

# SurgiTel®

## Xenon Light Source

### XLS-180

(P/N: 23851)

## Operator Manual



**GSC** General Scientific Corporation

77 Enterprise Drive, Ann Arbor, MI 48103  
Phone: 800-959-0153, Fax: 734-662-0520  
[www.surgitel.com](http://www.surgitel.com)

# TABLE OF CONTENTS

	<b>PAGE</b>
<b>1. INTRODUCTION</b>	<b>3</b>
<b>2. WARNINGS</b>	<b>4</b>
<b>3. SPECIFICATIONS</b>	<b>5</b>
<b>4. OPERATING ELEMENTS, SYMBOLS AND FUNCTIONS</b>	
4.1 FRONT PANEL	<b>6</b>
4.2 REAR PANEL	<b>7</b>
<b>5. INSTALLATION</b>	
5.1 SETTING UP LIGHT SOURCE	<b>8</b>
5.2 CONNECTING LIGHT CABLE	<b>8</b>
<b>6. OPERATION</b>	
6.1 POWERING LIGHT SOURCE	<b>9</b>
6.2 LIGHT BRIGHTNESS DISPLAY AND CONTROL	<b>9</b>
6.3 LAMP LIFE HOURS DISPLAY	<b>9</b>
<b>7. CLEANING</b>	<b>9</b>
<b>8. DISINFECTION AND STERILIZATION</b>	
8.1 DISINFECTING CONTROL UNIT	<b>9</b>
8.2 STERILIZING LIGHT CABLE	<b>10</b>
<b>9. MAINTENANCE, SERVICING &amp; REPAIR, WARRANTY</b>	
9.1 LAMP REPLACEMENT	<b>10</b>
9.2 WARRANTY	<b>11</b>
<b>10. END OF PRODUCT LIFE</b>	<b>11</b>
<b>11. TROUBLESHOOTING</b>	<b>12</b>

# 1. INTRODUCTION

## **Congratulations on the purchase of your new XLS-180 Xenon Light Source!**

This user-friendly Xenon Light Source is a high efficiency light source utilizing state-of-the-art superior illumination technology. It offers a variety of features such as:

- 5600° K daylight brightness for perfect color definition
- Quiet operation
- Compact and light weight
- Turret which adapts to various types of light guides
- Adjustable light output
- Easy lamp replacement
- Lamp life display indication

In short, you have chosen the best and we would like to make sure you receive the optimal results with your new Xenon Light Source, by using it correctly.

This manual will help you install the device and optimally integrate it with compatible components used with your system. It will also instruct you how to operate the Xenon Light Source, how to keep it clean, and methods you can use to sterilize it. This manual will provide guidelines to properly maintain and service your system, as well as recommendations for achieving the best performance.

## 2. WARNINGS



To prevent fire or electric shock, do not open or expose the light source unit to rain or moisture.

Refer all servicing to qualified personnel only.

Not suitable for use in the presence of any flammable air born substances.

To prevent any potential electro-magnetic interference, do not use a cellular phone near the light source.

This product should be used only with type BF endoscopic instruments which have been certified according to IEC 601-1 (for medical equipment) and IEC 601-2-18 (for endoscopic equipment).



This symbol indicates type BF equipment.

### **CAUTION**

***This product is not provided as sterile.***

### **CAUTION**

***All devices connecting to the Light Source must be classified as medical equipment. Additional information processing equipment connected to the Light Source, a Medical System and the operator must determine that all equipment complies with the appropriate end-product standards (such as IEC 60950 or IEC 60065 and the Standard for Medical System, IEC 60601-1-1).***

### **CAUTION**

***Light source can cause permanent eye damage if viewed directly with-out wearing the proper eye protection. To reduce the chance of eye damage, set the light intensity control “always” to a minimum level and insert the fiberoptic cable into the unit before turning on the power.***

