



DECLARATION OF CONFORMITY



WORLD PRECISION INSTRUMENTS, INC.
 175 Sarasota Center Boulevard
 Sarasota, FL 34240-9258 USA
 Telephone: (941) 371-1003 Fax: (941) 377-5428
 E-mail: wpi@wpiinc.com

DECLARATION OF CONFORMITY

We: World Precision Instruments, Inc.
 175 Sarasota Center Boulevard
 Sarasota, FL 34240-9258 USA

As the **manufacturer/distributor** of the apparatus listed, declare under sole responsibility that the product(s):
Z-LITE-Z

To which this declaration relates is/are in conformity with the following standards or other normative documents:

Tested to:
 EN 50081-1:1992
 EN 50082-1:1997
 EN 61000-4-2:1995
 EN 61000-4-3:1996

And therefore conform(s) with the protection requirements of Council Directive 89/336/EEC relating to electromagnetic compatibility and Council Directive 73/23/EEC relating to safety requirements:

Issued on: **April 14, 1999**

Cliff Redenberg
 Chief Technology Officer

Glen Carlquist
 Vice President of Manufacturing

F-QC-006

REV A

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 one year* 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 10 days after receipt of shipment. Claims for lost shipments must be made within 30 days of invoice or other notification of shipment.

Please save damaged or pilfered cartons until claim settles. 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.

• WPI cannot be held responsible for items damaged in shipment en route to us. Please enclose merchandise in its original shipping container to avoid damage from handling. We recommend that you insure merchandise when shipping. The customer is responsible for paying shipping expenses including adequate insurance on all items returned.

• Do not return any goods to WPI without obtaining prior approval and instructions (RMA#) from our returns department. Goods returned unauthorized or by collect freight may be refused. The RMA# must be clearly displayed on the outside of the box, or the package will not be accepted. Please contact the RMA department for a request form.

• Goods returned for repair must be reasonably clean and free of hazardous materials.
 • A handling fee is charged for goods returned for exchange or credit. This fee may add up to 25% of the sale price depending on the condition of the item. Goods ordered in error are also subject to the handling fee.

• Equipment which was built as a special order cannot be returned.
 • Always refer to the RMA# when contacting WPI to obtain a status of your returned item.
 • For any other issues regarding a claim or return, please contact the RMA department

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

* Electrodes, batteries and other consumable parts are warranted for 30 days only from the date on which the customer receives these items.



World Precision Instruments, Inc.

USA

International Trade Center, 175 Sarasota Center Blvd., Sarasota FL 34240-9258
 Tel: 941-371-1003 • Fax: 941-377-5428 • E-mail: sales@wpiinc.com

UK

1 Hunting Gate, Hitchin, Hertfordshire SG4 0TJ
 Tel: 44 (0)1462 424700 • Fax: 44 (0)1462 424701 • E-mail: wpiuk@wpi-europe.com

Germany

Zossener Str. 55, 10961 Berlin
 Tel: 030-6188845 • Fax: 030-6188670 • E-mail: wpide@wpi-europe.com

China & Hong Kong

WPI Shanghai Trading Co., Ltd.
 Rm 20a, No8 Dong Fang Rd., Lu Jia Zui Financial District, Shanghai PRC
 Tel: +86 688 85517 • E-mail: chinasales@china.wpiinc.com

Internet

www.wpiinc.com • www.wpi-europe.com • www.wpiinc.cn

www.wpiinc.com

High intensity source for fiber optic illumination

INSTRUCTION MANUAL

Serial No. _____



070914

World Precision Instruments

INTRODUCTION

The **Z-LITE** Fiber Optic Illuminator provides reliable, uninterrupted high-intensity light for microscopes. Use the rotary dimmer switch to control the halogen light source for a continuous range of subdued or concentrated lighting. The **Z-LITE** is available in the following configurations:

- **Z-LITE** – 115V, 60Hz Fiber optic illuminator, beige
- **Z-LITE-Z** – 230V, 60Hz Fiber optic illuminator, black
- **Z-LITE-186** – Z-LITE with bifurcated light guides
- **Z-LITE-Z186** – Z-LITE-Z with bifurcated light guides

Common accessories include a ring light and single or bifurcated flexible light guides to direct the light beam precisely.

The unit is shipped with a lamp that produces a color temperature of 3200°K. Forced air cooling prolongs the lamp life. The **EJA** bulb can be used as a replacement lamp. When you open the front panel, a safety switch automatically shuts off the power.

Unpacking

Upon receipt of this instrument, make a thorough inspection of the contents and check for possible damage. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed damage should be reported at once to the carrier and an inspection requested. Please read the section entitled "Claims and Returns." Please contact WPI Customer Service if any parts are missing at 941.371.1003 or customerservice@wpiinc.com.

