
OPTI-LITE
FIBER OPTIC LIGHT GUIDE
INSTRUCTION MANUAL



MANUAL NUMBER 21-11-1180

Issued July 2013

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1.0 INTRODUCTION

The Galiso OPTI-LITE has been designed to provide a consistent, intense white light for internal inspections of cylinders. A wide variety of Light Guides are available allowing for a wide variety of lengths and output of light strength.

The light source provides up to 150 watts of radiometric output from a 21 volt tungsten halogen lamp. The adjustable voltage supply governs output from 0 to 21 VAC. The light source is CSA listed to UL-1571 (120 V version) and is CE compliant (230/240 V version) to standards set for the year 2001.

The updated OPTI-LITE features an ergonomic Handle, a Bezel Adapter with locking design to keep Light Guides steady, a Digital Intensity Control from 0-100 %, and a separate On/Off Switch to maintain intensity settings when the unit is shut down.

The OPTI-LITE light box also has a high output fan, lamp baffle, and unique Bezel design to provide maximum airflow while restricting stray light from heating outer surfaces.

This innovative design allows quick, and user-friendly, replacement of the lamp. This is achieved by using rugged pin type lamps held in place at a terminal block, instead of being soldered in a more permanent position.

1.1 Specifications

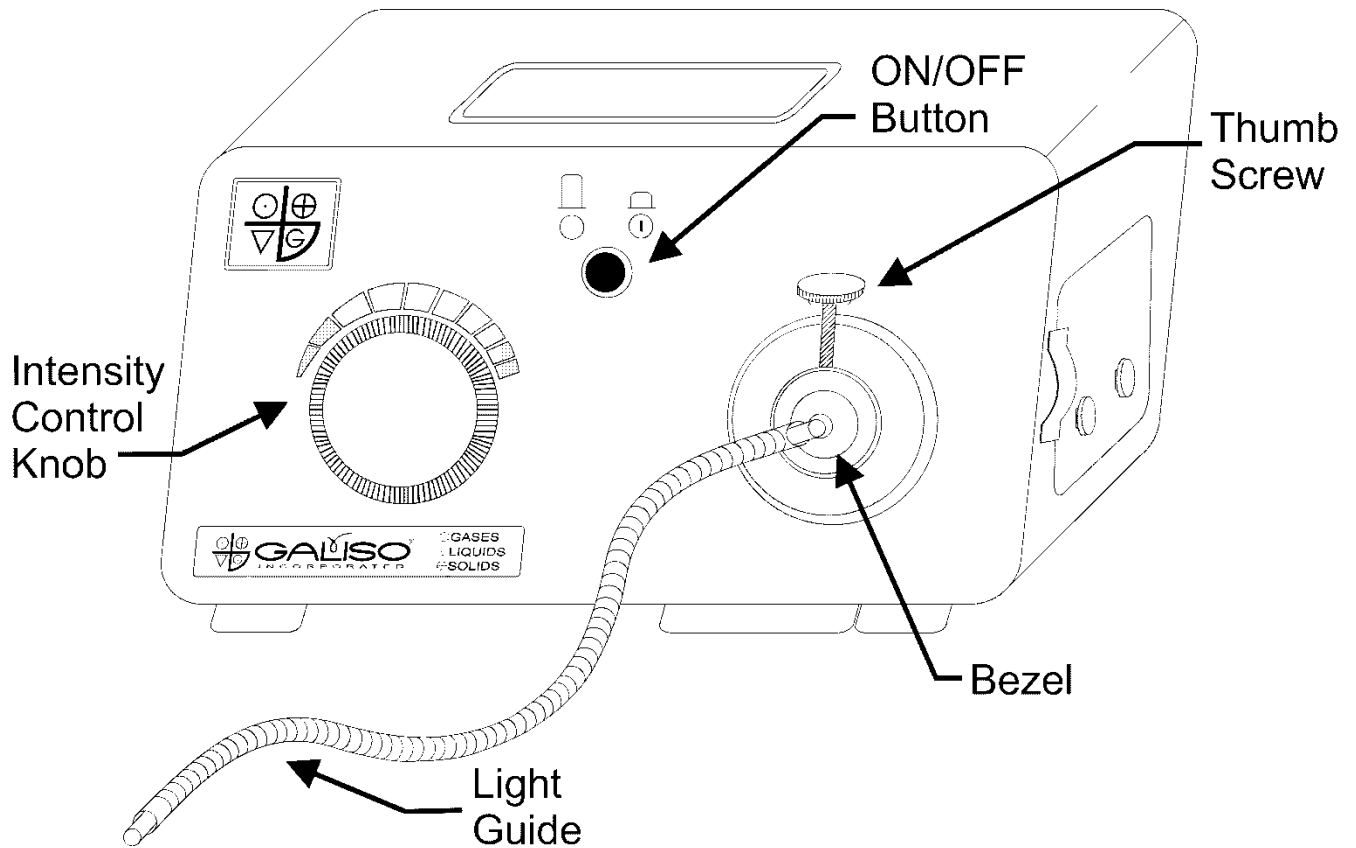


Figure 1-1, Opti-Lite Kit

Illuminator Box:

