

# TPC

## L590-LED Dental Operating Light



### Installation, Operation & User Manual

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**Technical Assistance is available Monday through Friday, 8:00 AM to 5:00 PM PST.  
Phone: 800-560-8222**

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## GENERAL INFORMATION

### SYMBOLS

#### **DANGER**

The paragraphs marked with this symbol contain instructions which must be followed carefully to avoid damaging the device, the operator and the patient.

#### **WARNINGS**

These instructions warn the operator that it is mandatory to operate with utmost care to avoid situations which could damage the device.

#### **RESTRICTION**

This icon indicates the most appropriate behavior to avoid damaging the device.

#### **RECOMMENDATIONS**

This icon indicates useful details for an effective use of the device.

#### **ADJUSTMENT**

#### **SENSOR**

#### **SERIAL NUMBER**

#### **ITEM CODE**

#### **STERILIZATION**

### SWITCH SYMBOLS

- **I** - ON
- **O** - OFF

### Other Important Symbols

#### **Disposal Symbol**

Dispose of the device according to the regulations on separate waste collection of electrical equipment. Directive WEEE 2012/19/EC



 **RELATIVE HUMIDITY**

 **TEMPERATURE**

 **Class II Device**

 **Danger Warning Symbol**

 **ATMOSPHERIC PRESSURE**

 **Refer to Documentation**

Refer to the documentation enclosed. Refer to the Manual.

 **WARNING: No modification of this equipment is allowed**

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## Specifications

Specification	Value
Input Voltage	AC 24V
Frequency	50/60Hz
Power	<15VA
Illumination	Adjustable from <8,000 to >30,000 lux acc. to ISO 9680
Color Temperature	5000K $\pm$ 10%

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## Package Contents

1. Light arm
  2. Power supply
  3. Light head (separate box)
  4. Light head handles (included in light head box)
  5. Nylon adaptor bushing
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## Ceiling Bracket Placement

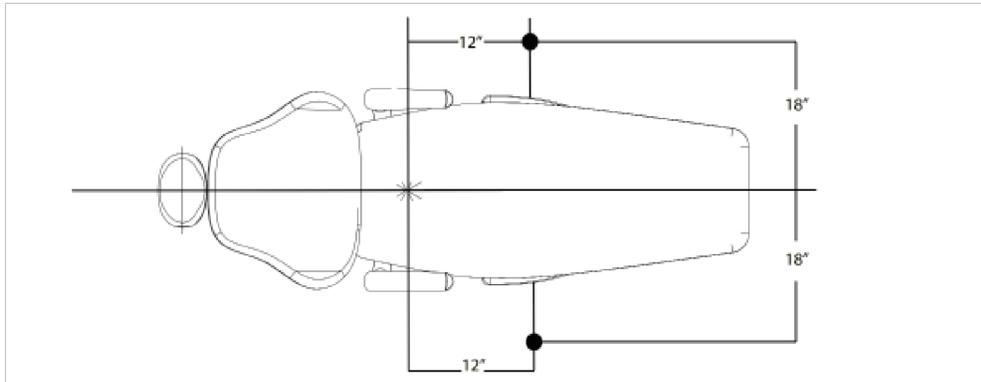
### Mounting Locations

#### Left-Handed Operation:

Mounting location for left-handed operation.

#### Right-Handed Operation:

Mounting location for right-handed operation.