### **CAUTION**

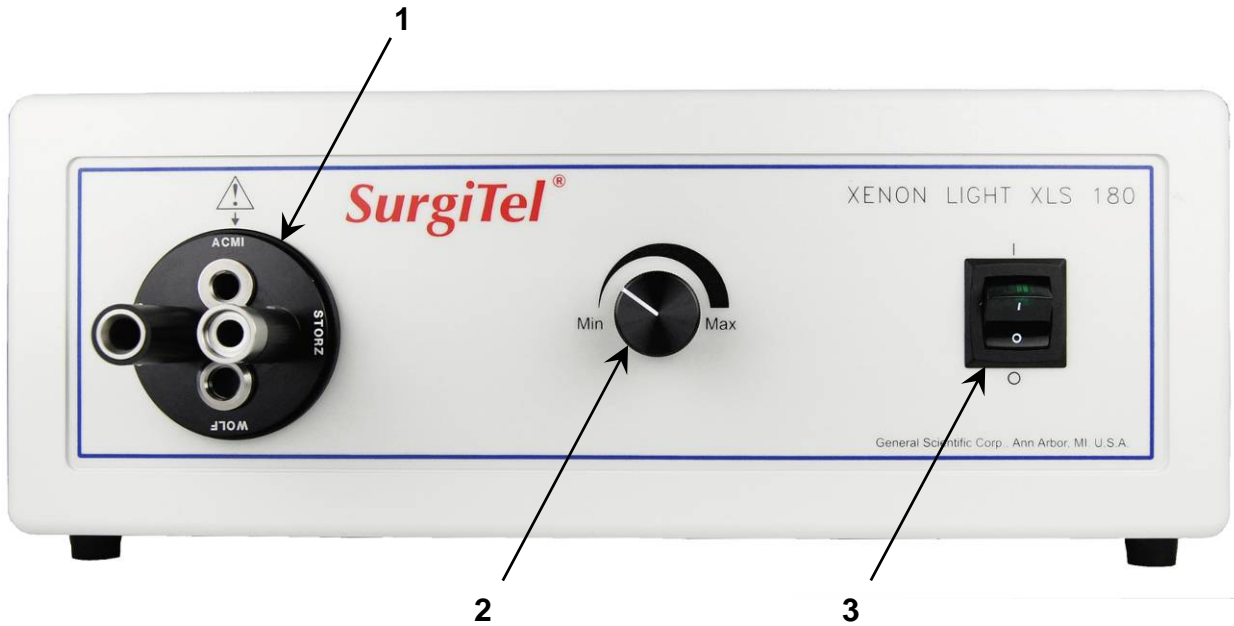
***The fiber optic cable must be a “NON-CONDUCTIVE CABLE”. It should not have conductive shielding or any other conductive connection between the patient and equipment. Such connection will impair safety of the equipment. After cleaning, it must be rinsed thoroughly (to eliminate any excess soaking/disinfectant solution) and dried before plugging into the light source receptacle. This will ensure that the optical surface is clean before being engaged into the light source.***

### 3. SPECIFICATIONS

Item	Specification
Lamp type	Cermax type 175 watt Xenon
Power	175 Watt
Color temperature	5600° K
Lamp life	500 hours (typical)
Lamp replacement	Cartridge replacement from the side of the unit
Light guide adapter	Equipped with a turret that will accommodate four different fittings: Storz, ACMI, Wolf, Olympus
Brightness control	Mechanical iris control from the front panel
Input voltage	100-120V AC, 50/60 Hz 220-240V AC, 50 Hz
Power consumption	250 watt max
Regulatory Approvals	UL60601, EN 60601-1, EN 60601-1-2, CAN/CSA, C22.2, No 601.1-M90
Equipment Class	Class I Europe, Class II USA, BF-type
Mode of Operation	Continuous
Water Resistant	Not Protected Equipment, IPX0
Operating Environment Temperature Relative Humidity Air Pressure	+10° to +40° C (50° to 104° F) 30 to 85% 700 to 1060 hPa
Storage Environment Temperature Relative Humidity Air Pressure	-20° to +60° C (-4° to 140° F) 0 to 95% 700 to 1060 hPa
Dimensions	355(14)W x 130 (5)H x 250 (10)D mm
Weight	9.5 lbs./4.3 kg