Overall Height: 4.9" (125 mm)

Overall Width: 8" (205 mm)

Overall Depth: 7" (180 mm)

Unit Weight: 9.9 lbs (4.5 kg) including cord

Light Guide Receptacle: 1" (25.4 mm) OD

Light Guide:

Light Guides are available in a variety of lengths.

2.0 SAFETY

Read all instructions before attempting to install or operate this machine. GALISO, INCORPORATED IS NOT RESPONSIBLE FOR DAMAGE OR INJURY CAUSED BY UNSAFE USE, MAINTENANCE, APPLICATION, MODIFICATION OR IMPROPER INSTALLATION OF THIS MACHINE. Please contact Galiso, Inc. at (800) 854-3789 for guidance when you are in doubt as to the proper safety precautions to be taken when installing or operating this machine.

2.1 General Safety

!WARNING!

Damage to eyesight will occur by looking directly at the lamp or Light Guide when the power is on. NEVER look directly into the Light Guide or the Lamp when they are lit.

- A. Do not use this unit near water or in an area with excessive water.
- B. Always unplug the unit before removing the Lamp or Fuse. High voltage is present internally.
- C. Do not direct wire for power or use any other power cord. Only use the 3-Prong, grounding power cord, supplied with the unit. Route cord so that it will not be pinched, severed or walked upon.
- D. In the event of loss of power, the OPTI-LITE will remain off when power is restored to the unit.
- E. Do not defeat the purpose of the fuse. Replace only if necessary and only replace with the fuse type described in Maintenance Section 5-1, or as marked on the unit.
- F. Do not place flammable materials near the unit.
- G. Allow at least 5 minutes of “cool down” time before opening the Lamp Compartment or touching any internal parts.
- H. Take care when removing the Light Guide from the Opti-Lite. The Lamp and surrounding surface may be hot or warm to the touch.
- I. Avoid using or storing the OPTI-LITE in, or on, areas of excessive vibration. Vibration of the lamp could cause shortening of the life of the Lamp.

2.1 General Safety, continued

- J. Do **NOT** touch the reflecting surface of the Lamp at any time. Oils from skin can cause “hot spots” that will reduce the life of the Lamp.
- K. Do not block ventilation openings on the unit. Do not impede airflow. Always be certain that the OPTI-LITE has proper clearance of the unit to allow for ventilation to prevent overheating (see Assembly Sec. 3-1, for accurate clearance requirements).

CAUTION:

Dust accumulation will restrict air flow which can cause damage the unit. (See maintenance section for cleaning recommendations.)

- L. Do not operate the unit without mounting feet in place. If the mounting feet are removed, air vents will be blocked.

Notice:

Improper ventilation of the OPTI-LITE can cause intermittent operation and/or failure of the electronics.

3.0 ASSEMBLY

Read all instructions and familiarize yourself with the safety, assembly, and operation procedures before assembling or operating the OPTI-LITE.

3.1 Receiving and Placement

- A. Select a space for the assembly and operation of the OPTI-LITE. The location of the machine should allow adequate clearance for ventilation (see Table 3-1, Minimum Clearance). Make certain that the mounting feet are on the bottom of the illuminator box. The location selected should be an area that does not have excessive vibration. The location should also be away from any flammable items or gases.

Rear	Bottom	Sides and Top
1.5" (37 mm)	Do not remove feet	.5" (25mm)

Table 3-1, Minimum Clearance

- B. Loosen the Locking Thumb Screw counter-clockwise to allowing the Light Guide to be inserted into the Bezel.
- C. Insert either end of the Light Guide into the Bezel on the Illuminator Box and retighten the Locking Thumb Screw. Do not over tighten the Locking Thumb Screw, only "hand-tight", is necessary.
- D. Make sure the Intensity Control Knob is in the low position and Power Button is in the OFF position.
- E. Plug into the appropriate voltage wall outlet and the OPTI-LITE is ready for operation.