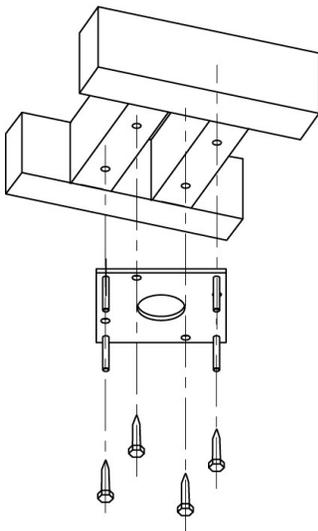


### Ceiling Brace Requirements

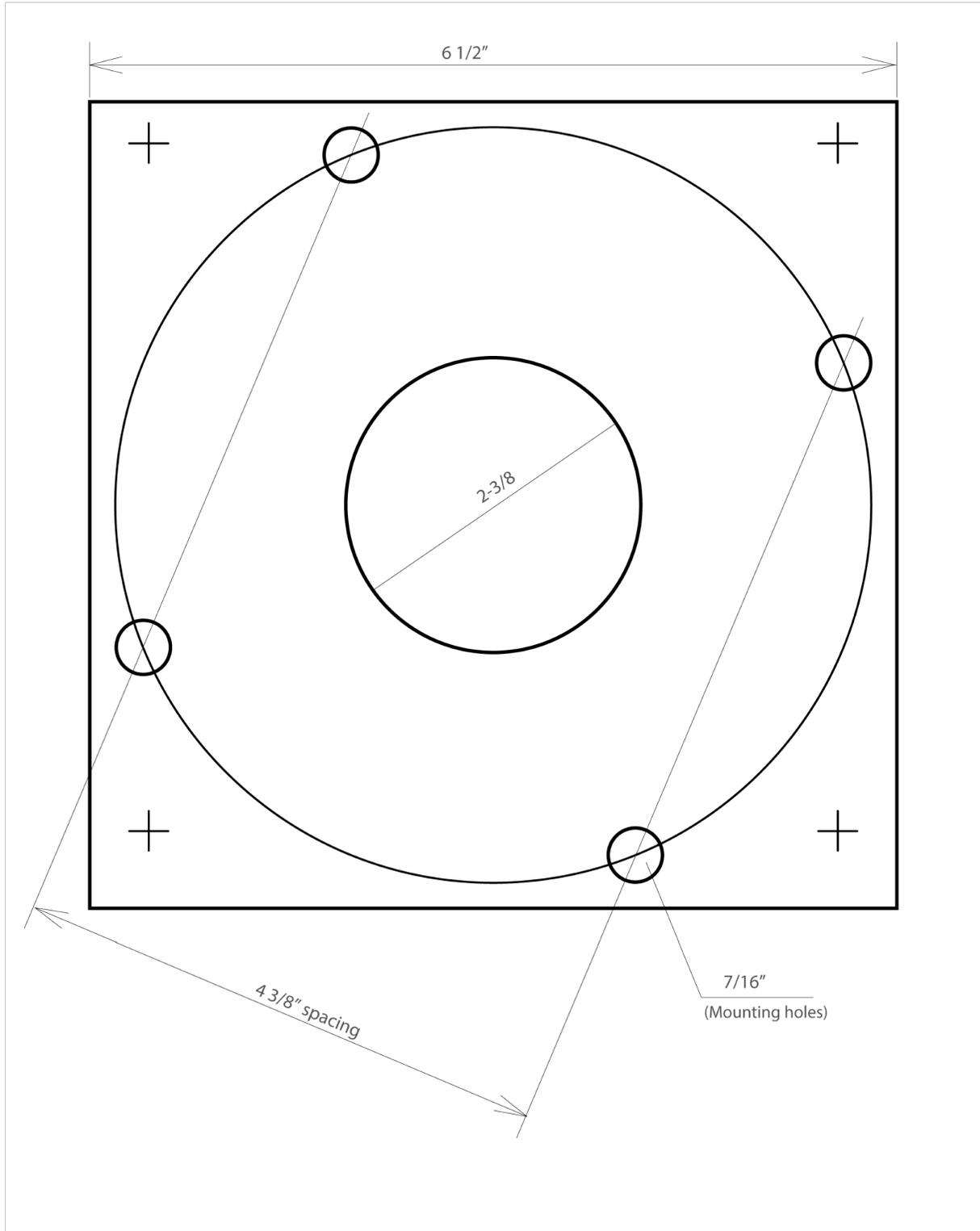
#### Ceiling Joists:

The ceiling structure must be capable of supporting 220 lbs (100 kg) dead weight.

