# **Instructions For Use**

# **Gleamer**<sup>®</sup> **Diagnostic Light**

Model (35W)	Mount	Input	Model Number
		Voltage	Effective 1/1/05 / Prior to 1/1/05
Gleamer <sup>®</sup>	Floorstand	115	GL30FL / 0960112
Standard Spot		230	GL32FL / 0960212
	Wall/Table	115	GL30W / 0960120
		230	GL32W / 0960220
Gleamer®	Floorstand	115	GLW30FL / 0980112
Wide Beam Spot		230	GLW32FL / 0980212
	Wall/Table	115	GLW30W / 0980120
		230	GLW32W / 0980220

This product was designed and assembled in the U.S.A. by

# **BURTON MEDICAL PRODUCTS CORP.**

This manual to remain with end user.

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# **Technical Description – Gleamer**<sup>®</sup>

The Gleamer<sup>®</sup> 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.

Great care has been taken in the basic design to give the user a fixture that projects a tight, homogeneous beam of visible light practically devoid of infrared and ultraviolet energy, but with high intensity to serve the needs of a demanding market. No light is reflected or projected back, owing to a special energy-absorbing heat exchanger. This heat exchanger absorbs very 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 front filter glass, besides rejecting IR and UV, presents a safety barrier in front of the quartzhalogen bulb that protects the user from glass shards in the unlikely event the bulb breaks. It also prevents the user from inadvertently touching the bare bulb.

The mounting system allows the Gleamer<sup>®</sup> lighthead to swing through a radius arc of approximately 50-inches, and project a beam on any location of a human subject. Because the fixture is lightweight (5 lbs for the head/arm), the supporting arms can be constructed from lightweight materials.

Universal Mount models can be installed on either a vertical surface (wall) or a horizontal surface (table). Floorstand models incorporate a 4-caster, space-saving base.

Power is supplied through a grounded 8-foot SJT cord, having a NEMA 5-15 hospital-grade North American plug. An On-Off switch in the primary circuit at the base of the arm controls power. The Gleamer is UL/CUL 60601 classified, and made in the USA.

# **Gleamer**<sup>®</sup> Specifications

# General

The Gleamer<sup>®</sup> is intended for use as a diagnostic light. It is available in floorstand, universal, and universal extension mount models, with standard and wide-spot options.

This unit has been tested and classified to UL60601-1. The exposed metal parts are <u>not</u> 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 a power switch and internal fuses. Effective working distance between patient and lighthead is from 18-in (46 cm) to 30-in (76 cm). A flexible gooseneck, which is attached to a 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 shockClass 1
Allowable leakage current does not exceed 200µa
Reliability of earth protection
Mode of operation continuous
Protection against explosion hazards
not to be used in presence of flammable anesthetics
Protection against hazardous parts and ingress of liquids1XP0
Degree of mobilityportable
(wall mount is not permanent; floorstand units move on 4 casters (2 locking))
Safety testsIEC 60601-1; IEC 60601-1-2; CSA/CAN C22.2 No. 601.1; IEC 60601-2-41

# Electrical

Input	
	or MR-16, 35W, FL40 (wide-beam Alternate)
	cord
	2)T 0.5 A (250V) each, located inside transformer housing

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

# Gleamer<sup>®</sup> Specifications, cont.

# **Environmental Conditions**

Transport and Storage	
Ambient temperature	$\dots 0^{\circ} \mathrm{C}$ to $70^{\circ} \mathrm{C}$
Relative humidity	10% to 100% (keep dry)
Atmospheric pressure	
Operation	
Ambient temperature	
Relative humidity	
Atmospheric pressure	
Shipping Container Markings	Fragile, Keep Dry

# Weights and Dimensions

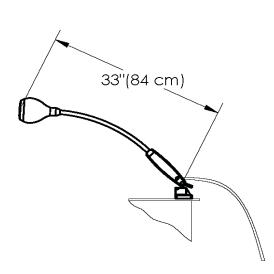
Net weight (lighthead, flexible arm, transformer housing, cord)	5 lbs (2.3 kg)
Net weight, wall mount model	
New weight, floor model	28 lbs, (13 kg)
Lighthead widest diameter	4.8-in (12 cm)
Lighthead length	
Flexible arm length	18.5-in (47 cm)
Effective swing radius from pivot to front of lighthead	
Upright (floorstand) length	
Universal extension arm length	16-in (41 cm)
Base outside dimensions 16.75-in x 17.75-	-in (43 cm x 45 cm)
Front window patented infrared and UV reflector coating on Bc	oroFloat <sup>TM</sup> substrate
Colors	white, black accents