If at any time, during assembly or operation, a question should arise call or contact Galiso, Inc. at (800) 854-3789 or online at www.galiso.com

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4.0 OPTI-LITE OPERATIONS

4.1 Operation

- A. Once the Light Guide has been inserted and Illuminator box is plugged in, press the ON/OFF Button to the “ON” (depressed) position.
- B. NOTICE: When switching on a cold Illuminator Box, leave the intensity control at low intensity for a minimum of ten seconds before increasing to full intensity. This will allow the Lamp to warm-up, helping to extend the Lamp life. After using the OPTI-LITE, return Intensity Control Knob to low and allow a cool down time of one to two minutes before turning the unit off.
- C. After the above steps have been performed, the Light Guide can be inserted into the cylinder neck to proceed with inspections. Always avoid looking directly into the Light Guide once the unit has been turned on.

4.2 Intensity

- A. No output will be noticed until the Intensity Control Knob is turned to the 9 o'clock position. This is normal and does not affect performance.
- B. Although halogen lamps are an inexpensive and effective light source, they can degrade by an average of 15% over the lifetime of the lamp. Furthermore, new lamps of the same brand and model number may vary +/- 20% in maximum intensity, depending on the batch.
- C. Under normal conditions, lamp manufacturers recommend halogen lamps be operated above 80% of their rated intensity for optimum and stable lamp performance.

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5.0 MAINTENANCE

5.1 General

- A. Other than periodical dusting, and wipe down, the OPTI-LITE and Light Guide requires no other maintenance.
- B. When cleaning is needed, use a commercial glass cleaner or common household detergent to gently wipe down the exterior of the Illuminator Box and Light Guide.

CAUTION!

Always unplug the power cord before performing any cleaning. Do not use excess water, treated cloth, harsh cleaning agents or sprays. Use any cleaning fluid sparingly. If moisture is present in the interior, allow the unit to dry thoroughly before use.

- C. Occasionally dust should be removed from the Illuminator Box by using vacuum or commercial can of compressed air. Pay special attention to the fan blades at the rear of the unit and the air vents in the front (around the Bezel) and on the bottom of the Main Housing.

5.2 Lamp Replacement

- A. Depress the power button to the “OFF” position. Unplug the power from the wall.

WARNING!

Always allow the Lamp and surrounding surface to cool before proceeding to the next step. These surfaces may remain hot for a time, possibly causing a burn if touched.

- B. Turn the Cover Lock Knobs (on the side of the Illuminator Box) counter-clockwise until the Lamp Tray opens. Gently pull the Lamp Tray away from the Main Housing.

