DENTAL OPERATING LIGHT

L550-LED

Installation, Operation & User Manual

Lustrous LED post-mount operating light · Includes light head and arm parts lists and troubleshooting



DOCUMENT
L550-LED Manual
Updated October 24, 2025 · L550-LED-2.0-MAN-001

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CONTENTS

In this manual

01 **General information** 3
Safety symbols · Label symbols · Specifications · Package contents

02 **Installation** 5
Light arm · Bushing ring · Wire harness · Light head · Power

03 **Operation** 7
Proximity sensor · Brightness · Composite mode · Handles

04 **Vertical arm adjustment** 9
Spring tension · Friction screw

05 **Replacement parts** 10
Light head · Light arm

06 **Care and warranty** 12
Cleaning and disinfecting · Warranty · Maintenance · Disposal

07 **Troubleshooting** 14
Problems, causes and solutions · Contact

How to read this manual

⚠ **WARNING** Risk of injury or damage to the equipment. Follow exactly.

ⓘ **NOTE** Information that makes the job easier or the result more reliable.

Technical support

(800) 560-8222

Monday to Friday, 8:00 AM to 5:00 PM Pacific.

SECTION 01

Safety and label symbols

These symbols appear in this manual and on the light's labels.

In this manual

Danger
Instructions that must be followed exactly to avoid harm to the device, the operator or the patient.

Warning
Operate with the utmost care to avoid situations that could damage the device.

Restriction
The correct behavior to avoid damaging the device.

Recommendation
Useful details for using the device effectively.

WARNING No modification of this equipment is allowed.

On the labels

- **Adjustment point**
- **Sensor** · proximity switch location
- SN **Serial number**
- REF **Item code**
- **Sterilization** · marks parts that can be steam sterilized, such as the handles
- I / O **Switch** · I = on, O = off
- **Relative humidity limits**
- **Temperature limits**
- **Atmospheric pressure limits**
- **Class II device**
- **Refer to the documentation**
- **Separate collection** · dispose of as electrical equipment (WEEE Directive 2012/19/EU)

GENERAL INFORMATION

Specifications and package contents



Specifications

Operating voltage	**24 V AC or DC**
Frequency	**50 / 60 Hz**
Power	**< 15 VA**
Illumination (ISO 9680)	**< 8,000 to > 30,000 lux**
Color temperature	**5,000 K ± 10%**
Controls	**Proximity sensor, toggle**
Warranty	**2 years**

Package contents

BOX 1 · LIGHT ARM

- Light arm
- Power supply
- Nylon adaptor bushing, 1⅞" O.D.

BOX 2 · LIGHT HEAD

- Light head
- Light head handles

SECTION 02

Installation

Install the light arm first, then the light head. Keep the power disconnected until the last step.



Fig. 1 Light arm on the light post

Install the light arm

1. **Fit the 1⅞" nylon bushing** into the light post. It is required for a proper fit in a standard 2" post.
2. **Install the light arm** on the light post.



Fig. 2 Cosmetic ring over the mounting stud

Fit the cosmetic ring

3. **Place the cosmetic ring** over the light head mounting stud.



Fig. 3 Arm harness connected to the light head

Connect the wire harness

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

INSTALLATION

Secure the head and connect power



Fig. 4 Head secured with the 2.5 mm Allen screw

Secure the light head

5 **Secure the light head** to the arm with the supplied 2.5 mm Allen screw.



Fig. 5 Power supply

Connect main power

6 **Connect the supplied 24 VDC power pack** to the light arm wire harness, using the terminal connector supplied.

NOTE The light head runs on 24 V AC or DC. The power pack supplied with the light is 24 VDC.

Final check

7 **Check every connection** is secure, then test the light before use (Section 03).

CAUTION Disconnect power before connecting or disconnecting the harness or the light head.

SECTION 03

Proximity sensor operation

The light is operated touch-free with the proximity sensor on the front of the light head, which supports hygiene during sterile work.