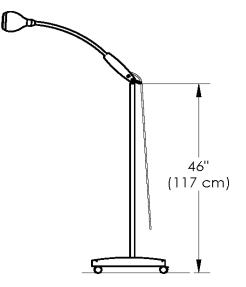
# **Optical Performance (Standard bulb)**

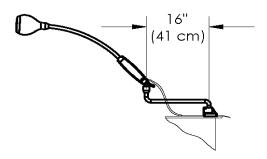
# Warranty

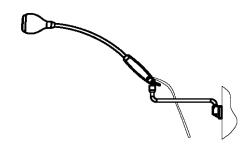
Burton guarantees this product, for a period of five years from the date of purchase, to be free from defects in materials or workmanship, excluding normal replacement parts (e.g., bulbs and fuses).

# **Gleamer**<sup>®</sup> **Diagnostic Lights**

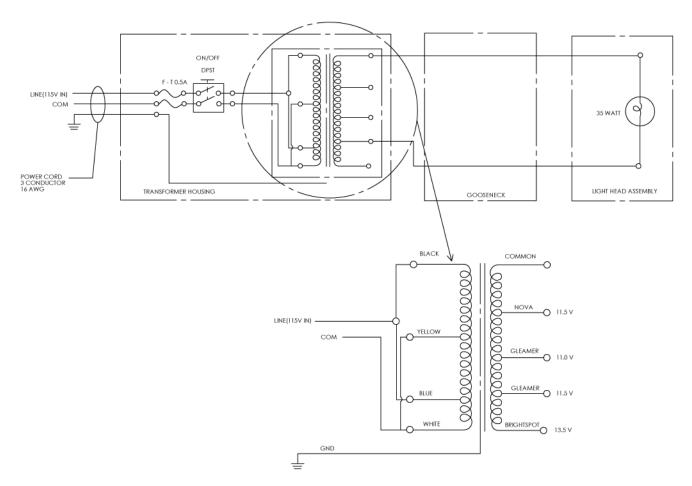








# Wiring Diagram – Gleamer<sup>®</sup>



NOTE: PRIMARY SHOWN WIRED FOR OPERATION ON 115V~

# A. Set-Up and Operation

#### A.1.0 Universal (Wall or Table) Mount Models

### A.1.1 Pre-Assembly

- A.1.1.1 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.1.1.2 Inspect the Head/Arm for possible damage:
  - The head should be tight on the flexible arm. The head does not rotate on the end of the arm.
  - The cord should feel secure at the connection to the transformer housing.
  - It should be possible to tighten or loosen friction on the shaft that is used for mounting the fixture. A lever-type handle is used for this purpose.
  - The bulb should be secure inside the head (housing). To check for proper bulb placement, remove the front cover and verify that the bulb pins are in the socket. The bulb should be centered. To avoid damaging the bulb, first review the instructions under Bulb Replacement.
- A.1.1.3 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 the entire shipment against the packing slip, which is enclosed in one of the boxes.
  - 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.
  - 5. Empty all boxes completely, open all inside containers, and examine all packing material so as not to overlook small articles.
- A.1.1.4 If a Shortage or Damage Occurs:
  - 1. You, the receiver, **not Burton**, are responsible for filing any claim(s) with the delivering carrier within five (5) days after receipt of the shipment.
  - 2. If damage or shortage occurs in transit, the delivering 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 delivering 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 Burton**.
- 6. Written authorization must be obtained from Burton before merchandise can be returned.

### A.1.2 Universal (Wall or Table) Mount Assembly

- A.1.2.1 Burton recommends a mounting height of 55-60 inches (140-152.4 cm).
- A.1.2.2 Attach the provided Universal Mount to a suitable horizontal surface (table) or vertical surface (wall). Use four (4) #10 round-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 round- or pan-head self-tapping or machine screws, 1" long, or as indicated by the application.