Secure the mounting plate to the ceiling joists using the supplied 4" lag bolts.



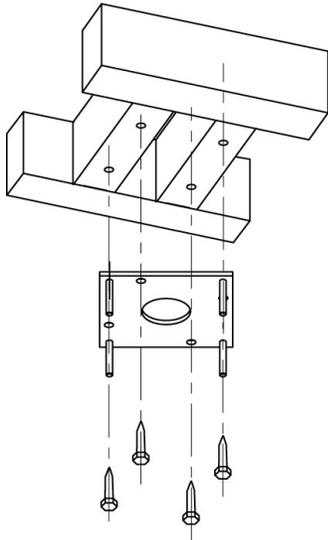
## Ceiling Bracket Mounting Plate



## Installation

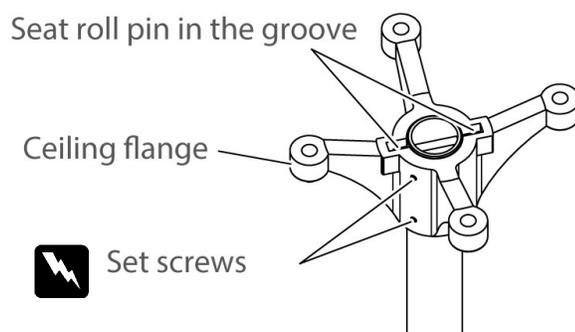
### Step 1: Secure Mounting Plate

Secure the mounting plate to the ceiling joists using the supplied 4" lag bolts. If mounting to a concrete backing, use the supplied concrete fasteners included with the bracket mounting kit.



### Step 2: Install Light Post

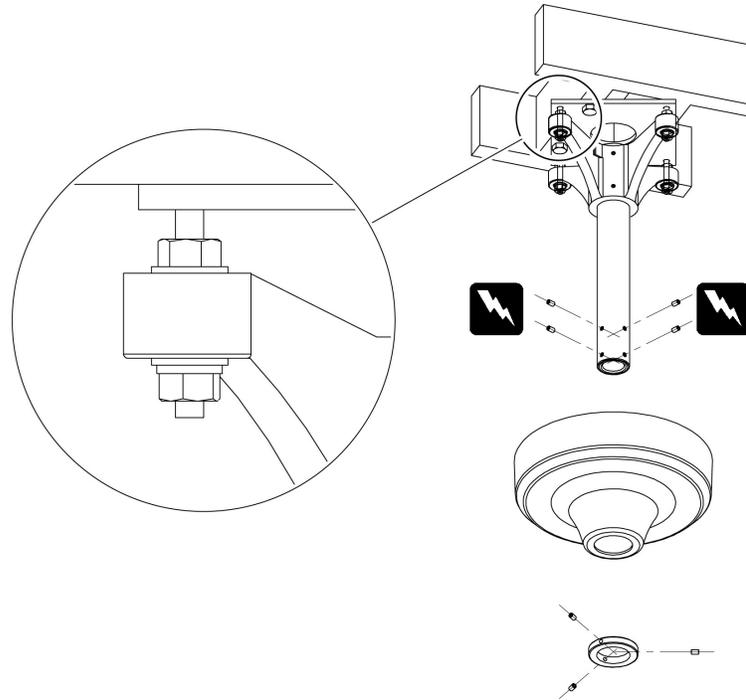
1. Slide the light post through the ceiling flange
2. Make sure the roll pin is properly seated into the ceiling flange grooves
3. Secure set screws to lock the post in place



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## Step 3: Level the Ceiling Flange

Level the ceiling flange by adjusting the nylon insert nuts on the studs the ceiling flange attaches to.