5.0 MAINTENANCE, continued

5.2 Lamp Replacement, continued

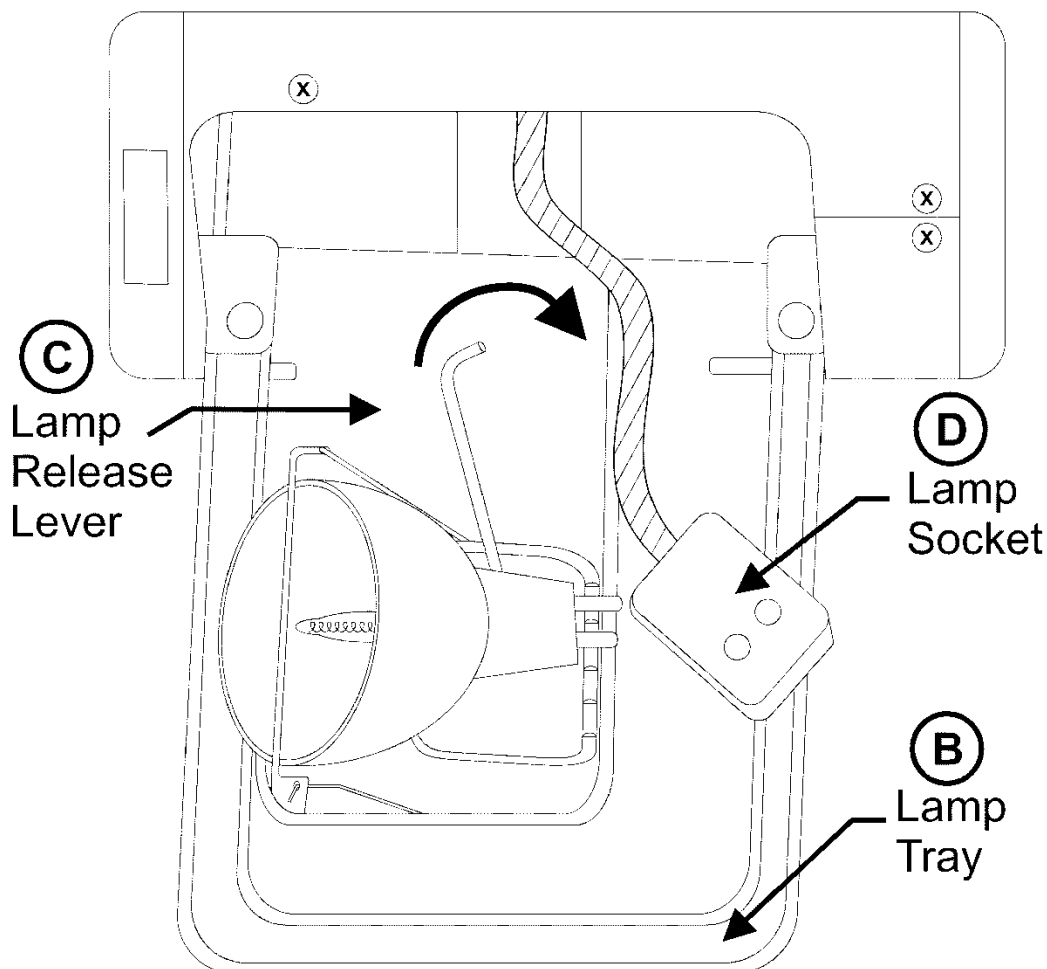


Figure 5-1, Lamp Replacement

- C. Push the Lamp Release Lever toward the Lamp Socket to raise the Lamp. Gently pull the Lamp from the ceramic Lamp Socket. See Figure 5-1, Lamp Replacement.

Remember to never touch the Bulb or the Reflector in the Lamp.
Only touch the sides when inserting a new Lamp.

- D. Insert a new Lamp into the Lamp Bracket. Make sure the Lamp Release Lever has been returned to its original forward position; push the Lamp all the way down into its holder. Connect the ceramic Lamp Socket to the prongs on the Lamp.
- E. Slide the Lamp Tray back into position inside of the Main Housing and then hand-tighten the Cover Lock Knobs.

5.0 MAINTENANCE, continued

5.3 Fuse Replacement

- A. Under normal use, the fuse should not require replacement. The purpose of the fuse is to protect the electronics from failure due to inrush.
- B. Should it become necessary to change the fuse, replace with the same type (120/100v: 2.5 amp/slow blow, 230/240v: 1.6 amp/slow blow) to insure long life and performance.

5.4 Troubleshooting

If the problem is not resolved by performing the following suggestions, please call Galiso, Inc. at (800) 854-3789.

- A. Light has low output, Fan operates:
 - 1. Check the lamp to ensure that it is fully seated. See Section 5.2 Lamp Replacement.
 - 2. Check to make sure the Light Guide is fully seated in the Bezel.
 - 3. Check the intensity setting.
 - 4. Check the Lamp. A partial short in the Lamp may cause low or intermittent output.
- B. Output is intermittent; Fan operates (Lamp turns on and off every few minutes.)
 - 1. The Illuminator Box may be running too hot. (A thermal cutoff protects the circuitry from heat failure.
 - 2. Check air intakes and exhaust areas for dust or dirt accumulation. Make sure minimum clearances are maintained. (See Section 3.1 Assembly and Placement, for clearance information).
 - 3. Move the OPTI-LITE to another location.

NOTICE:

Never enclose the Illuminator Box without adequate ventilation.

5.0 MAINTENANCE, continued

5.4 Troubleshooting, continued

- C. The Light briefly turns on and then off; Fan operates
1. The Lamp may have a faulty filament. Turn the Intensity Control Knob to maximum setting to the test lamp.
 2. If the Lamp fails, replace the Lamp (See 5.2 Lamp Replacement).
 3. Examine the Lamp Socket assembly for damage and continuity.
- D. The Light will not turn on, Fan operates
1. Replace the Lamp (See 5.2 Lamp Replacement).
- E. The Light is dim or non-existent; Fan does not operate
1. Make sure to use the correct model for the power available. Running a 240v unit in 120/100v conditions will stop the fan and dim the lamp.
- F. The Light is on; Fan does not operate
1. Return to Galiso, Inc. by calling (800) 854-3789 to receive a return authorization number and shipping instructions.
- G. The Light is off; Fan does not operate
1. Make sure the power cord is inserted completely into the IEC connector and also into the correct power source.
 2. Check the power cord for damage.
 3. Check the fuse.
- H. The Light Guide is burning
1. Check the fiber type. If a Light Guide is in use that is not a Galiso, Inc. fiber optic Light Guide, it may be plastic and susceptible to burning. Using a glass fiber Galiso, Inc. Light Guide is recommended.
 2. Some epoxy types cannot withstand the high temperatures developed in the light source. Call the supplier if there is any question as to the epoxy used to manufacture the fiber optic input.
 3. Check the Lamp type. Replace the Lamp with Galiso, Inc. approved part number: 85-11-0028, EKE 150W, (See Table 5-1, Spare and Accessory Parts). Light Guides damaged by use of non-approved Lamps will void the fiber warranty.

