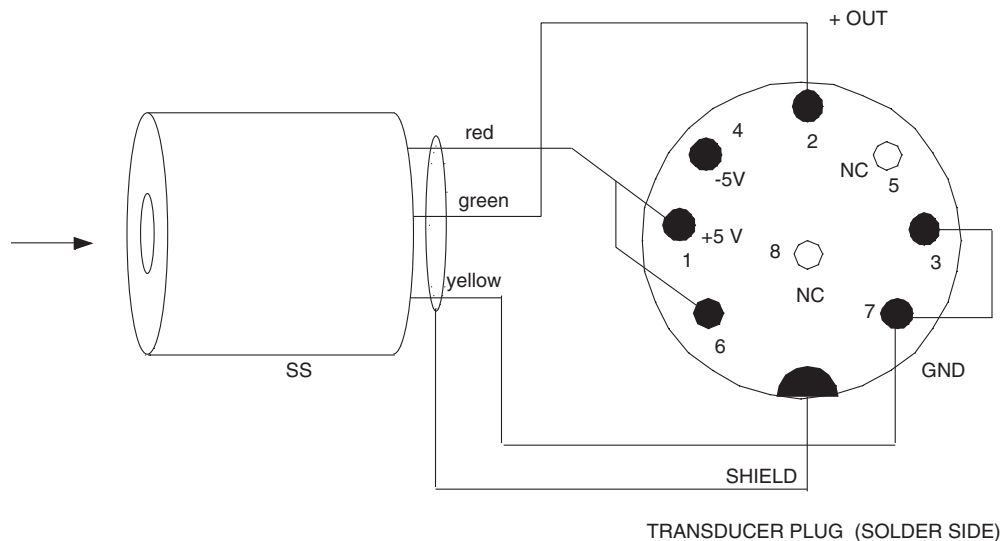
**Dark Output Voltage**  
100  $\mu$  V maximum (+5 V supply )

**Angular Field of View**  
 $\pm$  12 degrees off axis

**Spectral Range**  
400 to 1200 nM (max at 860 nM)

**Probe**  
5 mm diam x 100 mm, stainless steel

**Port**  
2 mm





## Warranty

WPI (World Precision Instruments, Inc.) warrants to the original purchaser that this equipment, including its components and parts, shall be free from defects in material and workmanship for a period of 90 days from the date of receipt. WPI's obligation under this warranty shall be limited to repair or replacement, at WPI's option, of the equipment or defective components or parts upon receipt thereof f.o.b. WPI, Sarasota, Florida U.S.A. Return of a repaired instrument shall be f.o.b. Sarasota.

The above warranty is contingent upon normal usage and does not cover products which have been modified without WPI's approval or which have been subjected to unusual physical or electrical stress or on which the original identification marks have been removed or altered. The above warranty will not apply if adjustment, repair or parts replacement is required because of accident, neglect, misuse, failure of electric power, air conditioning, humidity control, or causes other than normal and ordinary usage.

To the extent that any of its equipment is furnished by a manufacturer other than WPI, the foregoing warranty shall be applicable only to the extent of the warranty furnished by such other manufacturer. This warranty will not apply to appearance terms, such as knobs, handles, dials or the like.

WPI makes no warranty of any kind, express or implied or statutory, including without limitation any warranties of merchantability and/or fitness for a particular purpose. WPI shall not be liable for any damages, whether direct, indirect, special or consequential arising from a failure of this product to operate in the manner desired by the user. WPI shall not be liable for any damage to data or property that may be caused directly or indirectly by use of this product.

## Claims and Returns

Inspect all shipments upon receipt. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed loss or damage should be reported at once to the carrier and an inspection requested. All claims for shortage or damage must be made within ten (10) days after receipt of shipment. Claims for lost shipments must be made within thirty (30) days of receipt of invoice or other notification of shipment. Please save damaged or pilfered cartons until claim is settled. In some instances, photographic documentation may be required. Some items are time-sensitive; WPI assumes no extended warranty or any liability for use beyond the date specified on the container.

Do not return any goods to us without obtaining prior approval and instructions from our Service Department. Goods returned (unauthorized) by collect freight may be refused. Goods accepted for restocking will be exchanged or credited to your WPI account. Goods returned which were ordered by customers in error are subject to a 25% restocking charge. Equipment which was built as a special order cannot be returned.

## Repairs

Contact our Service Department for assistance in the repair of apparatus. Do not return goods until instructions have been received. Returned items must be securely packed to prevent further damage in transit. The Customer is responsible for paying shipping expenses, including adequate insurance on all items returned for repairs. Identification of the item(s) by model number, name, as well as complete description of the difficulties experienced should be written on the repair purchase order and on a tag attached to the item.