Make certain the applicable hole for the fixture shaft is oriented **<u>up</u>** to accept the light.

- A.1.2.3 Insert the small end of the Extension arm into the hole facing up. Push the Arm into the Mount until it bottoms out, and apply slight friction to the shaft with the mount adjusting screw.
- A.1.2.4 Assemble the supplied plastic bushing to the bare metal shaft of the Gleamer<sup>®</sup> head/arm. Spread the bushing to slip it over the shaft. An internal ring on the bushing will engage a mating groove in the shaft.
- A.1.2.5 Insert the Gleamer<sup>®</sup> fixture shaft bushing into the socket at the outboard end of the Extension Arm.
- A.1.2.6 After installation is completed, <u>leave the following items for the end user</u>:
  - This manual (*IFU Gleamer*)
  - The Owner Registration/Warranty Card
  - Any small wrenches that were in the installation pack

#### A.1.3 Wall Mount Operation (See also Section A.3.0.)

- A.1.3.1 You (the end user) should have the following items in your possession:
  - This manual (*IFU Gleamer*)
  - The Owner Registration/Warranty Card
  - Any small wrenches that were in the installation pack

**It is strongly recommended** that this product be registered with Burton Medical Products. By registration, you ensure that you validate your warranty and you will receive important safety updates. Register by mailing in the enclosed Owner Registration/Warranty card, or preferably online at <u>www.burtonmedical.com</u>. By registering online within 45 days of purchase, you will receive a valuable gift.

- A.1.3.2 Plug the integral power cord into a grounded convenience socket and activate the power switch ( ). The light should illuminate at full brightness.
- A.1.3.3 The lighthead can be positioned anywhere within its travel radius. A setscrew on the outboard hub of the extension arm can be used to adjust friction at the fixture shaft. The adjusting screw in the Universal Mount can be used to adjust friction at the central pivot. Up and down positioning is controlled by either loosening the bottom lever and rotating the entire fixture, or grasping the neck of the lighthead with one hand, and the stationary segment of the arm with the other, and bending the gooseneck (flexible segment to suit).

Do not try to twist the lighthead on the arm, because the connection will be damaged. Twisting the gooseneck compromises its integrity and will lead to premature failure. Avoid full horizontal extension, as the gooseneck can sag.

# A.2.0 Floorstand Models

#### A.2.1 Pre-Assembly

- A.2.1.1 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.2.1.2 Inspect the Head/Arm for possible damage:
  - The Head should be tight on the flexible arm. The head does not rotate on the end of the arm.
  - The cord should feel secure at the connection to the transformer housing.
  - It should be possible to tighten or loosen friction on the shaft that is used for mounting the fixture. A lever-type handle is used for this purpose.
  - The bulb should be secure inside the head (housing). To check for proper bulb placement, remove the front cover and verify that the bulb pins are in the socket. The bulb should be centered so that the guide fingers on the plastic cap prevent it from being jarred to the side.

- A.2.1.3 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 the entire shipment against the packing slip, which is enclosed in one of the boxes.
  - 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.
  - 5. Empty all boxes completely, open all inside containers, and examine all packing material so as not to overlook small articles.
- A.2.1.4 If a Shortage or Damage Occurs:
  - 1. You, the receiver, **not Burton**, are responsible for filing any claim(s) with the delivering carrier within five (5) days after receipt of the shipment.
  - 2. If damage or shortage occurs in transit, the delivering 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 delivering 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 Burton**.
  - 6. Written authorization must be obtained from Burton before merchandise can be returned.

# A.2.2 Floorstand Assembly

- A.2.2.1 Assemble the provided casters to the steel base. First, screw the jam nuts all the way down the caster studs, then screw the studs all the way into the base. Two of the casters have "brakes"; two are plain. It is suggested that the brake casters be located on the two short legs of the base, but actual location is at the discretion of the installer.
- A.2.2.2 When all casters have been mounted to the base (hand-tight), turn the base right side up and level it on a smooth surface by adjusting the height of one or two of the casters. When the base is level, tighten the jam nuts.
- A.2.2.3 Install the tubular upright by setting it in the center hole of the base, then tightening it with the provided bolt from underneath the base.

