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Luxxor®

User Guide

LUXXOR® 35 LED LIGHT SOURCE



Gradient Lens Corporation®

gradientlens.com



Luxxor® 35 LED Light Source

Never replace lamps again! The new Luxxor® 35 LED delivers all the super-bright intensity and whiteness of the Luxxor 24, but uses long-life LED technology estimated at 50,000 hrs, of life! (Compared to 500 hrs for metal halide arc lamps). These new lights also have both coarse and fine intensity adjustment, allowing finely controlled dimming with perfect color rendition.



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All product specifications subject to change without notice.

Warnings & Cautions

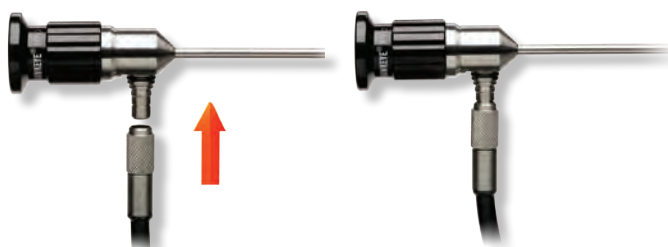
 WARNING!	There are no user serviceable or replacement parts. Do not attempt to dismantle box or remove top cover.
 CAUTION!	Only qualified personnel should make electrical inspections and repair of the LED Light Source.
 CAUTION!	The high intensity light at the front of the LED Light Source and at the tip of the fiber-optic bundle will create high temperatures and bright light. To minimize the risk of injury, avoid direct viewing or contact.
 WARNING!	To prevent temporary blinding and contact with heated parts, always plug the fiber optic bundle into the LED Light Source before turning the power on.
 CAUTION!	Do not use the LED Light Source directly in medical applications.
 HOT SURFACE!	Unit MAY BE HOT. Allow to cool before handling.
 CAUTION!	Preferred operation is in the horizontal position. Other operating orientations are permitted. Any changes or modifications made to this device that are not expressly approved by manufacturer may void the user's authority to operate the equipment.
 WARNING!	DO NOT obstruct cooling airflow. PROVIDE ADEQUATE VENTILATION TO PREVENT OVER HEATING. Do not cover this light source. Provide a 1.5 inch (3.8 cm) distance between LED Light Source and any solid objects. Do not operate device without the cover in place.
 DO NOT IMMERSE	DO NOT IMMERSE or store liquids above or on the LED Light Source.
 READ MANUAL	Please read this entire manual prior to operation. Protection provided by the equipment may be impaired if not used in accordance with the manufacturer's recommendations.

Unscrew the protective plug from the output receptacle on the front of the Luxxor® 35 LED.

Insert the male end of the Luxxor® Light Guide fully into the output receptacle.



Connect the other end of the Luxxor® Light Guide to your Hawkeye® borescope by pushing it onto the light post of the scope until it clicks into place.



Make sure the Power/Intensity knob is set to OFF.



Connect the power supply:



- 1) Plug the output of the power supply into the jack on the rear of the Luxxor® 35 LED light source.
- 2) Plug the small connector on the end of the power supply's AC cable into the power supply.
- 3) Plug the other end of the AC cable into a 100-240 VAC 50/60Hz outlet.

Rotate the Power/Intensity knob on the Luxxor® 35 LED clockwise to turn the light ON and set the intensity. Full intensity position is shown here.



WARNING: The Luxxor® 35 LED emits extremely bright light. DO NOT LOOK DIRECTLY INTO THE OUTPUT RECEPTACLE OF THE LIGHT SOURCE, OR INTO THE OUTPUT END OF AN ATTACHED LIGHT GUIDE.



Light Intensity

Light intensity can be varied electronically, with the power/intensity knob, or mechanically, with the sliding shutter. Maximum intensity is delivered with the shutter slide in the OPEN position, and the power/intensity knob rotated fully clockwise. Users may find it convenient to set a maximum output limit with the shutter, and fine-tune the output with the power/intensity knob.

Shutter
OPEN



Shutter
CLOSED





Do not obstruct air intake and outlets.

CAUTION!

Unrestricted airflow is necessary for cooling.

Keep at least 1.5 inches of space around the sides and rear of the unit.

Place the bottom on a flat, hard surface.

Do not cover with cloth or other materials while in use.

Intake



Outlets



1/4-20 UNF Mounting Hole

Mounting

A threaded hole is provided on the bottom of the unit to enable mounting to a stand or fixture. It will accept a screw with a 1/4-20 UNF thread.

Cleaning



Clean the exterior of the light source, power supply, and cables by wiping with a cloth dampened with mild soap and water.