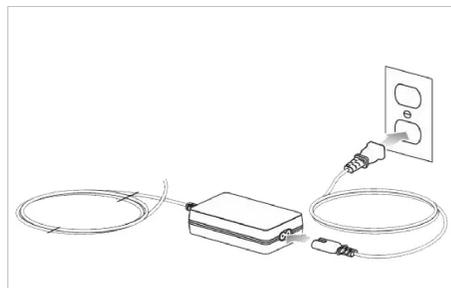


## Step 4: Install Power Pack

The included power pack requires a receptacle for installation. It's recommended to hardwire the connections to the power pack input. Follow all local electrical codes when making electrical connections.

### Power Pack Specifications:

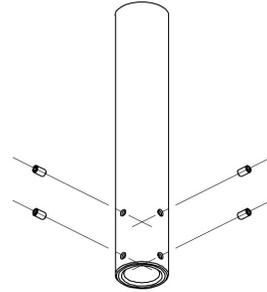
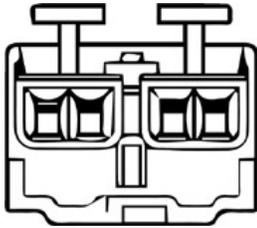
- **Input:** 110-240V AC
- **Output:** 24V DC @ 1.25 Amps
- **Location:** Place inside the ceiling or in the plastic ceiling bracket cover



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## Step 5: Run Light Cord

1. Run the light cord through the retaining ring, ceiling bracket cover, and then into the light post
2. Feed it through the access hole of the ceiling bracket
3. Using the white terminal connection block included with the power pack, complete the electrical connections to the power pack

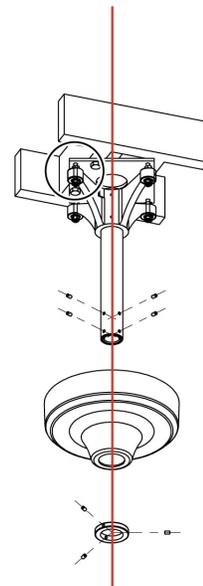


### Connection Points:

- To light wire harness
- Wago terminal block
- DC power pack

## Step 6: Secure Light Arm

1. Secure the light arm to the ceiling post column
2. Secure the 4 set screws to lock the light in place
3. Verify the rotation of the light once this is complete. As you may need to rotate the arm to move the locking position to the desired location



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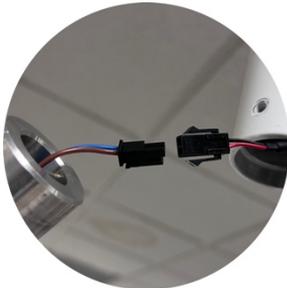
## Step 7: Install the Light Head Bushing Ring

Place the cosmetic ring over the light head mounting stud.



## Step 8: Connect The Wire Harness

Connect the wire harness connector from the light arm to the light head.



## Step 9: Secure Light Head

Secure the light head to the arm using the supplied 2.5mm Allen screw.



## Step 10: Final Check

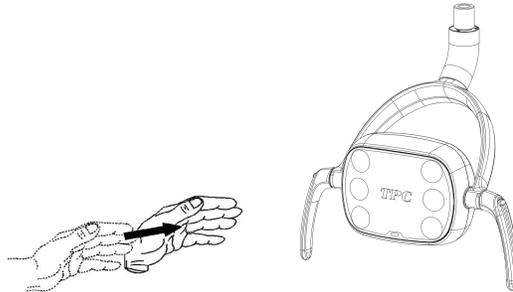
Verify all connections are secure and test the light operation before use.

## Operation Instructions

### 1. Operating the Light via the Proximity Switch

The L570-LED Dental Operating Light is developed to be operated via a proximity switch. This method of operation optimally supports hygiene for all versions, especially in connection with sterile treatment work.

The sensor is located on the front of the L550-LED Dental Operating Light.