- A.2.2.4 Assemble the supplied plastic bushing to the bare metal shaft of the Gleamer<sup>®</sup> head/arm. Spread the bushing to slip it over the shaft and align it with the flange toward the transformer housing. An internal ring on the bushing will engage a mating groove in the shaft.
- A.2.2.5 Insert the Gleamer<sup>®</sup> fixture shaft/bushing into the upright.
- A.2.2.6 Insert the (2) Allen head screws into the two holes provided on the upright, making certain that the screws are inside the grooves of the bushing. The screws will retain the head/arm in the upright.

# A.2.2.7 After installation is complete, <u>leave the following items for the end user:</u>

- This manual (*IFU Gleamer*)
- The Owner Registration/Warranty Card
- Any small wrenches that were in the installation pack

# A.2.3 Floorstand Operation (See also Section A.3.0.)

- A.2.3.1 You (the end user) should have the following items in your possession:
  - This manual (*IFU Gleamer*)
  - The Owner Registration/Warranty Card
  - Any small wrenches that were in the installation pack

It is strongly recommended that this product be registered with Burton Medical Products. By registration, you ensure that you validate your warranty and you will receive important safety updates. Register by mailing in the enclosed Owner Registration/Warranty card, or preferably online at <u>www.burtonmedical.com</u>. By registering online within 45 days of purchase, you will receive a valuable gift.

- A.2.3.2 Plug the integral power cord into a grounded convenience socket and activate the power switch ( ). The light should illuminate at full brightness.
- A.2.3.3 The lighthead can be positioned anywhere within its travel radius. Up and down positioning is controlled by either loosening the bottom lever and rotating the entire fixture, or grasping the neck of the lighthead with one hand, and the stationary segment of the arm with the other, and bending the gooseneck (flexible) segment to suit.

Do not try to twist the lighthead on the arm, because the connection will be damaged. Twisting the gooseneck compromises its integrity and will lead to premature failure.

## A.3.0 "Normal" Operating Conditions

## A.3.1 Electrical

The Gleamer<sup>®</sup> has been designed to operate continuously from a mains voltage and frequency of 115 V, 50 or 60 Hz. Alternatively, in countries which have different mains voltages, the fixture transformer input can be rewired (at the factory, or in the field) to operate at 230 V trms.

For voltages exceeding 115/230 V trms, 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.

## A.3.2 Mechanical

The following generalizations can be made regarding all models:

- A.3.2.1 Arch the lighthead so that the light beam is horizontal or angled slightly downwards. The light will be between, or off to the side, and lower than the operator, but higher than the patient. In some situations, the operator may want to position the lighthead above both themselves and the patient.
- A.3.2.2 When positioning the lighthead, grasp the neck while holding the rigid part of the arm steady, and bend (don't twist) the lighthead until the beam illuminates the field of interest.

# **B.** Maintenance

# **B.1.0 Bulb Replacement**

If the fixture is plugged into a suitable power convenience outlet, and the switch is on (|), but there is not light, the bulb probably has failed.

- B.1.1 Turn the power switch off ( $\circ$ ) and unplug the fixture from the mains supply. If the fixture was operating just prior to bulb failure, the bulb probably is too hot to handle. Allow at least 20 minutes for it to cool.
- B.1.2 Remove the front cap by removing two (2) screws. Squeeze the two side retaining tabs inward while simultaneously pulling the cap away from the housing.
- B.1.3 Remove the bulb by gripping the perimeter of the reflector and gently rocking and pulling it away from the housing. Pull the bulb straight out from the socket. Do <u>not</u> twist the bulb in its socket.

- B.1.4 To avoid damaging the bulb, do not touch it with bare hands. Oil on your hands can cause hot spots on the glass, which lead to early bulb failure. Hold the bulb with a clean cloth or tissue when installing. If touched, wipe off fingerprints before operating (use alcohol or acetone).
- B.1.5 Reverse the above procedure to insert a new bulb. **Warning**: Use Burton bulb replacement No. 0009600 (35-watt). Using a higher wattage bulb could cause electrical overload and possible fire. The front cap/glass filter must be in place before the light is returned to service.