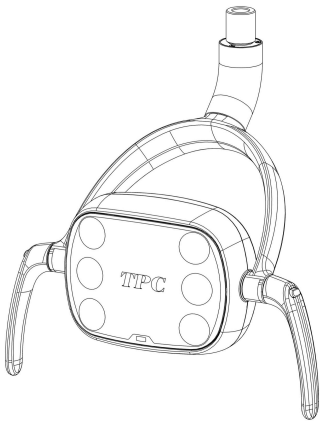


Fig. 6 Proximity sensor on the front of the light head

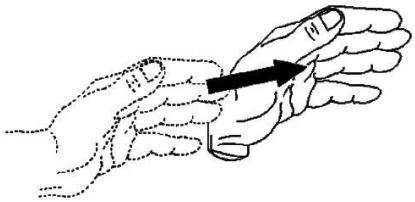


Fig. 7 Pass your hand in front of the sensor

Turn on

- With the light in sensor mode, move your hand past the sensor.

Adjust brightness

1. With the light on in normal mode, hold your hand at the sensor for **more than 3 seconds**.
2. The light switches off once to show it is in setting mode, then steps up to maximum brightness and back down.
3. Pull your hand away at the brightness you want. The light flashes once and returns to normal mode; the setting is saved.

Composite mode (yellow light)

- Pass your hand past the sensor: the light comes on in normal (white) mode.
- Pass it again **more than 2 seconds later**: the light switches to composite mode with yellow light.

Turn off

- In normal mode, move your hand past the sensor.
- Or set the toggle switch to its center position.

OPERATION

Removing and refitting the handles

Remove the handles for cleaning and disinfecting (page 12).

WARNING Switch the light off before removing or refitting the handles.

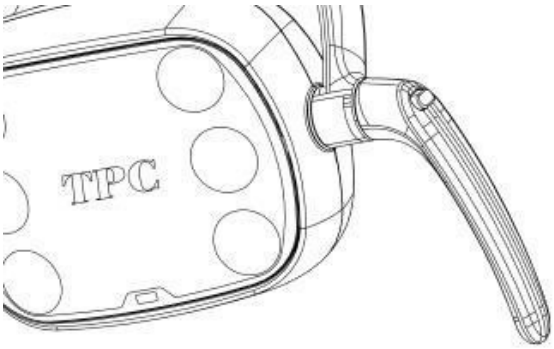


Fig. 8 Handle release button



Fig. 9 Toggle switch: center position is off

Remove

1. Press the button on the upper side of the handle.
2. Pull the handle off.

Refit

3. Push the handle back into position **without** pressing the button.
4. You will feel and hear a click when it locks in place.

Toggle switch

The toggle switch under the light head turns the light off when set to its center position.

SECTION 04

Vertical arm adjustment

Adjust the vertical arm if it drifts down or up on its own.



Fig. 10 Remove the screw



Fig. 11 Remove the end cap



Fig. 12 Spring tension nut



Fig. 13 Friction screw

1. **Remove the end cap** at the light head end of the vertical arm, using a small Phillips screwdriver.
2. **Slide the outer arm cover off** to reach the adjustments.
3. **Arm drifts down:** turn the tension nut at the end of the arm **clockwise** to increase spring tension (counterclockwise decreases it).
4. **Arm drifts up:** tighten the friction screw, a quarter turn at a time.
5. **Refit the cover and end cap,** then check the arm holds position.