**Warning: This equipment is not designed or intended for use on humans.**

*Copyright © 2001 by World Precision Instruments, Inc. All rights reserved. No part of this publication may be reproduced or translated into any language, in any form, without prior written permission of World Precision Instruments, Inc.*

## World Precision Instruments, Inc.

**USA:** International Trade Center, 175 Sarasota Center Boulevard, Sarasota FL 34240-9258 USA  
Tel: 941-371-1003 • Fax: 941-377-5428 • E-mail: sales@wpiinc.com • Internet: <http://www.wpiinc.com>

**UK:** Astonbury Farm Business Centre • Aston, Stevenage, Hertfordshire SG2 7EG England • Tel: 01438-880025 • Fax: 01438-880026 • E-mail: [wpiuk@wpi-europe.com](mailto:wpiuk@wpi-europe.com)

**Germany:** Liegnitzer Str. 15, D-10999 Berlin, Germany • Tel: 030-6188845 • Fax: 030-6188670 • E-mail: [wpide@wpi-europe.com](mailto:wpide@wpi-europe.com)

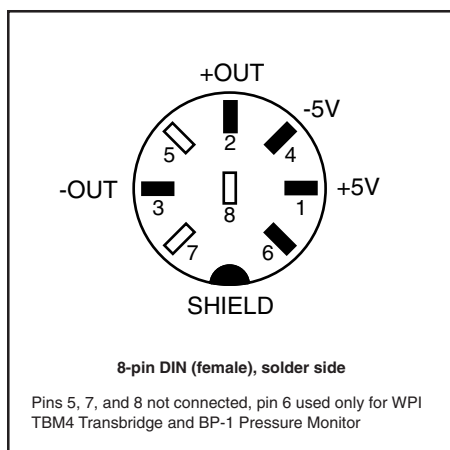
**Japan:** 3-6-14-202 Kasumigaseki, Chiyoda, Tokyo 100-0013, Japan • Tel: 81-3-3592-4500 • Fax: 81-3-3592-4540 • E-mail: [info@wpi-j.com](mailto:info@wpi-j.com)

**Australia:** P.O. Box 1191, Glen Waverley, Victoria 3150, Australia • Tel: (03) 9887-6262 • Fax: (03) 9887-9585 • E-mail: [wpi.au@ozemail.com.au](mailto:wpi.au@ozemail.com.au)



# 3492

## 8-Pin Female DIN



This accessory is included with your WPI transducer to facilitate its adaptation to non-WPI bridge-type amplifiers. You should make certain before proceeding that your amplifier is compatible with the transducer requirements as explained below and on your transducer specification sheet.

### OPERATION AND USE

The information contained in the diagram above and the paragraphs below should let you quickly reconfigure your WPI transducer to any compatible third-party bridge amplifier.

Your WPI transducer is supplied ready to use with our TBM4 Transbridge and BP-1 Pressure Monitors and can be quickly connected to the DA100 Differential Amplifier module available for the MP100WS data acquisition system via the optional TC102 Transducer Connector Interface. In addition, if you need to, you can adapt the transducer to most non-WPI bridge amplifiers. Along with the pin-out information for your WPI transducer, you need to know the pin-out information for your particular bridge amplifier's required connector.

We recommend that you first use the female DIN connector provided as an intermediate step to test the transducer/amplifier

combination before permanently removing our 8-pin DIN and replacing it with the required connector (if you wish to make the modification permanent).

WPI transducers require two excitation voltage inputs, a positive 5 volt input connected to pin 1 and a negative 5 volt input connected to pin 4. These two input voltages "excite" or power the bridge transducer. To record the transducer's output signal also requires two pins. Pin 2 carries the positive signal "out" of the transducer and Pin 3 carries the negative signal "out. of the transducer. The diagram to the left shows these connections as they would be made on the solder side of the female 8-pin DIN (WPI part number 3492). Therefore, pins 1, 4, 2, and 3 are the relevant connectors for adaptation to non-WPI equipment. The connection between pins 1 and 6 found in the male DIN connector attached to the end of all WPI transducers should not be duplicated on the 8-pin female DIN as it is useful only in conjunction with WPI bridge amplifiers. Finally, if you do choose to make the modification permanent by replacing the male 8-pin DIN with your amplifier's connector, you must also make sure that the shield is connected from the WPI transducer's cable to your new connector.

Note: For your convenience, WPI has available for sale the same shielded cable stock used for our transducers in 25-ft lengths, part number 5385.

## World Precision Instruments, Inc.

**USA:** International Trade Center, 175 Sarasota Center Boulevard, Sarasota FL 34240-9258 USA  
Tel: 941-371-1003 • Fax: 941-377-5428 • E-mail: sales@wpiinc.com • Internet: <http://www.wpiinc.com>

**UK:** Astonbury Farm Business Centre • Aston, Stevenage, Hertfordshire SG2 7EG England • Tel: 01438-880025 • Fax: 01438-880026 • E-mail: [wpiuk@wpi-europe.com](mailto:wpiuk@wpi-europe.com)

**Germany:** Liegnitzer Str. 15, D-10999 Berlin, Germany • Tel: 030-6188845 • Fax: 030-6188670 • E-mail: [wpide@wpi-europe.com](mailto:wpide@wpi-europe.com)

**Japan:** 3-6-14-202 Kasumigaseki, Chiyoda, Tokyo 100-0013, Japan • Tel: 81-3-3592-4500 • Fax: 81-3-3592-4540 • E-mail: [info@wpi-j.com](mailto:info@wpi-j.com)

**Australia:** P.O. Box 1191, Glen Waverley, Victoria 3150, Australia • Tel: (03) 9887-6262 • Fax: (03) 9887-9585 • E-mail: [wpiaw@ozemail.com.au](mailto:wpiaw@ozemail.com.au)