Returns: Do not return any goods to WPI without obtaining prior approval (RMA # required) and instructions from WPI's Returns Department. Goods returned (unauthorized) by collect freight may be refused.

If a return shipment is necessary, use the original container, if possible. If the original container is not available, use a suitable substitute that is rigid and of adequate size. Wrap the instrument in paper or plastic surrounded with at least 100mm (four inches) of shock absorbing material. For further details, please read the section entitled "Claims and Returns."



OPERATING INSTRUCTIONS

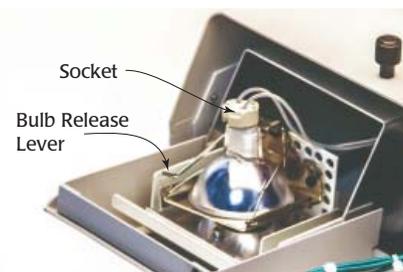
1. Plug the illuminator's AC power cord into a grounded receptacle.
2. Turn the rotary dimmer knob (large black knob on the front panel) in a clockwise direction to increase the light intensity. A click indicates that the power is ON. When you rotate the knob to its extreme clockwise position, the light is at its brightest. Rotating the knob counter-clockwise decreases the intensity of the light and also shuts off the power.

Using Light Guides

The metal light guide port on the face of the **Z-LITE** (bottom left) has an inside diameter of $\frac{5}{8}$ " to accommodate fiber light guides. See ACCESSORIES. Insert the desired light guide into the connection port and tighten the knurled light guide knobs to hold the guide firmly.

Replacing the Bulb

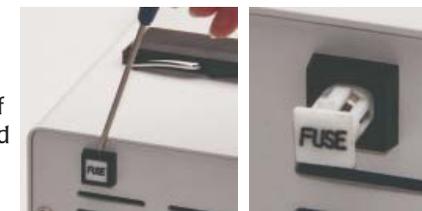
1. Shut off the power and remove the AC power cord from the outlet. Although the power is automatically shut off by a safety switch when the front panel is opened, removing the AC cord is a precautionary measure.
2. Loosen the knurled case knob on the top of the case until the front panel opens.
3. The bulb release lever is located on the left side of the bulb. Push this lever upward. The lever pushes the bulb which slides forward out of the cradle.
4. Gently pull the socket away from the back of the bulb.
5. To insert a new bulb, push the bulb release lever down into its original position. Align the two pins on the lamp with the two holes in the socket. Firmly press the bulb into the socket until the pins are fully seated. Then, push the bulb back until its cradle.
6. Close the front panel, re-tighten the knurled case knob, plug the AC power cord into the power outlet.



Changing the Fuse

This unit is equipped with a fuse. The fuse will blow if a problem occurs. If this happens, wait until the lamp cools down before attempting to replace the fuse. If the fuse continues to blow, there is a short and the problem must be fixed by a qualified technician. To change the fuse:

1. Insert a small, flat-head screwdriver into the recess on top of the fuse housing that is located on the back of the unit. The fuse casing pops out.
2. Remove the casing and the fuse.
3. Position a new fuse in the casing and reinstall the casing.



TROUBLESHOOTING

If the illuminator will not operate:

1. Check the connections to the lamp. Loosen the case knob on the top front of the instrument to open the front panel. Verify that the lamp is properly seated and in full contact with the lamp holder contact springs. Close the panel and re-tighten the case knob.
2. Check the fuse. See Changing the Fuse.

SPECIFICATIONS

Lamp	21V/150W quartz halogen
Fuse	3A Fast, 5mm x 20mm
Maximum Temperature	3200°K
Size	200 x 200 x 140mm (7.9 x 7.9 x 5.5")
Power	115/230V AC, 50/60Hz, 3A
Weight	5.7kg (12.6 lb.)

ORDERING INFORMATION

Z-LITE	115V, 60Hz Fiber optic illuminator, beige
Z-LITE-Z	230V, 60Hz Fiber optic illuminator, black
Z-LITE-186	Z-LITE with bifurcated light guides
Z-LITE-Z186	Z-LITE-Z with bifurcated light guides

Light Guides and Accessories

500186	Bifurcated Light Guide (with lenses)
R-8-8-WPI-01	Ring Light Guide for PZM (Requires adapter #13338 for use with PZM stereo microscopes)
13338	Ring Light Adapter (48mm Ø) for PZM, PZMII, PZMIII
502015	Ring Light Adapter for PZMIV
5475	Adapter for SMA-terminated Fiber Optic Cables
EJA*	Replacement Bulb, 150W, 40 hour lamp

*The Z-LITE is supplied with an EKE 200 hour lamp. The recommended EJA is brighter, though it has a shorter life.