### 2. Turn On the Dental Operating Light

#### Procedure:

- The operating light is switched on to sensor mode
- Move your hand past the proximity switch
- → The L570-LED is turned ON



## 3. Brightness Adjustment of White Light

### Procedure:

- ✓ The operating light is switched ON in the normal mode.
  1. Hold your hand on the proximity switch for at least 3 seconds
  2. The operating light switches OFF once, indicating it has entered the setting mode, and then increases the brightness setting to the maximum level step by step. Then the operating light reduces the brightness step by step.
  3. As soon as the desired brightness has been reached, pull your hand back from below the proximity switch. The current brightness setting is then saved for the normal mode. The light briefly flashes once again. This indicates that you have left the programming mode. The light switches to the normal mode.

**Note:** Hold for >3 seconds at the proximity switch



## 4. Switching the Operating Light to the Composite Function

### Procedure:

- ✓ The operating light is switched on to sensor mode
  1. Move your hand past the sensor-controlled switch within 2 seconds. The operating light switches to normal mode with white light.
  2. Move your hand past the sensor-controlled switch again after 2 seconds. The operating light switches to composite mode with yellow light.

**Note:** Pass proximity switch >2 seconds apart



## 5. Turn Off the Dental Operating Light

### Procedure:

- ✓ The operating light is in normal mode.
  - Move your hand past the proximity switch
  - → The L570-LED is turned OFF
  - Place the toggle switch to the center position to turn the light off.



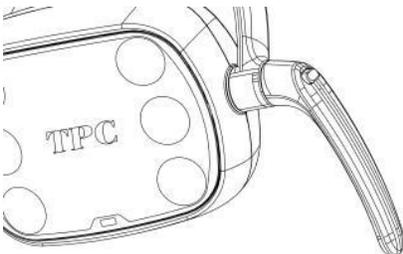
## 6. Remove the Handles for Cleaning and Replace Them

### To Remove the Handles:

- ✓ The light is switched off
- Push the button on the upper side of the handle and pull it off

### To Replace the Handles:

- ✓ The light is switched off
- Push the handle back into position WITHOUT pushing the button on the handle. You can feel and hear the click when the handle snaps in properly.



## Vertical Arm Adjustment

If you experience a downward drift with your dental operating light's vertical arm, please follow the procedure below:

1. Remove the end cap cover on the end of the vertical arm closest to the light head. This requires a small Phillips screwdriver.
2. Slide the outer arm cover off to gain access to the adjustments.
3. Turn the nut located at the end of the light arm to adjust the tension:
  - Turn the nut **clockwise** to increase the tension
  - Turn the nut **counterclockwise** to decrease the tension
4. If your vertical light arm drifts down, then you need to increase the spring tension.
5. If the vertical light arm drifts back up, you need to adjust the friction screw. Only adjust the friction screw in quarter turns.

### Adjustment Points:

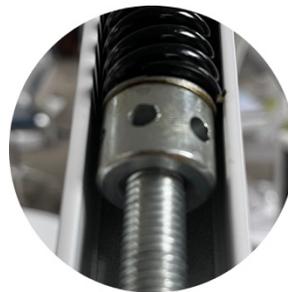
- Spring Tension Adjustment
- Friction Screw Adjustment