5.0 MAINTENANCE, continued

5.5 Spare Parts

Item	Part No.	Description
1	85-11-0028	Lamp Halogen, MR16 Quartz
2	85-11-0029	Light Guide, 1/4" x 20'L
3	85-11-0043	Light Guide, 1/4" x 5' ULG
4	85-11-0050	Light Guide, 1/4" x 6' L
5	85-11-0061	Light Guide, 1/8" x 5' L
6	85-11-0062	Light Guide, 1/8" x 10' L
7	85-11-0063	Light Guide, 1/4" x 5' L
8	85-11-0064	Light Guide, 1/4" x 10' L
9	85-11-0066	Light Guide, 1/8 x 5', Hypo Tube End
10	85-11-0067	Light Guide, 3.0 x 5' L, w/Plastic Fiber

Table 5 - 1 Spare and Accessory Parts

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1. **DURATION:** Galiso provides a one-year warranty from date of purchase, to the original purchaser, for standard products, unless otherwise specified. For all spare parts purchases, Galiso provides a 90-day warranty unless otherwise specified. Soft goods such as our speed seals, and O-rings, which are subject to wear in the normal course of operation, are not covered under this warranty.
2. **COVERAGE:** Galiso manufactured equipment is warranted against defective materials or workmanship. THIS WARRANTY IS VOID IF:
 - A) THE EQUIPMENT HAS BEEN DAMAGED BY ACCIDENT OR UNREASONABLE USE, IMPROPER SERVICE/MAINTENANCE, IMPROPER INSTALLATION, ABNORMAL OPERATING CONDITIONS, NEGLIGENCE, REPAIR BY ANY PERSON NOT AUTHORIZED BY GALISO, INC. OR OTHER CAUSES NOT RELATED TO MATERIAL DEFECTS OR WORKMANSHIP.
 - B) THE SERIAL NUMBER HAS BEEN ALTERED OR DEFACED.
3. **PERFORMANCE:** Galiso reserves the right to make warranty determination only after inspecting the item at the Galiso manufacturing facility. If the warranty determination indicates that the defective item is covered under warranty, the item will be repaired or replaced with the same parts/items or parts/items of equivalent quality, at the option of Galiso. In the event of replacements, the replacement unit will continue under the original equipment warranty or carry a 90-day warranty, whichever is longer. No charge will be made for warranty repairs, and/or replacements. All freight charges to and from Galiso Inc. or a Galiso Inc. authorized repair facility, are the responsibility of the customer requesting warranty service.

If the warranty determination indicates that the item is **not** covered by warranty, a repair/replacement cost estimate will be submitted to the customer/purchaser for approval prior to initiating any repair work.
4. **CLAIMS:** In the case of equipment malfunction, notify Galiso (1-800-854-3789) and provide the Model Name, Model Number, Serial Number and a description of the problem. Return Authorization Number, shipping and/or service information will be provided on receipt of the required information.
5. **SERVICE EQUIPMENT:** Galiso attempts to make available, whenever possible, a limited amount of service equipment at a minimal use charge, plus freight expense, for those customers wishing to avoid downtime during repair of their equipment. Such items are available on a first come, first served basis and are billable at the specific service charge applying with a one-month minimum.
6. **MODEL CHANGES:** Galiso reserves the right to make changes in materials and specifications, without notice. Galiso may offer, for a stipulated fee, the opportunity to upgrade your equipment to the latest configuration.
7. **DISCLAIMERS:** Galiso provides technical data and assistance to aid customers in the selection and use of our products. There are no implied warranties of merchantability nor suitability for a particular purpose associated with the transmittal of technical data and/or customer assistance.

Galiso does not assume liability for any consequential, incidental, or special damages. Liability under this warranty is limited to repairing, or replacing Galiso equipment items returned to the factory or an authorized facility.
8. **COMPUTER AND NETWORK VIRUS PROTECTION:** Galiso Inc. equipment, which utilizes internet access, comes equipped with a subscription to virus protection software. It is the responsibility of the equipment owner to maintain this virus protection subscription or other virus protection at their cost. Current virus subscriptions are mandatory to maintain the benefits of this warranty. Galiso does not assume liability for any or all damages related to or are the result of internet or network failure or malware or computer viruses or any other type of internet or network malfunction or attack.