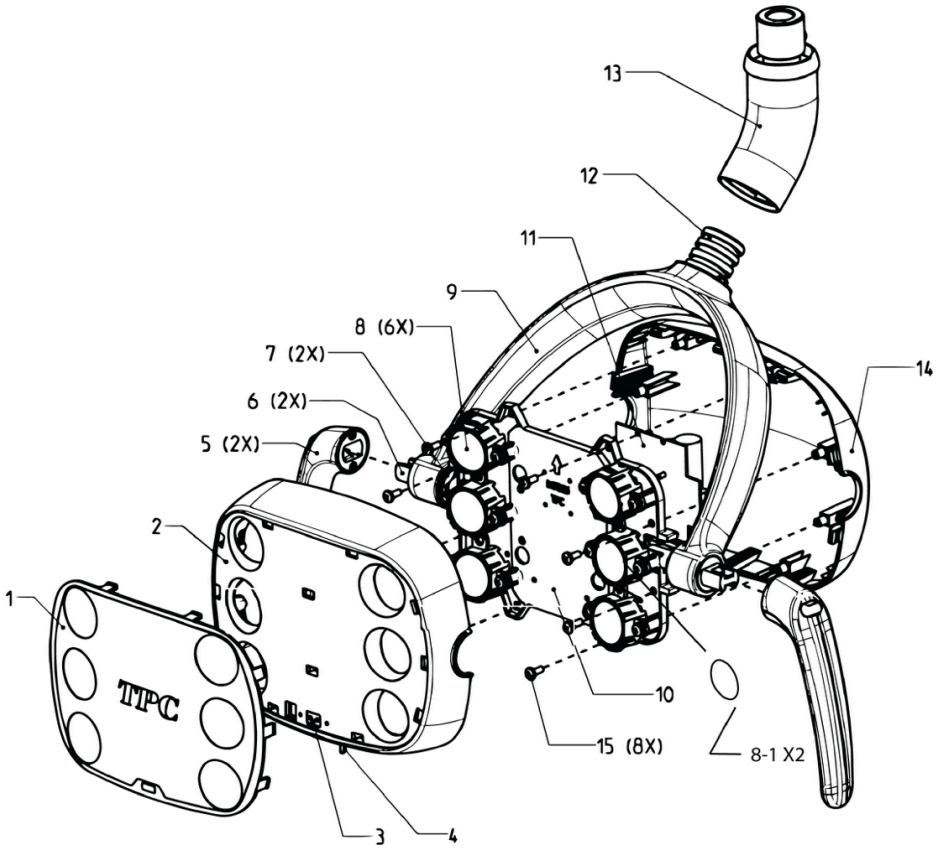


Fig. 14 Spring arm cover

NOTE If the light drifts left or right, the light post is not level. Level the unit or post rather than adjusting the arm.

SECTION 05

Light head replacement parts



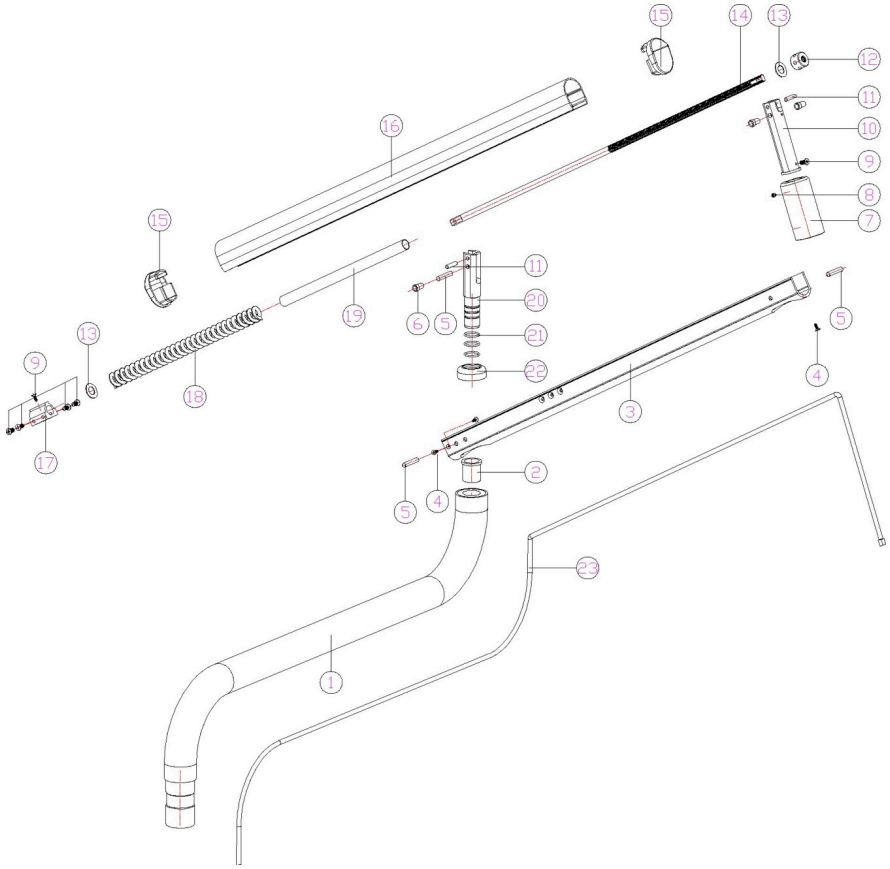
NO.	DESCRIPTION	PART NO.
1	Splash shield	L550-LLH-RP1
2	Front cover	L550-LLH-RP2
3	Motion sensor	L550-LLH-RP3
4	Toggle switch	L550-LLH-RP4
5	Handle	L550-LLH-RP5
6	Handle mount	L550-LLH-RP6
7	C-clip	L550-LLH-RP7
8	LED	L550-LLH-RP8