Remove Screw



Remove Cap



Spring Adjustment

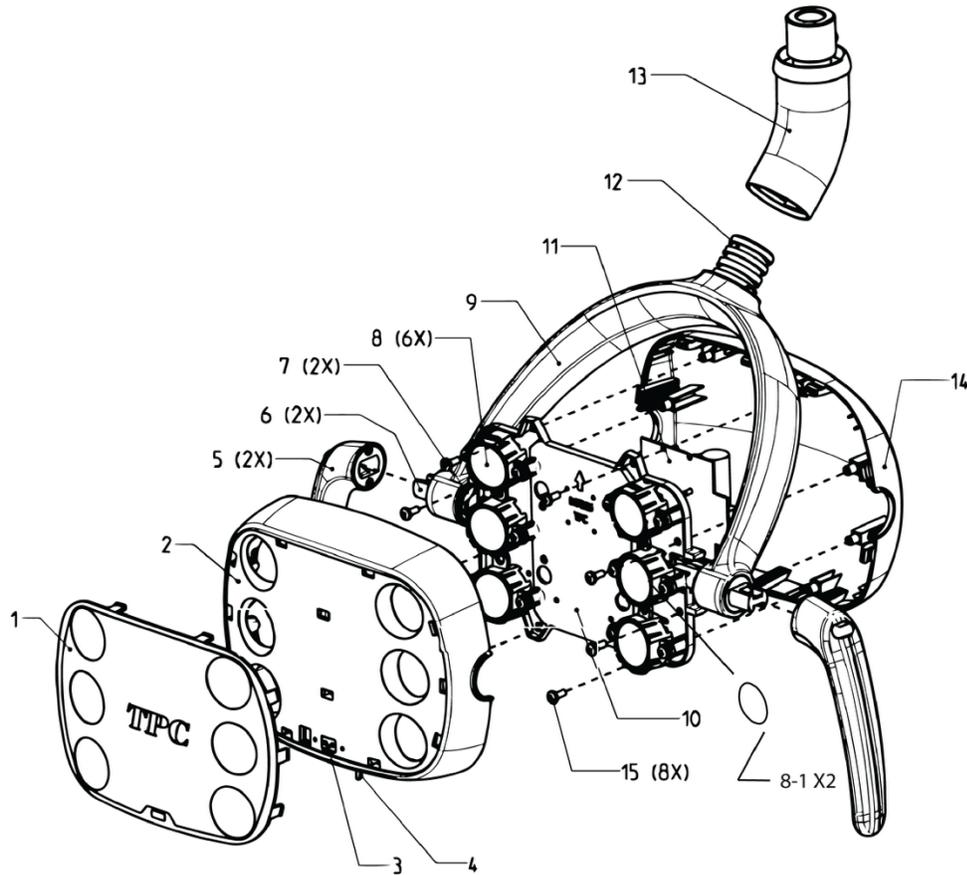


Friction Adjustment



Spring Arm Cover

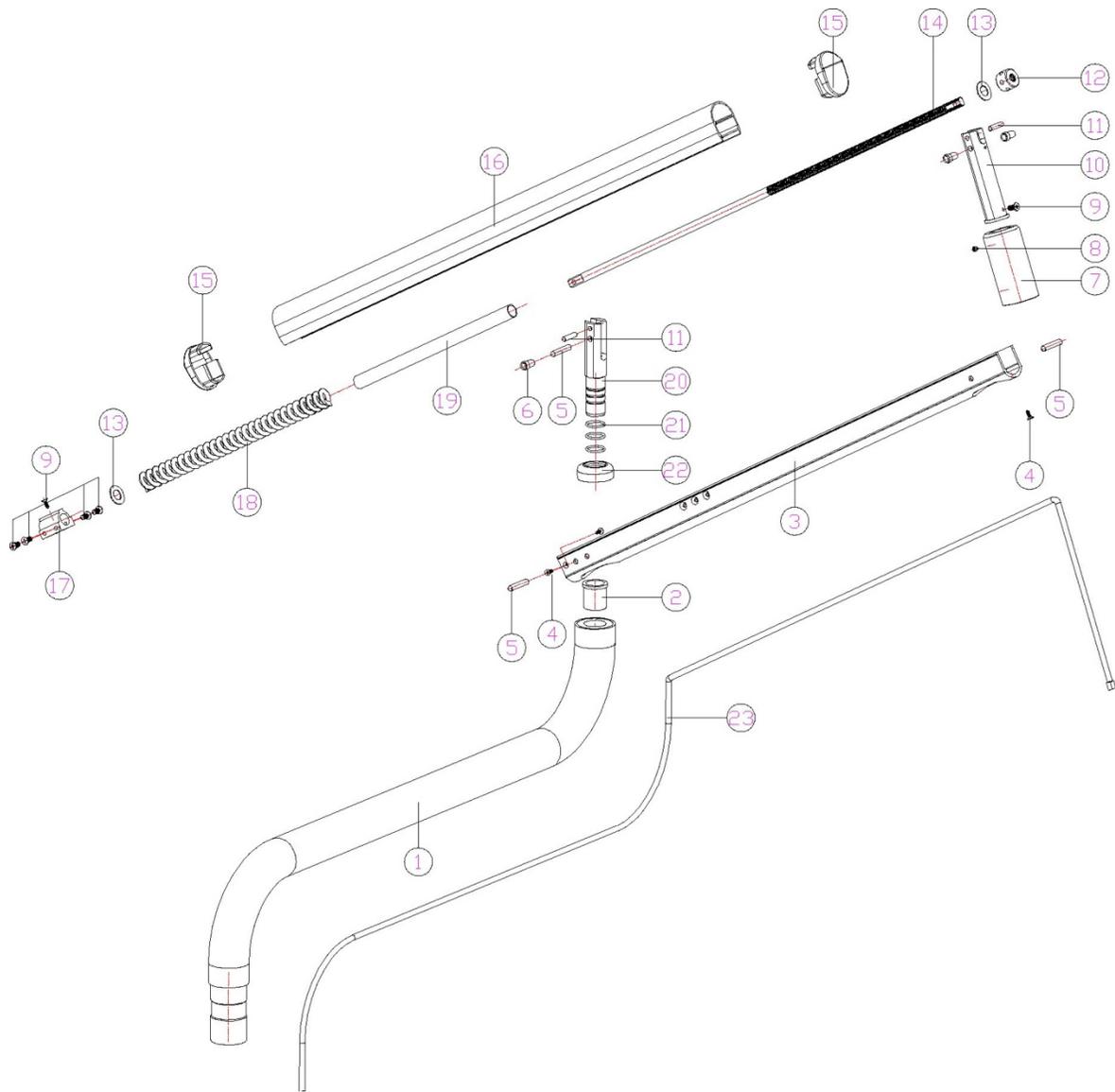
## Head Replacement Parts List



No.	Description	Part Number
1	Slash Shield	L570-LLH-RP1
2	Front Cover	L570-LLH-RP2
3	Motion Sensor	L570-LLH-RP3
4	Toggle Switch	L570-LLH-RP4
5	Handle	L570-LLH-RP5
6	Handle Mount	L570-LLH-RP6
7	C-Clip	L570-LLH-RP7
8	LED	L570-LLH-RP8
9	Yoke trim	L570-LLH-RP9
10	Mounting plate	L570-LLH-RP10
11	PCB Board	L570-LLH-RP11
12	Yoke	L570-LLH-RP12
13	Swivel tri axis	L570-LLH-RP13
14	Back Cover	L570-LLH-RP14
15	Screw	L570-LLH-RP15

**Arm**

## Replacement Parts List



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<b>No.</b>	<b>Description</b>	<b>Part Number</b>
