



# Super Exam 50™

## INSTRUCTIONS FOR USE

PERFORMANCE RELIABILITY VALUE

*The Right Light*

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**Task and Exam**



# Instructions For Use

## Super Exam 50™ Diagnostic Light

Model (50W)	Mount	Input Voltage	Model Number
Super Exam 50™	Floorstand	115/120	SE50FL
		230/240	SE51FL
	Wall	115/120	SE50W
		230/240	SE51W
	Rail Mount	115/120	SE50R
		230/240	SE51R
	Ceiling Mount	115/120	SE50SC
		230/240	SE51SC
	Table Mount	115/120	SE50T
		230/240	SE51T

This product is distributed by:

**Burton Medical Products Corporation**  
**21100 Lassen Street**  
**Chatsworth, CA 91311**  
**USA**

Questions?  
 Tel. (800) 444-9909  
 (818) 701-8700  
 Fax (800) 765-1770  
 (818) 701-8725

[www.burtonmedical.com](http://www.burtonmedical.com)

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## Introduction

Dear Purchaser,

Congratulations on your purchase of the Super Exam 50™ Diagnostic Light!

This manual gives instructions on how to install your new light. It also provides technical information about the light and instructions on operation, maintenance, and cleaning.

Please read these instructions carefully and follow the safety instructions and requirements. In particular, note that this product has a spring-loaded arm. Be sure to follow the precautions in section A.1.2.

If there are any particular problems that have not been treated in sufficient detail in this manual, for your own safety please contact your supplier or Burton before proceeding.

## Technical Description – Super Exam 50™

The Super Exam 50™ is a general-purpose, high-intensity diagnostic light specifically designed for use in the clinic or hospital setting. Its design offers excellent illumination and color rendition, large field size, and convenient positioning.

Super Exam 50™ has a unique set of integrated lenses that gives the user a fixture that projects a tight, homogeneous beam of light with high intensity to serve the needs of a demanding market. A special heat exchanger absorbs high-temperature radiant energy, so it can be dissipated by natural convection without heating the outer housing to uncomfortable levels. The light can, therefore, be in continuous use for hours without causing discomfort to physician or patient.

The mounting system allows the Super Exam 50™ light head to swing through a radius arc of approximately 42 inches, and project a beam on any location of a human subject. Because the fixture is lightweight (6 pounds for the head/arm), the supporting arms can be constructed from lightweight materials.

Options for installing the light include the following mounts: table, rail, wall, ceiling, and floor. Floor stand models incorporate a 5-caster base. Rail mounts clamp to existing rails on bed or wall.

Power is supplied through a grounded 11-foot SJT cord, having a NEMA 5-15 hospital-grade North American plug. A switch on the head controls power to the bulb. The Super Exam 50™ conforms to the strict standards of IEC 60601-1 and IEC 60601-2-41.

## Safety

**Important Safety Note:** This product contains a spring-loaded arm. To avoid damage or possible injury, do not remove the protective sleeve or rubber band until after you complete the following steps:

1. First assemble the mount, table, rail, ceiling, or floor.
2. Then insert the lighthead into the mount.
3. Finally, carefully remove the protective plastic sleeve or rubber band to unfold the product.

The distributor of this product can accept liability for the light only when repairs or changes are carried out by Burton or Burton-approved companies, and components that influence the safety of the light are replaced with Burton spare parts.

The light is not intended for use in areas where there is a risk of explosion.

This product complies with IEC/EN 60601-1-2 (2001) electromagnetic compatibility for medical devices.

The power cable must be replaced only by a qualified electrician or other qualified professional.

Any repairs to the arm must be performed by Burton or Burton-approved personnel. As mentioned above, the arm contains high-tension springs.

# Super Exam 50™ Specifications

## General

The Super Exam 50™ is intended for use as a diagnostic light. It is available in floor, table, rail, wall, and ceiling mounts.

This unit has been tested and classified to IEC 60601-1 and IEC 60601-2-41. The exposed metal parts are not grounded, nor do they have to be, since the metal parts are adequately isolated from the high voltage supply.

Power to the fixture is controlled from a transformer at the base of the arm, which contains internal fuses. Effective working distance between patient and lighthouse is from 18 inches (46 cm) to 39 inches (1 meter). A 39-inch (1 meter), two-section movable arm provides positioning freedom.

Burton will make available to the purchaser or his representative technical material, including circuit diagrams, parts lists, and component descriptions, which will assist the user's qualified personnel in repairing those parts of this equipment designated by Burton as repairable.

## Classification

Type of protection against electric shock ..... Class 1  
Allowable leakage current ..... does not exceed 200µa  
Reliability of earth protection ..... does not exceed 0.1 ohm  
Mode of operation ..... continuous  
Protection against explosion hazards .....  
..... not to be used in presence of flammable anesthetics  
Protection against hazardous parts and ingress of liquids ..... IP20  
Degree of mobility ..... none of the mounts are hard-wired  
Safety tests .. IEC 60601-1; IEC 60601-1-2; CSA/CAN C22.2 No. 601,1; IEC 60601-2-41

## Electrical

Input ..... 120V\*, 50/60 Hz, 54W, .99PF  
Bulb ..... 12V, 50W, halogen, Burton P/N 4000061PK  
Power Cord ..... 11 foot (3 meter), NEMA 5-15, hospital-grade plug  
Fuses (2) ..... 1A (250V) each, located inside transformer housing

\* 230V models are available for use outside of North America. Contact Burton for details.

