

# Dolan-Jenner

*industries*



## Operation Manual

**Fiber-Lite®**

## **MI-150™ ILLUMINATOR**

*A Product of Dolan Jenner Industries*

### Introduction

The Fiber-Lite® MI-150 is a 150 Watt quartz halogen fiber optic illuminator designed for general microscopy use. When used with specialty fiber optic cables the MI-150 illuminator can also be used in a variety of laboratory illumination applications.

### Initial Setup

Remove the MI-150 Illuminator from the carton and retain the manual and any additional documents.

Remove the fiber optic cable from the carton if the illuminator was purchased as part of a Fiber Optic system. If the system includes an EEG2823, EEG3922 or BG2820 self supporting gooseneck fiber optic cable then also remove the LH759 lens(es) from the carton. The EEG2823 and EEG3922 fiber optic systems include two(2) LH759 lenses while the BG2820 system includes one(1) LH759 lens.

Loosen the fiber optic nosepiece thumbscrew.

Insert the fiber optic tip into the illuminator nosepiece. If the fiber optic is either an EEG2823, EEG3922 or BG2820 self supporting gooseneck style cable then the tip of the cable will have a small groove in the tip. The groove in the tip will firmly secure the fiber optic cable in the nosepiece and prevent rotation of the cable. Align the groove in the tip with the nosepiece thumbscrew. Ringlight fiber optic cables do not have a groove and can be installed without special alignment.

Tighten the thumbscrew by hand to make a secure connection to the fiber optic. **Use of pliers or other tools is not recommended. Use of tools may result in damage to the illuminator or the fiber optic cable.**

Insert the AC power cord into the power entry at the rear of the illuminator. **Use only approved power cord supplied with the illuminator.**

Insert the AC power cord into the proper AC mains outlet for the illuminator voltage ordered. *If any doubt exists consult the labels on the rear and underside of the illuminator before connecting the illuminator to AC power.*

### Fiber Optic Connection

The MI-150 illuminator uses a B-type fiber optic nosepiece with a 0.590 in. (15mm) ID. B-Type nosepieces will accept self-supporting goosenecks (EEG2823, EEG3922, BG2820) and ringlight (A3739) fiber optics without the need for an adapter. Fiber optics smaller than the 0.590 in. (15mm) ID will require the use of B-type adapters (SX-5B, SX-6B & SX-7B). Contact the distributor or the factory for additional information.

## Operation

All the MI-150 series illuminators are equipped with a front panel manual solid state intensity control.

Press the ON(1)/OFF(0) rocker switch on the front panel to ON(1). The illuminator will light and is ready for service. The illuminator intensity is controlled by the rotary control located on the front panel of the illuminator. The 0 position (when control is turned fully counter-clockwise) corresponds to the lowest illuminator intensity. The 100 position (when control is turned fully clockwise) corresponds to the highest illuminator intensity.

**NOTE: Continuous operation of the illuminator at the highest intensity level will yield rated lamp life. Operating the illuminator at reduced intensity can result in significantly extended lamp life.**



### WARNING

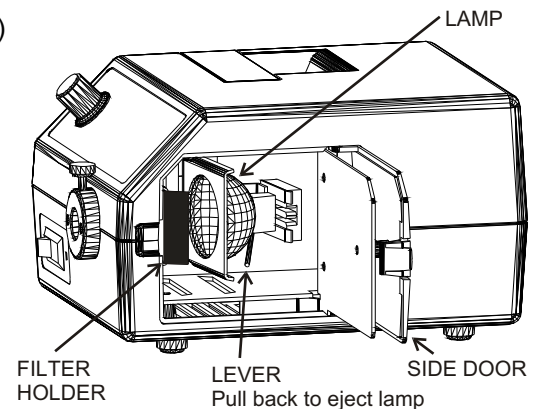
**Risk of electrical shock. Remove power plug before lamp replacement and wait for hot lamp to cool.**



## Lamp Replacement

- Turn the illuminator intensity control fully counterclockwise (the 0 position) and run the illuminator with the fan for several minutes. Wait until the nosepiece is cool to the touch.
- Press the ON(1)/OFF(0) rocker switch to the OFF(0) position.
- Remove the AC power cord from the AC power receptacle.
- Open the lamp access door by depressing the small clip toward the rear of the illuminator with your thumb or finger. Once the clip disengages from the illuminator housing the lamp access will spring open several inches. The lamp access door will open slightly more than 90° to allow easy access to the lamp and lamp socket.
 