1	Ridge Arm	L600N-ARM-RP-1
2	Nylon Hub	L600N-ARM-RP-2
3	Spring Arm Base	L600N-ARM-RP-3
4	Phillips Screw	L600N-ARM-RP-4
5	Pin	L600N-ARM-RP-5
6	Bushing	L600N-ARM-RP-6
7	Bell Assembly	L600N-ARM-RP-7
8	Set Screw	L600N-ARM-RP-8
9	Phillips Screw	L600N-ARM-RP-9
10	Upper Knuckle	L600N-ARM-RP-10
11	Pin	L600N-ARM-RP-11
12	Tension Nut	L600N-ARM-RP-12
13	Washer	L600N-ARM-RP-13
14	Spring	L600N-ARM-RP-14
15	End Cap Cover	L600N-ARM-RP-15
16	Spring Arm Top Cover	L600N-ARM-RP-16
17	Tension Block	L600N-ARM-RP-17
18	Spring	L600N-ARM-RP-18
19	Spring Sleeve Guard	L600N-ARM-RP-19
20	Connecting Hub	L600N-ARM-RP-20
21	O-Ring	L600N-ARM-RP-21
22	Bezel Cover	L600N-ARM-RP-22
23	2 Conductor Wire Harness	L600N-ARM-RP-23
24	Nylon Light post bushing Not on Diagram	L600N-ARM-RP-24