## **B.2.0** Fuse Replacement

If this product is operated according to procedures in this manual, the fuses that are located internally at the base of the transformer housing may never need replacing. But, if one or more system abnormalities do occur, the protective current fuse(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.2.1 Turn the power switch off ( $\circ$ ) and unplug the fixture from the mains supply. If the fixture was operating just prior to fuse failure, the lighthead probably is too hot. Wait 20-40 minutes for it to cool.
- B.2.2 Lay the Head/Arm on a table (flat surface) and unscrew the lever from the bottom of the transformer housing. Note location and number of mating parts for later reassembly.
- B.2.3 Remove two screws at the top end of the transformer housing and **carefully** pull the two halves of the transformer housing apart. All internal components should be resting inside the half with the cord and switch.
- B.2.4 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.2.5 Reverse the above procedure to restore the fixture to proper operation.

# **B.3.0** Preventive Maintenance Checklists

# **B.3.1** Gleamer Floor Stand Preventive Maintenance

Check	<b>Corrective Action</b>
Weekly Check overall operation of the fixture: Do the switch and bulb operate properly? Does the lighthead stay in position (not drift) when the arm is moved up and down or to the sides? Does the lamp roll smoothly (casters operating properly)? Do all components appear secure (lighthead, arm attachment points, upright connection to the base)?	If the answer to any of these questions is NO, do not use the product. Consult with your maintenance personnel before operating the light.
Monthly Check the upright for "wobble". (If loose, the light is offset and could tip over.)	Tighten the screw under the base casting.
<b>Annually</b> Check same items as for weekly and monthly maintenance, plus inspect the power cord for external abrasion. Lightly pull and twist the cord at the inlet strain relief to test for internal conductor breakage when the light is energized.	Any flickering is indicative of an intermittent break, and the cord should be replaced.
Check electrical connectors for evidence of overheating (charring, discoloration) and chafed insulation.	Replace as necessary.

# **B.3.2** Gleamer Universal (Wall or Table) Mount Preventive Maintenance

Check	<b>Corrective Action</b>
Weekly Check overall operation of the fixture: Do the switch and bulb operate properly? Is the horizontal extension arm level/not sagging? Does the lighthead stay in position/avoid drifting when the arm is moved? Do all components appear secure?	If the answer to any of these questions is NO, do not use the product. Consult with your maintenance personnel before operating the light.
Annually Check same items as for weekly maintenance, plus inspect the power cord for external abrasion. Lightly pull and twist the cord about the inlet strain relief to test for internal conductor breakage when the light is energized. Check tightness of bolt or screws holding the wall mount. (If loose, the light could pull out.) Check wire connectors for evidence of overheating (charring, discoloration), and chafed insulation.	Any flickering is indicative of an intermittent break, and the cord should be replaced. Tighten or relocate hold-down screws. Replace as needed.

# **B.4.0** Cleaning (weekly, or as needed – unplug the fixture first)

- B.4.1 External surfaces of the Gleamer<sup>®</sup> Task Light are polycarbonate, vinyl, or powderpainted. Suggested cleaning technique is to use a soft cloth and mild detergent in water. Do not let any water solution run into the transformer housing. After cleansing, dry all surfaces promptly with a soft cloth or towel.
- B.4.2 For especially stubborn stains, rubbing or denatured alcohol can be used.
- B.4.3 Under no circumstances should organic solvents such as paint thinners, MEK, or acetone be used.

## **B.5.0** Replacement Parts

1.	Front Cap Assembly	
2.	Bulb, 35 W, Standard Beam, Set of 4	0009600PK
3.	Bulb, 35 W, Wide Spot, Set of 4	0009608PK
4.	Gooseneck	
5.	Transformer	
6.	Handle	0009604
7.	Switch	0006035
8.	Socket	
9.	Fuse 0.5 Amp Slo-Blo	0007027
10.	Caster	0002803
11.	Lock Caster	1009717

# C. Symbols and Warnings

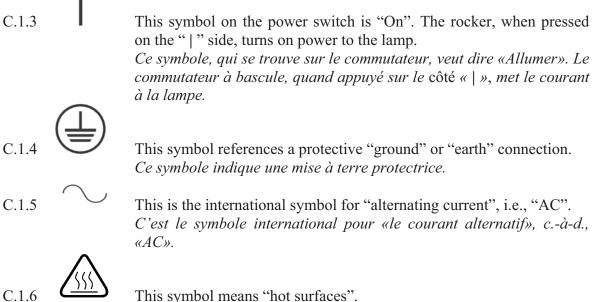
# C.1.0 Symbols



This symbol references text in the manual. The block below references the particular paragraph.