**Do not pry open the door with a tool. This may result in damage to the illuminator housing or the lamp access door.**
- Check the lamp assembly to verify that the lamp and socket are cool before proceeding. **Caution: The lamp runs at very high temperatures and contact with a hot lamp may result in severe injury.**
- Pull the lamp eject lever to remove the lamp from the socket.
- Lift and remove the lamp from the lamp socket by grasping the rear of the lamp adjacent to the lamp power pins.
- Remove the lamp from the socket.
- Discard the old lamp.
- Insert the replacement lamp into the lamp socket by aligning the lamp power pins with the slots in the lamp socket. **CAUTION: Do not touch the interior of the lamp reflector, the lamp envelope or the lamp pins with your fingers. Touching the interior of the lamp reflector, the lamp envelope or the lamp pins will result in significant shortening of the lamp life. Handle the lamp only by the exterior of the reflector or the area adjacent to the pins.**
- Push the lamp gently into the socket to seat the lamp in the socket and lampholder.
- Rotate the lamp access door toward the illuminator housing and gently press the lamp access door to cause the door clip to seat into the housing and secure the door.
- Reattach AC line cord and the illuminator is ready for service.



### WARNING

**Replace the fuse with the correctly rated fuse as listed on the label on the back of the illuminator. Use of an improper fuse can create a hazardous situation.**



## Filter Option:

MI-150 illuminators ordered with the filter option are shipped with the IR filter and the filter holder installed at the factory. The filter holder is located behind the illuminator nosepiece, in front of the lamp. (see diagram on page 2) To use color filters (not included), place color filter into the filter holder behind the IR filter such that the IR filter is located between the lamp and the color filter.

**WARNING: Do not use color filters without an IR filter in place. Filters become HOT with use! Allow sufficient time (10-15 minutes) for the filters to cool before handling.**



**Technical Data**

Lamp	150 W Quartz halogen, 21V (EKE, EJV or EJA) as ordered
Voltages	115 VAC, 200 W, 50/60 Hz or 230 VAC, 200W, 50/60 Hz (Set at factory)
Lamp Life	200-10,000 Hours depending on intensity
Fuse	115 VAC: 3 Amp, 250V, 3A slow blow, 5 x 20 mm 230 VAC: 2 Amp, 250V, 2A slow blow, 5 x 20 mm
Color Temperature	3100-3400 degrees Kelvin depending on lamp used
Safety Approvals	115 VAC - UL & C-UL, 230 VAC - CE
Dimensions	6 in. L x 8.5 in. W x 5.3 in. H 15.3 cm L x 21.6 cm W x 13.5 cm H
Weight	7.75 lbs. (3.6 kg.)
Max. Housing Temp.	15°C above ambient

**Environmental Conditions Use Specifications**

Type of Use	Indoor at max. altitude of 2,000 M
Ambient Temperature	+5°C to +40°C
Relative Humidity	80% maximum up to +31° C (non-condensing) decreasing linearly to 50% relative humidity @ +40° C
Installation Category	II
Pollution Degree	2

**NOTICE: If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.**

**NOTICE: Cleaning of the equipment is not recommended. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.**

**Corporate Headquarters and Factory:**

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**Electromagnetic Compatibility** (in accordance with the EMC Directives 89/336/eec)

Dolan-Jenner Industries, Inc. declares that the Fiber-Lite® MI-150 series of fiber optic illuminators complies with the following EMC standards :

- EN61010-1
- EN55011, Class B, Level 1
- EN50082-1
- IEC 801-2
- IEC 801-3
- IEC 801-4

(Test reports available for review at the manufacturer.)

*Charles G. Clarkson*

Authorized Signature

12/8/98

Date

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