## Cleaning and Disinfecting Guide

### Important Notice:

The manufacturer makes no representation as to the disinfectant efficacy of these products. We make no warranty, expressed or implied, that these disinfectants will not damage the surface finishes. Damage and discoloration of the surface finishes are not covered under the warranty. Iodophor-based disinfectants will cause yellow staining on many surfaces. Regular washing with soap and water will minimize this staining. Iodophor neutralizers such as Promeddyne are also available.

### Unacceptable Disinfectants

**These disinfectants will harm the surface finishes of dental equipment and are not recommended. Use of these products will void your warranty.**

Chemical Composition	Trade Names
Strong Phenols	Lysol, Lysol 2, Lysol Professional, Coe Foam, Coe Spray Pump, Vitaphene, Omni II
Phenol/Alcohol Combinations	[Same as above]
Sodium Hypochlorite / Household Bleach	Clorox, Ajax, Purex
Alcohol	
Household Cleaners	

### Conditionally Acceptable Disinfectants

**These disinfectants have been found to be the least harmful to the equipment surfaces by our test methods.**

Chemical Composition	Trade Names
Iodophors	Biocide, Aseptic IDC, Wescodyne, SD5, Promeddyne, Iodo Five
Mild Phenols	Procide ES, Asepti Steryl Aerosol
Glutaraldehyde/Phenol Sprays	Sterall Spray, Coldspor
Synergized Quat	Super Discide, Cavicide, Kleenaseptic
Phenol/Water Sprays	Top Cide, Sporicidin Pump Spray
Other	Birex SE

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## Warranty Information

LED Dental Operating Lights are guaranteed to be free from defects in workmanship and materials for 2 years from the date of purchase, unless otherwise stated. TPC will repair or replace any defective part at no charge. TPC will not be responsible for labor charges or shipping charges to/from the TPC facility. This guarantee does not cover normal wear or stains on the surface finish. The guarantee does not cover damage resulting from improper installation, misuse, or accidents incurred in shipping and handling. All claims against the freight carrier must be initiated at the time the damaged items are received. The claim is the responsibility of the customer. We are improving our products on a continuous basis. We reserve the right to make modifications without the need for prior notification and are not obliged to modify previously manufactured items. Light bulbs are not covered under any type of warranty. Only authorized service technicians should attempt to service TPC equipment. Service performed by any unauthorized technician may result in a voided warranty.

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## Maintenance

Maintenance must be performed at scheduled intervals to ensure the operational and functional reliability of your product and to protect the safety and health of patients, users, and other persons. The owner is responsible for making sure that all maintenance activities are performed.

As manufacturers of medical electrical equipment, we can assume responsibility for the safety properties of the unit only if maintenance and repairs on the unit are performed either by us or by agencies which we have expressly authorized, and if components of the unit are replaced by original spare parts in case of failure.

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## Recycling and Disposal

### 1. Recycling

Dispose of used equipment in accordance with the principles, standards and requirements of your country. Ensure that the equipment does not become contaminated during disposal.

### 2. Disposal of Packaging Materials

All packaging materials are selected according to environmental standards and can be recycled. Please send the old packaging materials to the relevant collection and reprocessing system.

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## Troubleshooting Guide

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
Light does not illuminate	No power to light LED has expired Transformer has expired	Check power Replace LED Replace transformer
Light turns on and off when the light head is moved	Open in-line power	Check light head to rigid arm connector. Inspect arm wire.
Vertical arm drifts down	Tension needs to be increased in arm	Tighten arm tension adjustment
Vertical arm drifts up	Friction arm adjustment loose	Tighten friction arm adjustment
Light drifts from left to right	Light post not level	Level unit / light post

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## Contact Information

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**End of Manual**