## Environmental Conditions

### Transport and Storage

Ambient temperature ..... -20°C to 70°C  
Relative humidity ..... 10% to 100% (keep dry)  
Atmospheric pressure ..... 500hPa to 1060hPa

### Operation

Ambient temperature ..... 10°C to 40°C  
Relative humidity ..... 30% to 75%  
Atmospheric pressure ..... 700hPa to 1060hPa

Shipping Container Markings ..... Fragile, Keep Dry

# Super Exam 50™ Specifications, cont.

## Weights and Dimensions

Net weight (lighthouse, flexible arm, transformer housing, cord) .....	6 lbs (2.7 kg)
Net weight, wall mount model.....	7 lbs (3.2 kg)
Net weight, floor model .....	28 lbs (12.7 kg)
Lighthouse widest diameter .....	6.25 in (15.9 cm)
Lighthouse length .....	6.75 in (17.1 cm)
Effective swing radius from pivot to front of lighthouse .....	46 in (116.8 cm)
Upright (floorstand) length .....	35 in (88.9 cm)
Base outside dimensions .....	Ø24 in (61 cm), 12 in (30.5 cm) legs x 5
Color .....	White

## Optical Performance

Central Illuminance, $E_c$ at 24 in (60 cm): ..	45,750 Lux (4236 fc) (operated @ 120V input)
Central Illuminance, $E_c$ at 1 meter: .....	17,000 Lux, (1579 fc) (operated @ 120V input)
Total Irradiance, $E_e$ .....	220 W/m <sup>2</sup>
Ultraviolet Radiation.....	<.35 mW/cm <sup>2</sup>
Color Temperature .....	3800K
CRI (Color Rendering Index) .....	99

## Approvals

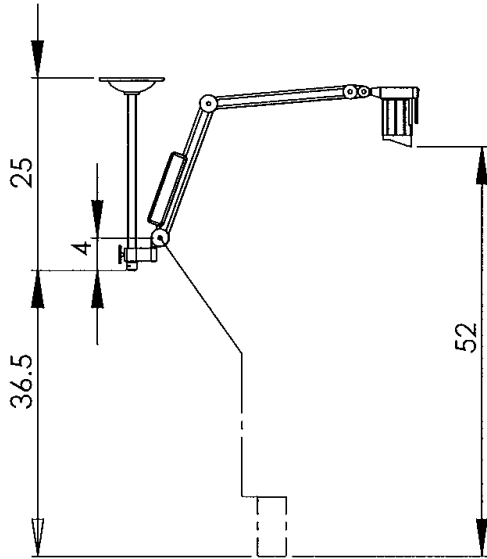
- Class 1 medical device 93/ 42 EEC
- IEC 60601-1 Medical electrical equipment, safety requirements
- IEC 60601-1-2 Electromagnetic compatibility
- IEC 60601-2-41 Safety of surgical luminaires and luminaires for diagnosis

## Warranty

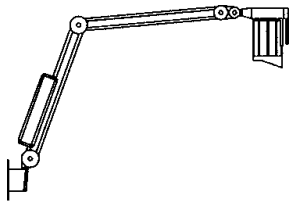
Burton guarantees this product, for a period of five years from date of purchase, to be free from defects in materials or workmanship, excluding normal replacement parts (e.g., bulbs, fuses, transformers, casters, switches, sockets, and ballasts).