- DO NOT IMMERSE.
- KEEP WATER OUT OF THE INTERIOR OF THE UNIT.
- ALLOW TO DRY AFTER CLEANING.
- DO NOT RECONNECT TO POWER WHEN WET.

Environmental Ratings:

Operating Temperature	41° F to 104° F (5° C to 40° C)
Operating Humidity	0 to 95% rh (non-condensing)
Storage Temperature	-10° F to 140° F (-20° C to 60° C)
Storage Humidity	30 to 75% rh
Atmospheric Pressure	700 hpa to 1060 hpa
Mode of Operation	Continuous
Safety System Classification	Class II
System Pollution Degree	2
Installation Category	II

Electrical Ratings

External Power Supply Ratings:

Input	100 - 240 V~, 50/60 Hz, 1.4 A max
Output	+12 V , 5.0 A

Luxxor® 35 LED Power Requirements:

Voltage.....	+12V DC; 14V DC maximum
Current.....	3.4 amp
Battery power	We recommend using a battery rated at 12V/9Ah or equivalent with a minimum 3.5 amp current limit rating.

Dimensions

Length	127MM (5.0")
Width	90MM (3.5")
Height	68MM (2.7")
Weight	0.45 kg (1.0 lbs)

Illumination Source

Type	LED Custom Module
Color Temperature	5700 K - 6500 K Nominal
Power	35 Watts
Average LED Life*	50,000+ Hours

* Based on LED manufacturer rated wattage and thermal operation.






Troubleshooting

Under certain conditions the overvoltage protection of the power supply may cause it to turn off to prevent damage to the unit.

In the event the unit stops functioning, try the following steps to restart:

1. Turn OFF the Luxxor® 35 LED by rotating the intensity control knob counterclockwise until the switch clicks off.
2. Completely disconnect the power supply from both the light source, and mains (AC outlet).
3. Wait for about 5 seconds until the power supply discharges. The power supply LED indicator will turn off.
4. Reconnect the power supply to the Luxxor® 35 LED, and to the AC outlet.
5. Turn ON the Luxxor® 35 LED by rotating the control knob clockwise until it clicks on, and the LED indicator light is on.
6. Rotate the knob to increase the light output intensity to the desired level.

Approvals/Compliance


	The CE mark on this product indicates that it has been tested to and conforms to the provisions noted within the following directives:
	Low Voltage: 2006/95/EC (73/23/EEC) EMC: 2004/108/EC (89/336/EEC) RoHS 2: 2011/65/EU
	In accordance with the following standards: EN61010-1, IEC 61326-1, EN 61326-1 IEC 62471, IEC/EN 61000 3-2 IEC/EN 61000 3-3, EN 50581
	Conforms to UL Std 61010-1 Certified to CSA Std C22.2 No. 61010-1
	WEEE www.lamprecycle.org

Agency Compliance Statements

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Class A Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

	Any changes or modifications made to this device that are not expressly approved may void the user's authority to operate the equipment.
NOTE	To maintain compliance with FCC Rules and Regulations, cables connected to this device must be shielded cables, in which the cable shield wire(s) have been grounded (tied) to the connector shell.

Canadian Notice

This equipment does not exceed the Class A limits for radio noise emissions as described in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'émet pas de bruits radioelectriques dépassant les limites applicables aux appareils numeriques de la classe A prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

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30-Day Customer Satisfaction Guarantee

Gradient Lens Corporation offers its direct customers a money-back guarantee. If, for any reason, you are not completely satisfied with your purchase within 30 days, call our customer service department. A Return Material Authorization (RMA) number will be issued allowing a refund of the original purchase price from GLC (excluding shipping and handling charges), provided that the product is in original, saleable condition with all packaging.

Limited Warranty

Gradient Lens Corporation warrants that the Luxxor® 35 LED light source will be free of defects in materials and workmanship for two years from the date of first retail purchase.

Gradient Lens Corporation warrants that all Hawkeye® borescopes and accessories manufactured by Gradient Lens Corporation will be free of defects in materials and workmanship for one year from the date of first retail purchase. The entire Hawkeye® Borescope Warranty is available online at <http://warranty.gradientlens.com>.

Video, lighting and some accessory products come with their manufacturer's warranty.

Warranty Claims and Non-Warranty Repairs

Whether you have a warranty claim, an out-of-warranty repair, or you don't really know which, call our customer service department at the number(s) listed above to talk about it. If necessary, we will issue you an RMA number and shipping instructions, allowing you to send the product back. Please do not return any product without calling for an RMA number first. You are responsible for shipping and insurance on any returns.



Do not dispose of this product as unsorted municipal waste. Prepare this product for reuse or separate collection as specified by Directive 2002/96/EC of the European Parliament and the Council of the European Union on Waste Electronic and Electrical Equipment (WEEE). If this product is contaminated, this directive does not apply.



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