NO.	DESCRIPTION	PART NO.
9	Yoke trim	L550-LLH-RP9
10	Mounting plate	L550-LLH-RP10
11	PCB board	L550-LLH-RP11
12	Yoke	L550-LLH-RP12
13	Tri-axis swivel	L550-LLH-RP13
14	Back cover	L550-LLH-RP14
15	Screw	L550-LLH-RP15

The ceiling-mounted L570-LED uses L570-LLH part numbers.

REPLACEMENT PARTS

Light arm replacement parts



NO.	DESCRIPTION	PART NO.
1	Rigid 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

NO.	DESCRIPTION	PART NO.
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 *	L600N-ARM-RP-24

* Not shown on the diagram.

SECTION 06

Cleaning and disinfecting

⚠ **IMPORTANT** TPC makes no representation about the efficacy of these disinfectants and no warranty, expressed or implied, that they will not damage surface finishes. Damage and discoloration of surface finishes are not covered by the warranty.

Not acceptable

These harm the surface finishes of dental equipment. Using them voids the warranty.

Strong phenols	Lysol, Lysol 2, Lysol Professional, Coe Foam, Coe Spray, Pump, Vitaphene, Omni II
Phenol / alcohol combinations	Same as strong phenols
Sodium hypochlorite (bleach)	Clorox, Ajax, Purex
Alcohol	—
Household cleaners	—

Conditionally acceptable

The least harmful to equipment surfaces in TPC testing.

Iodophors	Biocide, Aseptic IDC, Wescodyne, SD5, Promedyne, Iodo Five
Mild phenols	Procide ES, Asepti Steryl Aerosol
Glutaraldehyde / phenol sprays	Sterall Spray, Coldspor
Synergized quats	Super Discide, Cavicide, Kleenaseptic
Phenol / water sprays	Top Cide, Sporicidin Pump Spray
Other	Birex SE

ⓘ **NOTE** Iodophor disinfectants leave yellow stains on many surfaces. Regular washing with soap and water keeps staining down, and iodophor neutralizers such as Promedyne are available.

CARE

Warranty, maintenance and disposal

2 year limited warranty

LED operating lights are guaranteed free from defects in workmanship and materials for 2 years from the date of purchase, unless otherwise stated.

Covered

TPC will repair or replace any defective part at no charge.

Not covered

- Labor, and shipping to and from TPC
- Normal wear or stains on the surface finish
- Damage from improper installation, misuse or accidents
- Damage in shipping and handling

Claims against the freight carrier must be started when the damaged items are received; filing the claim is the customer's responsibility. TPC improves its products continuously and may modify them without notice, without obligation to modify items already made.

⚠ **IMPORTANT** Only authorized service technicians should service TPC equipment. Service by an unauthorized technician may void the warranty.

Maintenance

Maintain the light at scheduled intervals to keep it reliable and to protect patients, users and others. The owner is responsible for making sure maintenance is done. TPC is responsible for the unit's safety only when maintenance and repairs are carried out by TPC or an agency it has authorized, using original spare parts.

Recycling and disposal

Dispose of used equipment according to the rules of your country, and make sure it is not contaminated during disposal. All packaging is recyclable; send it to the relevant collection system.

SECTION 07

Troubleshooting

	PROBLEM	CAUSE	SOLUTION
01	**Light does not come on**	No power to the light	Check the power supply and connections
		LED has failed	Replace the LED
		Power supply has failed	Replace the power supply
02	**Light turns on and off when the head is moved**	Open in-line power connector	Check the light head to rigid arm connector, and inspect the arm wire
03	**Vertical arm drifts down**	Spring tension too low	Increase the arm tension (page 9)
04	**Vertical arm drifts up**	Friction screw loose	Tighten the friction screw (page 9)
05	**Light drifts left or right**	Light post not level	Level the unit or light post

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