# Diagrams

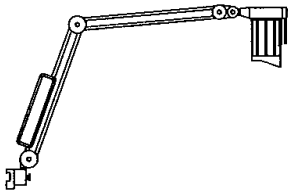
SE50 CEILING



SE50 WALL

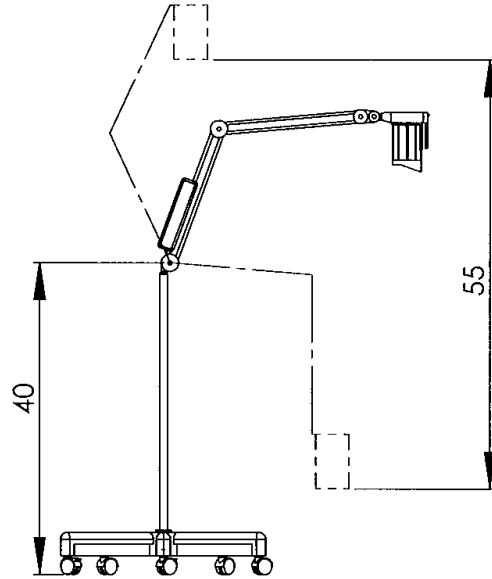


SE50 RAIL

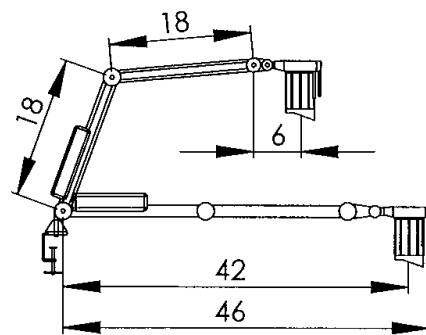


# Models

SE50 FLOOR



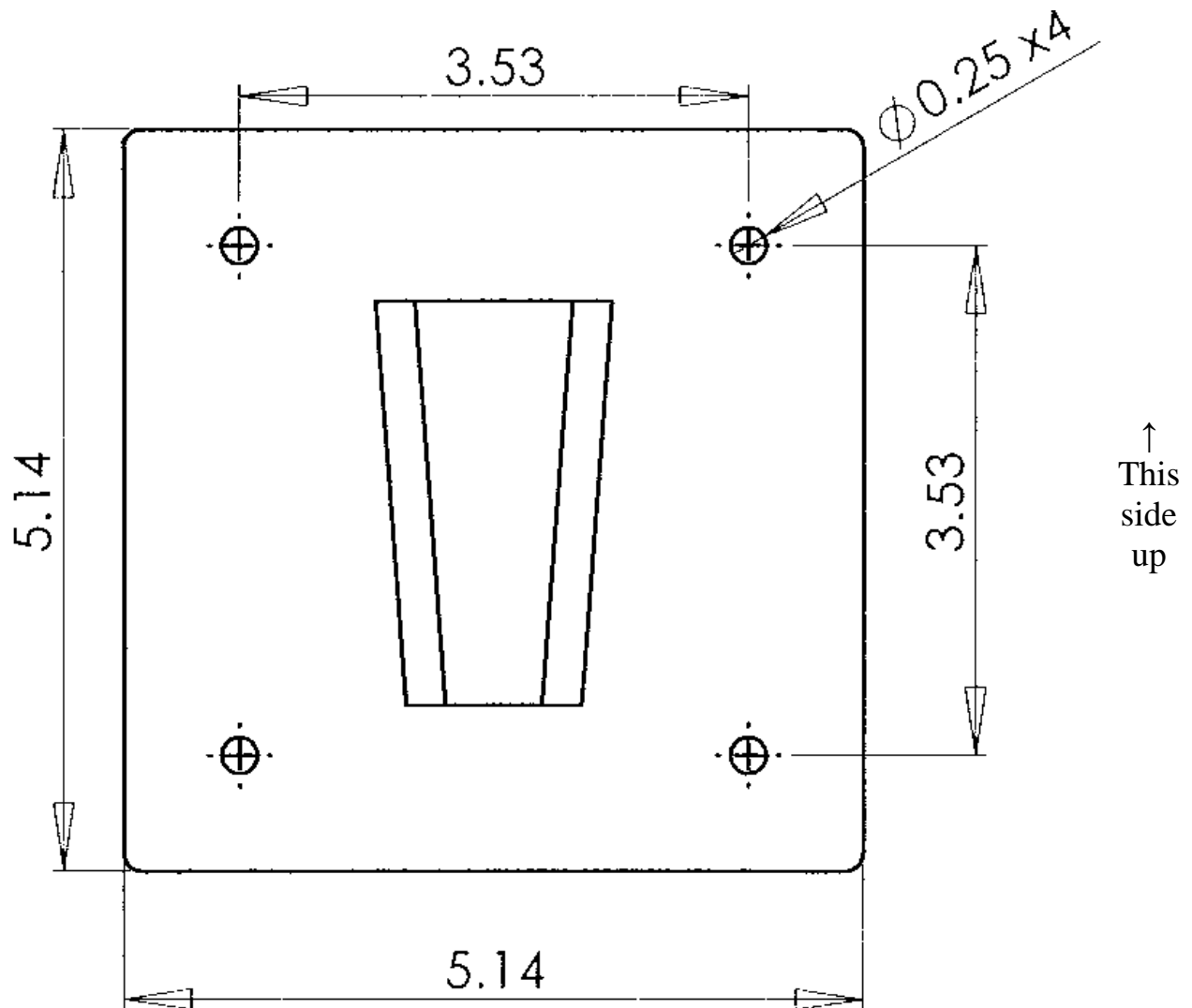
SE50 TABLE



All measurements are in inches.

## Diagrams, cont.

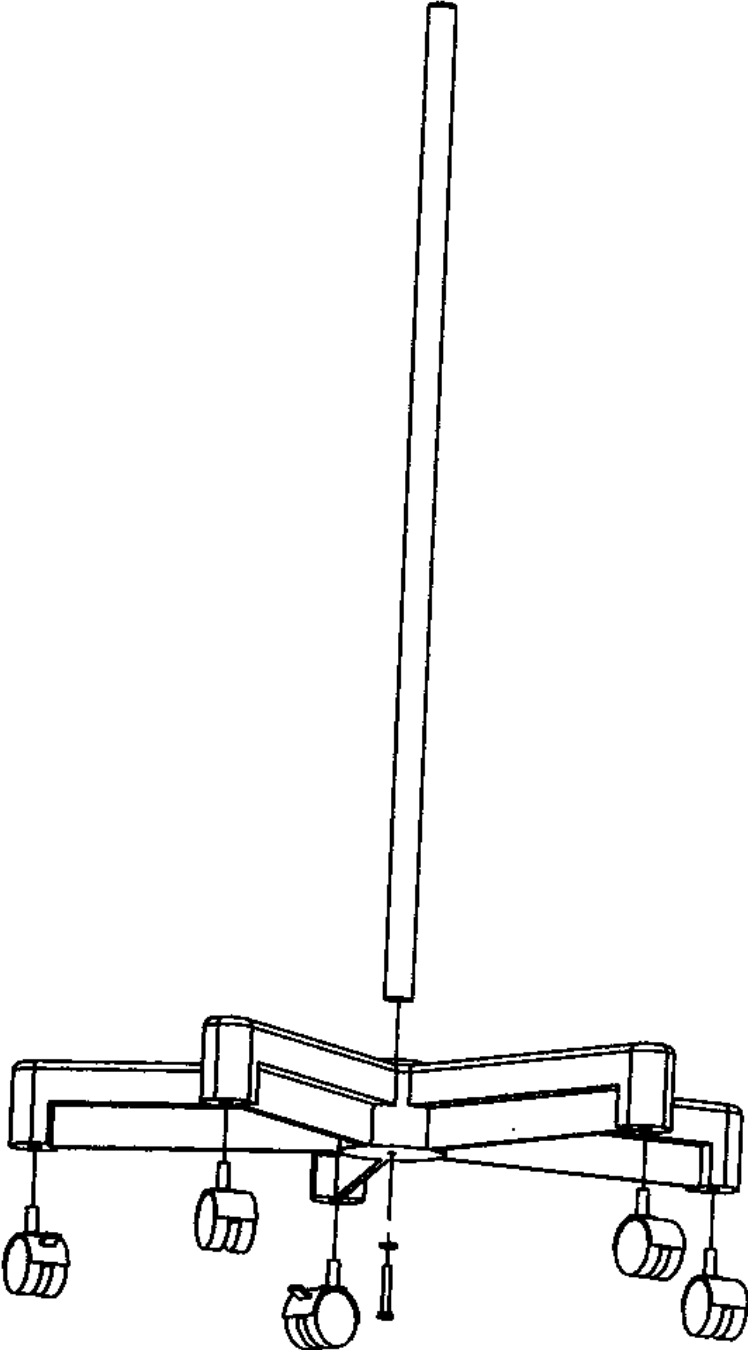
### Wall Plate Mounting Diagram



All measurements are in inches.