*Ce symbole se rapporte au texte dans le manuel. Le rectangle audessous indique le paragraphe particulier.* 

This symbol on the power switch is "Off". The rocker, when pressed on the " $\circ$ " side, turns off power to the lamp. *Ce symbole sur le commutateur veut dire «Fermé». Le commutateur à bascule, quand appuyé sur le côté «* $\circ$ *», éteint l'électricité.* 



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	<b>Caution</b> – Hot surfaces, do not touch bulbs/lenses.		
	Attention – Surfaces brûlantes de l'ampoule/lentille. Ne jamais		
	toucher aux ampoules/lentilles chaudes.		

- 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 Do not twist the lighthead on its arm. Twisting a gooseneck will lead to premature failure.
  Attention Ne pas pivoter la tête de lampe autour de son bras. Tordant le goosneck aboutira à la défaillance prématurée.
- C.2.1.5 **Caution** Incandescent: suitable for dry locations only. *Attention* – *Incandescente: utiliser seulement aux endroits secs.*

### C.2.2Warnings

- 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 20 minutes for it to cool. *Avertissement* – *Eviter de remplacer l'ampoule quand la lampe est* chaude. Laisser refroidir l'ampoule au moins 20 minutes.
- C.2.2.3 Warning Do not use this fixture in the presence of flammable anesthetics. *Avertissement* – *Ne pas employer cette lampe en présence d'anesthésiques inflammables.*
- C.2.2.4 **Warning** During normal operation do not touch any optical surfaces (glass filter, bulb, etc.). These surfaces are extremely hot and will burn human tissue on contact.

*Avertissement* – Ne jamais toucher les ampoules/lentilles quand la lampe est en usage. Ces surfaces sont extrêmement chauds et causeront des brûlures cutanées à l'instant.

- C.2.2.5 Warning Unplug the fixture before replacing fuses. *Avertissement* – Débrancher la lampe avant du remplacement des 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 sûreté de la prise de terre est atteinte seulement quand la lampe est branchée sur une prise de courant équivalente marquée "Catégorie Hôpital".

C.2.2.7 **Warning** – DO NOT operate this light without the front cap/glass filter in place. The filter prevents unwanted UV and IR radiation from reaching the patient.

*Avertissement* – *NE PAS faire éclairer cette lampe si l'écran filtre (de verre) n'est pas à sa place devant l'ampoule. Le filtre prévient que les UV/IR émissions non voulues touchent le malade.* 

# C.3 Electromagnetic Compliance (EMC)

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.

# Troubleshooting Guide, Gleamer<sup>®</sup>

Symptoms	Probable Cause	Remedy	
SymptomsProbable CauseNo Light OutputNot plugged in.Switch not on ( $\circ$ ). Light bulb failed. Fuses failed: Because of internal short. Because of high mains voltage, or high voltage spikes. Because of single occurrence of lightning strike. Break in wiring. Short or open circuit in transformer.Switch failure (or defective).		RemedyPlug into a suitable hospital-grade receptacle.Turn switch on ( ).Replace with new bulb.Replace with new fuse(s).Locate short and fix it.Put voltage regulator on line.Check condition of transformer and wiring.Locate and replace wires.Determine failure mode and replace transformer.Replace switch.	
Poor (Low) Light Output    Loose or corroded connectors.      Weak transformer (defective). Low mains voltage.      Wrong bulb. Transformer primary leads not connected properly for mains voltage.		Check all connections; clean/replace as necessary. Replace transformer. Check mains condition and have an electrician correct the trouble(s). Verify correct bulb in place. Check transformer circuit diagram and rewire for proper input voltage.	
Lighthead Doesn't Hold Position	Weak gooseneck. Lever not tightened enough. Worn or missing components.	Replace gooseneck. Tighten lever as required. Replace as necessary.	