## 4. OPERATING ELEMENTS, SYMBOLS AND FUNCTIONS

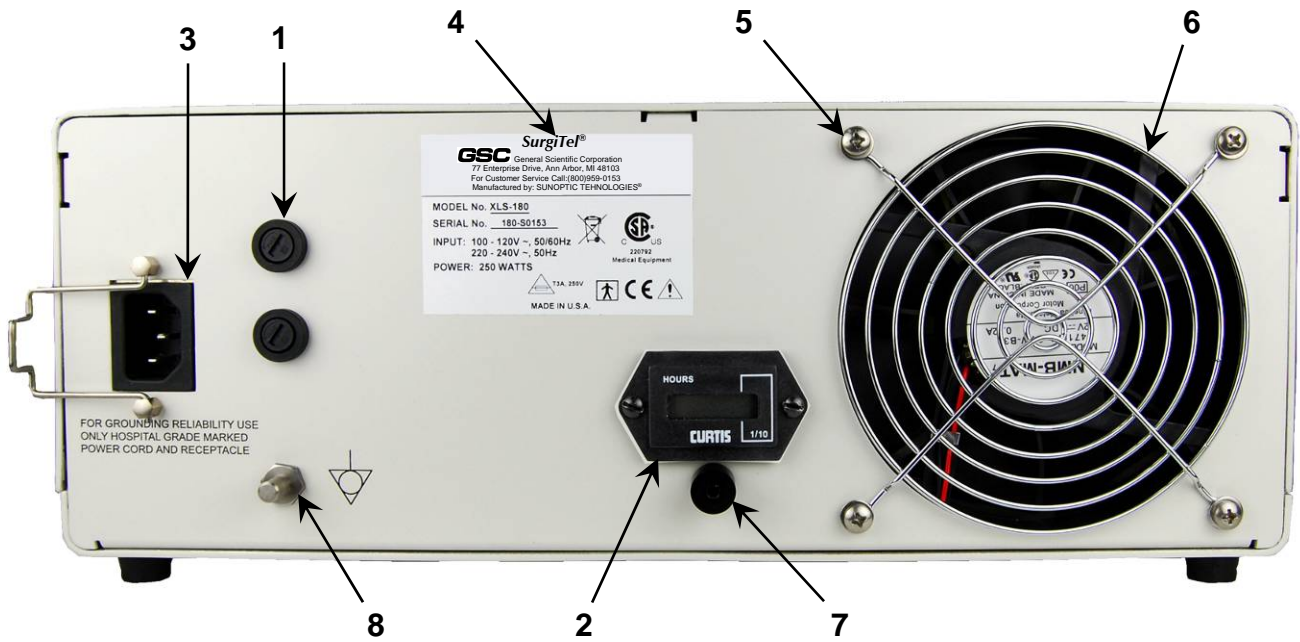
### 4.1 FRONT PANEL



**Figure 1.** Light Source Front Panel

No.	Name	Function
1	Turret	Accepts light source end fitting of light guide cable.
2	Intensity Control	Mechanically controls the light output.
3	Power switch	Turns the light source on and off; illuminates green when turned on.

## 4.2 REAR PANEL



**Figure 2. Light Source Rear Panel**

No.	Name	Function
1	Fuses	Over current protection. Type, AGC 3A
2	Hour Meter	Allows tracking of total running time on unit and provides a control on individual lamp hours
3	AC main inlet	Accepts AC Power cord
4	Serial number label	Serial number and power requirements
5	Venting grids	Allows adequate ventilation and cooling of the light source
6	Fan	Fan 12V DC, air flow for cooling of unit
7	Hour meter reset button	Resets hour meter to zero hours
8	Connector	For potential equalization

## 5. INSTALLATION

### 5.1 SETTING UP THE LIGHT SOURCE

Place the light source on a stable surface (cart, counter, stand, etc.).

If you choose to use the Xenon stand (sold separately) with your source, follow the steps below for proper assembly.



Step 1



Step 2



Step 3  
(Fully assembled)

#### NOTE

**Avoid places where the light source may be splashed with liquid. Absolutely “DO NOT” use in any environment with explosive or flammable gases. “DO NOT” block the venting grids on the light source.**

Make sure the power switch is in the OFF position.

Connect the AC power cord to the power inlet located on the rear panel of the light source, as shown.



#### CAUTION

**Use only cords provided with the light source.**

Plug the AC power cord into a wall outlet using the three (3) prong plug supplied with the unit.

#### CAUTION

**To prevent electric shock, connect power cords of peripheral equipment through medical isolation transformers.**

#### NOTE

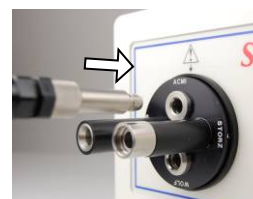
**When using a medical isolation transformer, be sure to check the transformer power ratings. Make sure that the power cord is connected to the main power supply with a three prong plug (USA use UL2601-1 rated isolation transformers and/or power strips only).**

#### CAUTION

**When used in clinical or residential areas near a radio or TV unit, it may cause reception interference. To avoid adverse electromagnetic effects, “DO NOT” operate this equipment near RF energy equipment.**

### 5.2 CONNECTING THE LIGHT CABLE

Connect the light cable and optics to your loupes or headband. Then plug the light cable end fitting into the appropriate turret port, located on the front panel, as shown.





## 6. OPERATION

### 6.1 POWERING UP THE LIGHT SOURCE

To operate the light source: Attach the light source to the instrument or headlamp. Turn the power switch on. The indicator on the power switch will light. The fan will start.

### 6.2 LIGHT BRIGHTNESS DISPLAY AND CONTROL

The light brightness adjustment enables the user to obtain a brighter or darker illumination on the object they are observing.

Adjust the light intensity by turning the intensity control knob.