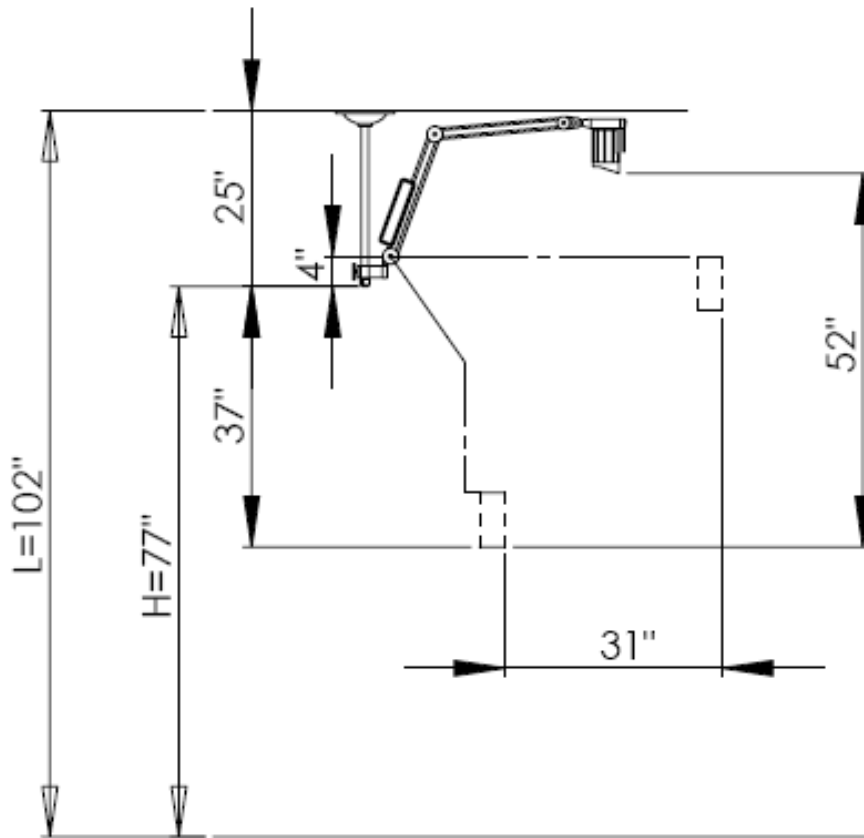
**Diagrams, cont.**

**Floor Base Assembly**



## Diagrams, cont.

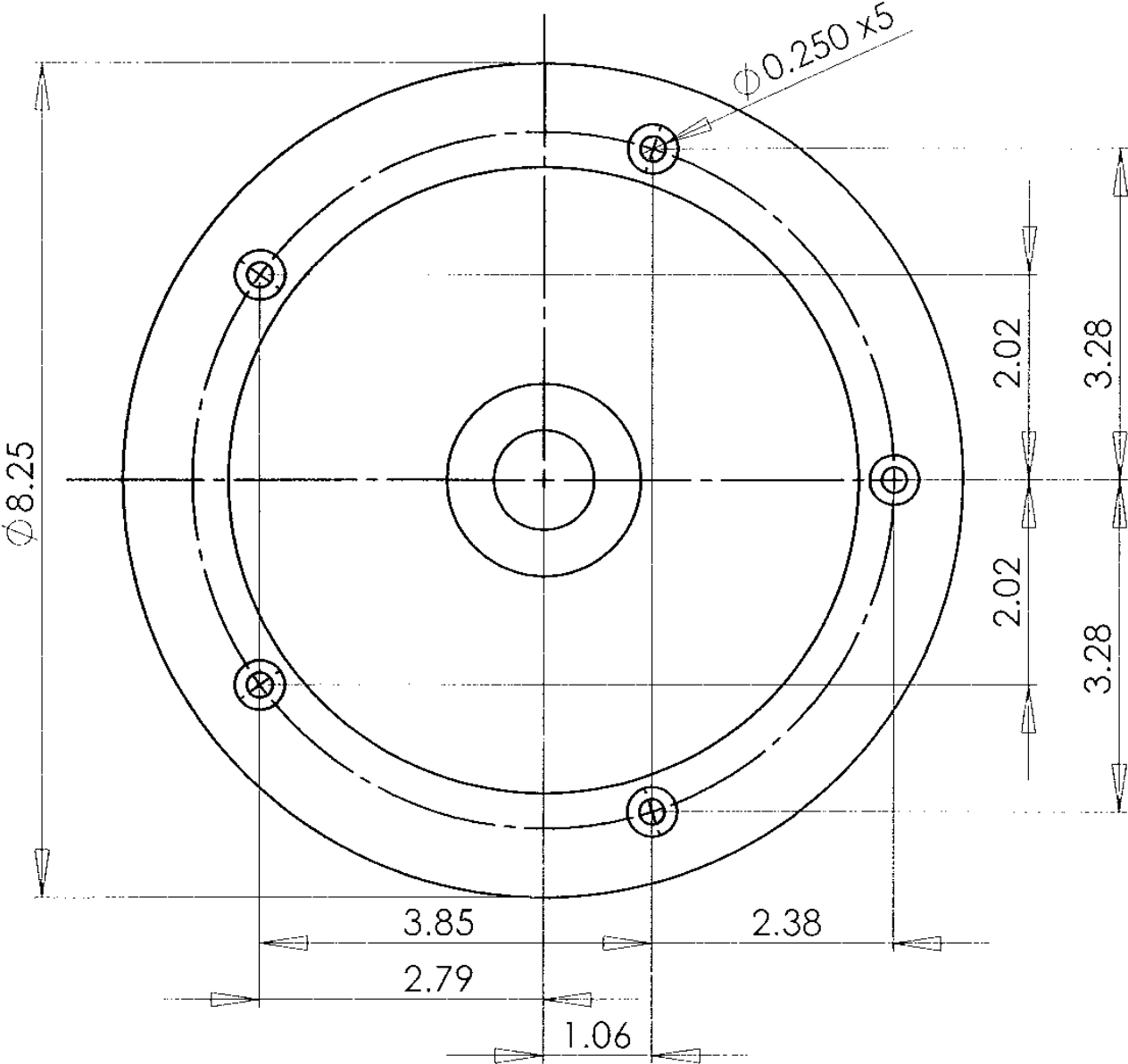
### Ceiling Height



L = CEILING HEIGHT	H = CLEARANCE	DOWN TUBE
8' (96")	71"	25"
8.5' (102")	77"	25"
9' (108")	83"	25"
9.5' (114")	89"	25"
10' (120")	95"/80"	25"/40"
10.5' (126")	86"	40"
11' (132")	92"	40"

Diagrams, cont.

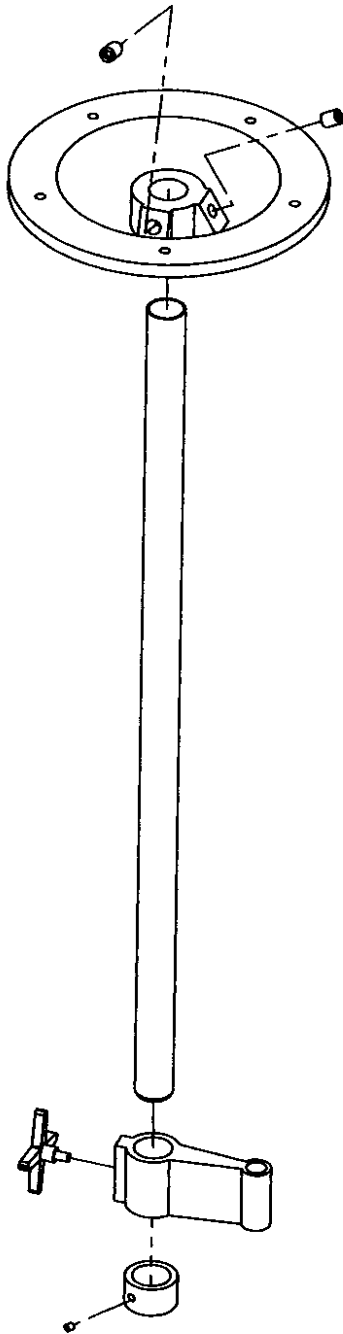
Ceiling Plate Mounting Pattern



All measurements are in inches.

## Diagrams, cont.

### Ceiling Assembly



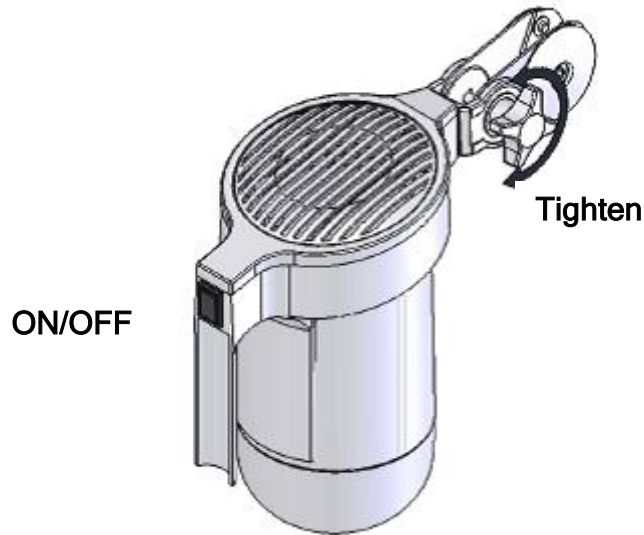
1. Secure drop tube to ceiling plate with the two set screws (size M8). Note that one set screw has a dog point to engage a dimple on the tube.

2. Slide the Mount Bracket up the tube and secure with the knob. Actual height can be adjusted for the Mount Bracket.
3. Attach the stop ring to the end of the drop tube and secure with set screw.

## A. Set-Up and Operation

### A.1.0 General Information

- A.1.1** This luminaire is intended for use as a general purpose examination luminaire. Optimum working distance between the light source and illuminated object or surface, using a standard lamp, is 20 inches (50 cm).



### **A.1.2 Precautions**

- This product contains a spring-loaded arm. To avoid damage or possible injury, first assemble the mount (table, wall, rail, ceiling, or floor). Then insert the lighthouse into the mount. Finally, remove the protective plastic sleeve or rubber band, and carefully unfold the product.
- Always use enclosed table bracket, part number 4000070, rail bracket 4000068, optional floor stand 5000176, ceiling mount 4000066, or wall brackets 4000071.
- Burton cannot guarantee the lifetime and functionality if third party accessories are used.
- Avoid spilling liquid on the lamp head.
- Note! Never open the lamp head while the power is connected.

### **A.1.3 After Installation is Complete**

After installation is completed, leave this manual, *Instructions for Use – Super Exam 50™*, for the end user.

## A.1.4 Pre-Assembly

- A.1.4.1 Remove the product and accessories from the shipping container(s). Save the containers and packaging in case hidden damage is revealed. If there is product damage caused during transit, contact the shipping company (not Burton).
- A.1.4.2 Inspect the head/arm for possible damage. Do not use the light if you find damage.
- The head should be tight on the arm.
  - The cord should feel secure at the connection to the transformer housing.
  - It should be possible to tighten or loosen the friction knob at the end of the shaft holding the light head.
  - To avoid damaging the bulb, first review the instructions under Bulb Replacement.
  - The transformer housing that is on the arm should be free from cracks and damage.
- A.1.4.3 Before Reporting Shortages:
1. Be sure you have received the correct number of boxes, cartons, etc. as shown on the bill of lading.
  2. Check all parts received against the enclosed packing slip. Should there be missing parts, please contact Customer Service.
  3. Items indicated in the column headed "Back Order" are not included in the shipment, and will follow later.
  4. Be sure that nothing has been removed from the cartons before they are checked by the individual in charge. Please retain all packaging until you verify that contents are satisfactory. Any product returned to Burton should be in its original container(s).
  5. Empty all boxes completely, open all inside containers, and examine all packing material so as not to overlook small articles.
- A.1.4.4 If Boxes are Missing or Damage Occurs:
1. You, the receiver, **not Burton**, are responsible for filing any claim(s) with the freight carrier within five (5) days after receipt of the shipment.
  2. If damage or shortage occurs in transit, the freight carrier is required by law to make notation of a shortage or damage. This notation is to be made on the bill of lading.
  3. If, in your opinion, there may be concealed damage, an agent from the freight carrier is obligated to make an inspection after the goods are unpacked.
  4. Do not destroy packing material until after the agent has made out his report.
  5. All claims must be made to the carrier, **not to Burton**.
  6. An RGA (Returned Goods Authorization) number must be obtained from Burton before merchandise can be returned.
- A.1.4.5 Prior to installation: Attach bulb to socket. See Section B.1.0, Bulb Replacement.

## **A.2.0 Wall or Table Models**

### **A.2.1 Wall Mount Assembly**

- A.2.1.1 Burton recommends a mounting height of 55 – 60 inches (140 – 152 cm).
- A.2.1.2 Attach the provided mount to a suitable vertical surface (wall). Use four (4) #10 flat-head wood screws, which are 1-1/2" long into wood surfaces, or 2" long through wallboard into wood studs. When attaching the mount to metal, use #10 flat- or pan-head self-tapping or machine screws, 1" long, or as indicated by the application.
- A.2.1.3 Insert the Super Exam 50™ fixture shaft into the mount.

### **A.2.2 Table Mount Assembly**

- A.2.2.1 Burton Medical recommends the table mount be secured to a horizontal surface, e.g., a table top or desk. Ensure that the table clamp attaches to a flat surface strong enough to support the weight of the fixture.
- A.2.2.2 Insert the Super Exam 50™ fixture shaft into the table mount bracket.

### **A.2.3 Wall and Table Mount Operation**

- A.2.3.1 Plug the integral power cord into a grounded convenience socket and activate the power switch. The light should illuminate at full brightness.
- A.2.3.2 The lighthead can be positioned anywhere within its travel radius.

## **A.3.0 Floorstand Models**

### **A.3.1 Floorstand Assembly**

- A.3.1.1 Assemble the provided casters to the steel base:
  - The wheels provided are snap-fit. Press them into the base.
  - Two of the casters have brakes; the others are plain. Location of the brake casters is at the discretion of the installer.
- A.3.1.2 Install the tubular upright by setting it in the center hole of the base, then tightening it with the provided bolt and washer from underneath the base.
- A.3.1.3 Insert the Super Exam 50™ fixture shaft/bushing into the upright.

### **A.3.2 Floorstand Operation**

- A.3.2.1 Plug the integral power cord into a grounded convenience socket and activate the power switch. The light should illuminate at full brightness.
- A.3.2.2 The lighthead can be positioned anywhere within its travel radius.

## **A.4.0 Ceiling Models**

### **A.4.1 Ceiling Assembly**

- A.4.1.1 Plan to install the ceiling mount preferably within 4 feet of an existing electrical outlet; or install a grounded convenience outlet within 4 feet of the planned ceiling mount location.
- A.4.1.2 Assemble the ceiling mount per Ceiling Assembly diagram.
- A.4.1.3 Secure to the ceiling with appropriate back support. See Ceiling Plate Mounting Pattern diagram.

### **A.4.2 Ceiling Mount Operation**

- A.4.2.1 Plug the integral power cord into a grounded convenience socket and activate the power switch. The light should illuminate at full brightness.
- A.4.2.2 The lighthead can be positioned anywhere within its travel radius.

## **A.5.0 “Normal” Operating Conditions**

### **A.5.1. Electrical**

The Super Exam 50™ has been designed to operate continuously from a mains voltage and frequency of 120V, 50 or 60 Hz.

For voltages exceeding 120V, the extra heat generated from overdriving the bulb may cause the lighthead housing to become uncomfortably warm. Also, depending on the overdriving voltage, lamp life may be shortened considerably.

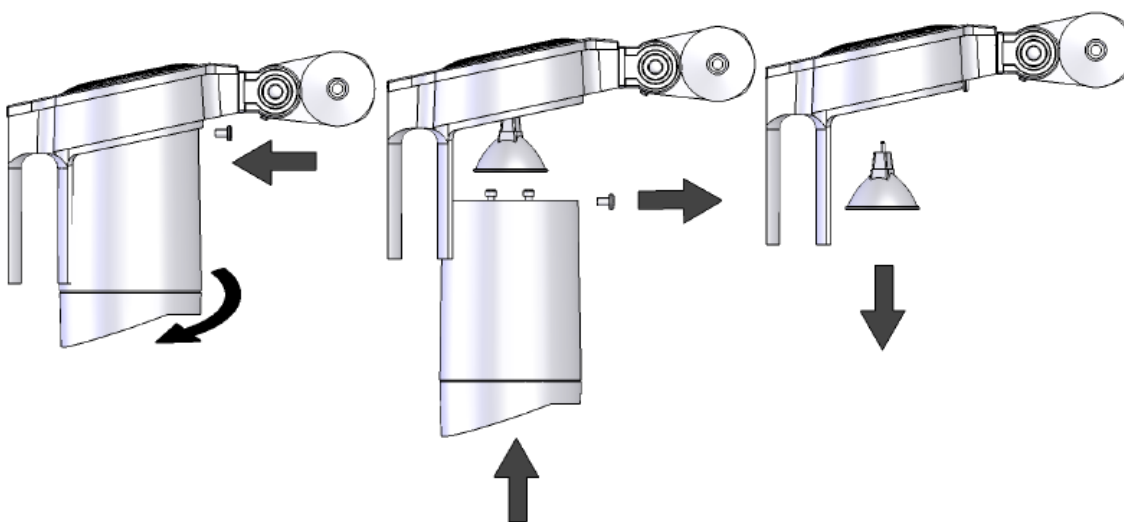
## B. Maintenance

### B.1.0 Bulb Replacement

Disconnect from the electrical outlet.