### 6.3 LAMP LIFE HOURS DISPLAY

The hour meter shows the total elapsed running time of the unit. Record the hours when replacing the lamp.



## 7. CLEANING

**NOTE** *Always disconnect the power cord before cleaning the system.*

The control unit can be cleaned with any cleaning agents, which are used for external cleaning of electric equipment, according to instructions given by the manufacturer of the cleaning solution.

Do not allow excessive moisture or liquids to come in direct contact with the control unit.

Do not use cleaning agents that are not permitted for use with plastics, i.e., ammonia, acetone, salty acids (HCl), etc.

Do not allow cleaning agents or liquids to enter the control unit outlets.

## 8. DISINFECTION & STERILIZATION

### 8.1 DISINFECTING THE UNIT

**NOTE** *Always disconnect the power cord before cleaning the system.*

Use any disinfectant agents which are commonly used on surfaces of electric medical equipment. Such disinfectant agents usually arrive in the form of sprays or damp cloths.

Follow the instructions given by the manufacturer of the disinfectant solution.

### 8.2 STERILIZING THE LIGHT CABLE

The light cable should be sterilized according to the manufacturer's specification.

## 9. MAINTENANCE, SERVICING AND REPAIR, WARRANTY

Performance of preventive maintenance is not essential. Regular maintenance can, however, contribute to identifying potential problems before they become serious; thus, enhancing the instrument's reliability and extending the life of the product. Maintenance services can be obtained from the manufacturer.

Defective equipment are to be serviced and repaired exclusively by General Scientific Corporation. All repair work employs to original manufacturer's parts only.

### 9.1 LAMP REPLACEMENT

<b>WARNING</b>
<p><b><i>CERMAX lamps are at high internal pressure when cold and at operating temperature; therefore, CERMAX lamps may unexpectedly rupture resulting in a discharge of hot fragments of quartz and/or glass and metal.</i></b></p> <p><b><i>Only handle lamps with protective covers in place. "DO NOT" handle lamps without their protective covers unless government approved safety glasses, facemasks (with neck protector, chest protector and gauntlets) are worn.</i></b></p>

**CAUTION** *Always disconnect power cord and turn main switch off before lamp replacement.*

**CAUTION** *Take utmost care not to hit gas-seal edge of lamp; it may cause gas leaks or lamp failure.*

**CAUTION** *Do not touch lamp and patient simultaneously when changing lamp.*

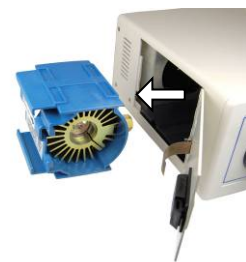
Open lamp compartment door and pull out lamp cartridge, as shown.

Replace lamp cartridge with new unit and log the serial number and hours on the hour meter.

Close the lamp compartment door.

Re-connect the power cord and turn the light source on, according to 6.1.

Reset hour meter to zero by depressing hour meter reset button on rear panel, as shown.



## 9.2 LIMITED WARRANTY

Your fiber-optic product(s) carry a 3-year warranty from the date of shipment on workmanship and all defects of material, excluding replaceable sweatbands, headband, fiber-optic cable and lamps. Should your product prove to have such defects within three years of the shipment, General Scientific Corporation will repair or replace the product or component part without charge. Should your fiber-optic product(s) need servicing under this warranty, please contact General Scientific Corporation to receive a Return Authorization Number. You should carefully pack unit in a sturdy carton and ship it to GSC. Please include a note describing the defects, your name, telephone number and a return address. Warranty does not cover equipment subject to misuse, accidental damage, normal wear and tear or if transferred to a new owner without authorization from General Scientific Corporation. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

- In the USA 800 959-0153 (toll free)  
734 996-9200
- FAX number: 734 662-0520

## 10. END OF PRODUCT LIFE

In accordance with the European Waste from Electrical and Electronic Equipment (WEEE) directive, we encourage our customers to recycle this product whenever possible. Disposal of this unit must be performed in accordance with the applicable local environmental regulations.

In the US a list of recyclers in your area can be found at: <http://www.eiae.org/>.

Please contact customer service to issue a return authorization to return product to manufacturer at the end of product life.



## 11. TROUBLESHOOTING

PROBLEM	SOLUTION
<b>The power indicator (refer to 4.1) is not lit.</b>	A. Check that the AC power cord is properly connected. B. Check the fuses. If necessary, replace.
<b>The power indicator is lit, but Xenon lamp will not ignite.</b>	A. Check lamp connection. B. Check that the lamp door cover is secured. C. Check hourmeter if lamp hours exceeds the rated lamp life. D. Replace the lamp (refer to 9.1).