Open the lamp cover by removing the lock safety screw and rotating the lens assembly. Change the bulb by pulling it straight out. Use only Burton p/n 4000061PK. The use of any other bulb may cause a hazard fire and void the product warranty.

Fit the new bulb by pressing it straight up into the lamp holder. Re-assemble lens assembly by positioning it in the guide tracks, turning it to the locked position, and re-installing the lock safety screw.



### B.2.0 Cleaning

Unplug the unit first. Open the lamp head as shown above. Blow and dry off any dust and dirt. Use mild soap and water to clean the unit, and let dry thoroughly before use. For stubborn stains, use isopropyl alcohol. Do not use paint thinners or solvents such as acetone or MEK.

### B.3.0 Fuse Replacement

If this product is operated according to procedures in this manual, the fuses that are located in the transformer housing may never need replacing. But, if one or more system abnormalities do occur, the protective current fuses(s) will fail and need to be replaced.

Before replacing a blown fuse(s), a complete system check should be undertaken to reveal the underlying cause(s) for the failure. Appropriate corrective action should be taken to prevent future occurrences.

- B.3.1 Turn the power switch off and unplug the fixture from the mains supply. If the fixture was operating just prior to fuse failure, the lighthouse is probably too hot. Wait 20-40 minutes for it to cool.
- B.3.2 Remove the screw at the bottom of the transformer housing and carefully pull the cover of the transformer housing apart. All internal components should be resting inside the half with the cord.
- B.3.3 Locate the fuse box (gray with black tabs) and pull the tabs out of the box, along with fuses. Check the integrity of the fuses and, if necessary, replace them (see Parts List).
- B.3.4 Reverse the above procedure to restore the fixture to proper operation.

**B.4.0 Replacement Parts**

Lens Assembly.....	4000072
Bulb.....	4000061PK
Transformer.....	4000073
Fuse 1A Slo-Blo.....	1017229
Caster .....	4000076
Lock Caster .....	4000077

**B.5.0 Preventive Maintenance**

<b>Check</b>	<b>Corrective Action</b>
<p><b>Weekly</b>            Check overall operation of the fixture:  <input type="checkbox"/> Do the switch and bulb operate properly?  <input type="checkbox"/> Does the lighthouse stay in position (not drift) when the arm is moved up and down, or to the sides?  <input type="checkbox"/> Do all components appear secure (lighthouse, arm attachment points, upright connection to the base)?</p>	<p>If the answer to any of these questions is NO, do not use the product. Consult with your maintenance personnel before operating the light.</p>
<p><b>Monthly</b>  <input type="checkbox"/> Check the floor model upright for “wobble”. (If loose, the light is offset and could tip over.)  <input type="checkbox"/> Check that the mount (wall, table, rail, or ceiling) is secure to the mounting surface.</p>	<p>Tighten the screw under the base housing.             Tighten the mounting screw (or C-clamp for the table mount).</p>
<p><b>Annually</b>  <input type="checkbox"/> Check the same items as for weekly and monthly maintenance.   <input type="checkbox"/> Inspect the power cord for external abrasion.  <input type="checkbox"/> Lightly pull and twist the cord at the inlet strain relief to test for internal conductor breakage when the light is energized.   <input type="checkbox"/> Check electrical connectors for evidence of overheating (charring, discoloration) and chafed insulation.</p>	<p>If the answer to any of the questions is NO, do not use the product. Consult with your maintenance personnel before operating the light.             Any flickering is indicative of an intermittent break, and the cord should be replaced.             Replace as necessary.</p>

## C. Symbols and Warnings

### C.1.0 Symbol Explanations



Do not throw away. Electronic waste: the product must be recycled.  
*Ne pas jeter. Déchet électronique: doit être recyclé.*



We conform to the relevant European Directive(s).  
*Conformité Européenne.*



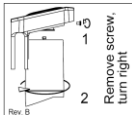
Can be placed on normal flammable surfaces (e.g., wood).  
*Peut être placé sur des surfaces inflammables, «bois, par exemple».*



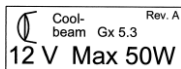
Approved by Nemko.  
*Approuvé par Nemko.*



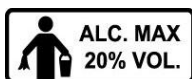
Indicates Equipment Type: B, Applied Part  
*Ce symbole dénote un appareillage de Type B: Pièce Attachée.*



Explanation of head dis-assembly.  
*Une explication pour démonter la tête de l'éclairage.*



Indicates technical specifications for the light source.  
*Ce symbole dénote les spécifications techniques de la lumière.*



Do not use a cleaning solution with more than 20% alcohol.  
*Veillez ne pas employer une solution de nettoyage comportant plus de 20% d'alcool.*



This symbol references text in the manual. The block below references the particular paragraph.  
*Ce symbole se rapporte au texte du manuel. Le rectangle du dessous indique le paragraphe approprié.*



This symbol references a protective “ground” or “earth” connection.  
*Ce symbole indique une mise à terre protectrice.*



This is the international symbol for “alternating current”, i.e., “AC”.  
*C’est le symbole internationale pour «le courant alternatif», c.-à.-d., «AC».*



This symbol means “hot surfaces”.  
*Ce symbole veut dire «des surfaces brûlantes».*

## **C.2.0 Warnings and Cautionary Notices**

### **C.2.1 General Cautions**

- C.2.1.1     **Caution** – Hot surfaces at bulb/lens. Do not touch bulb/lens.  
*Attention* – *Surfaces brûlantes de l’ampoule/lentille. Ne jamais toucher à l’ampoule/lentille chaude.*
- C.2.1.2     **Caution** – When relamping the light, avoid touching the light and the patient at the same time.  
*Attention* – *Pendant le remplacement de la lampe, éviter de toucher l’ampoule et le malade à la fois.*
- C.2.1.3     **Caution** – When relamping the light, unplug the fixture first.  
*Attention* – *Débrancher la lampe avant du remplacement de l’ampoule.*
- C.2.1.4     **Caution** – Incandescent: suitable for dry locations only.  
*Attention* – *Incandescente: utiliser seulement aux lieux secs.*
- C.2.1.5     **Caution** – Stop using the light immediately if there are cracks or damage in the transformer housing.  
*Attention* – *Il faut s’arrêter immédiatement d’utiliser l’appareillage si l’encastrement du transformateur est endommagé.*
- C.2.1.6     **Caution** – When re-attaching the lens assembly after replacing the bulb, make sure to re-install the lock safety screw. (See B.1.0, Bulb Replacement.)  
*Attention* – *Pendant le remplacement de l’assemblage de la lentille après ayant remplacé la lampe, ne manquez pas de replacer la vis de sécurité.*

### **C.2.2 Warnings**

- C.2.2.1     **Warning** – Failure to properly follow installation and preventive maintenance instructions may result in mechanical failure.  
*Avertissement* – *Faillir à suivre les indications d’installation et d’entretien préventif peut aboutir à la défaillance mécanique.*

- C.2.2.2 **Warning** – Avoid relamping when the fixture is hot. Wait at least 30 minutes for it to cool.  
*Avertissement* – Éviter de remplacer l'ampoule quand la lampe est chaud. Laisser refroidir l'ampoule au moins de 30 minutes.
- C.2.2.3 **Warning – Explosion hazard.** Do not use this fixture in the presence of flammable anesthetics.  
*Avertissement – Risque d'explosion.* Ne pas employer cette lampe en présence d'anesthésiques inflammables.
- C.2.2.4 **Warning** – During normal operation do not touch any optical surfaces. These surfaces are hot and will burn human tissue on contact.  
*Avertissement* – Ne jamais toucher les ampoules/lentilles quand la lampe es utilisée. Ces surfaces sont extrêmement chaudes et causeraient immédiatement des brûlures cutanées.
- C.2.2.5 **Warning** – Unplug the fixture before replacing fuses.  
*Avertissement* – Débrancher la prise de courant avant de remplacer les fusibles.
- C.2.2.6 **Warning** – Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked “Hospital Grade”.  
*Avertissement* – La sécurité de la prise de terre est obtenue uniquement quand la lampe est raccordée à une prise de courant équivalente marquée “Catégorie Hôpital”.
- C.2.2.7 **Warning** – DO NOT operate this light without the front lens assembly in place. The lens assembly prevents unwanted UV and IR radiation from reaching the patient.  
*Avertissement* – NE PAS utiliser cet éclairage si l'ensemble de la lentille n'est pas placé devant l'ampoule. L'ensemble de la lentille empêche aux rayons UV/IR de se transmettre au patient.

### **C.3.0 Electromagnetic Compliance (EMC)**

Electromagnetic or other interference between this equipment and other devices should not occur. Generally, electromagnetic interference is not an issue with this type of product (incandescent lighting fixture with magnetic transformer). However, if you suspect this product is causing interference, please contact Burton.

To prevent harmful interference to other devices in the vicinity, it is important to install and use the equipment in accordance with the instructions. If this equipment does cause interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the other device(s).
- Increase the separation between the equipment.
- Use different electrical circuits for the conflicting devices.
- Consult with Burton or your field service technician for help.

## D. Troubleshooting Guide, Super Exam 50™

Symptoms	Probable Cause	Remedy
No light output	<p>Not plugged in.</p> <p>Switch not on.</p> <p>Light bulb failed.</p> <p>Fuses Failed:            Because of internal short.            Because of high mains voltage,            or high voltage spikes.            Because of single occurrence of            lightning strike.</p> <p>Break in wiring.</p> <p>Short or open circuit in            transformer.</p> <p>Switch failure (or defective).</p>	<p>Plug into suitable hospital-grade            receptacle.</p> <p>Turn switch on.</p> <p>Have qualified personnel do the            following:            Replace with new bulb.            Replace with new fuse(s).                Locate short and fix it.                Put voltage regulator on line.</p> <p>    Check condition of transformer and                wiring</p> <p>Locate break and replace wires.</p> <p>Determine failure mode and replace            transformer.</p> <p>Replace switch.</p>
Poor (low) light output	<p>Wrong bulb</p> <p>Loose or corroded connectors</p> <p>Weak transformer (defective).</p> <p>Low mains voltage</p>	<p>Verify that correct bulb is in place.</p> <p>Have qualified personnel do the            following:            Check all connections; clean/replace as            necessary.            Replace transformer.            Check mains condition and correct the            problem.</p>
Lighthouse doesn't hold position	Worn or missing components.	Have qualified personnel replace as necessary.



*Luxo Medical Products*

**Burton Medical Products**

21100 Lassen St.

Chatsworth, CA 91311

USA

800-444-9909/ 818-701-8700

Fax 800-675-1770/818-701-8725

[www.burtonmedical.com](http://www.burtonmedical.com)

A horizontal bar composed of five rectangular segments of varying shades of blue, from dark to light.

*THE RIGHT LIGHT*