CEILING-MOUNT OPERATING LIGHT

L690-LED

Installation, Operation & User Manual

Lucent LED ceiling-mount operating light · Includes ceiling bracket template, arm parts list and troubleshooting



DOCUMENT
Lucent L690-LED Installation and Operation Manual
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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.

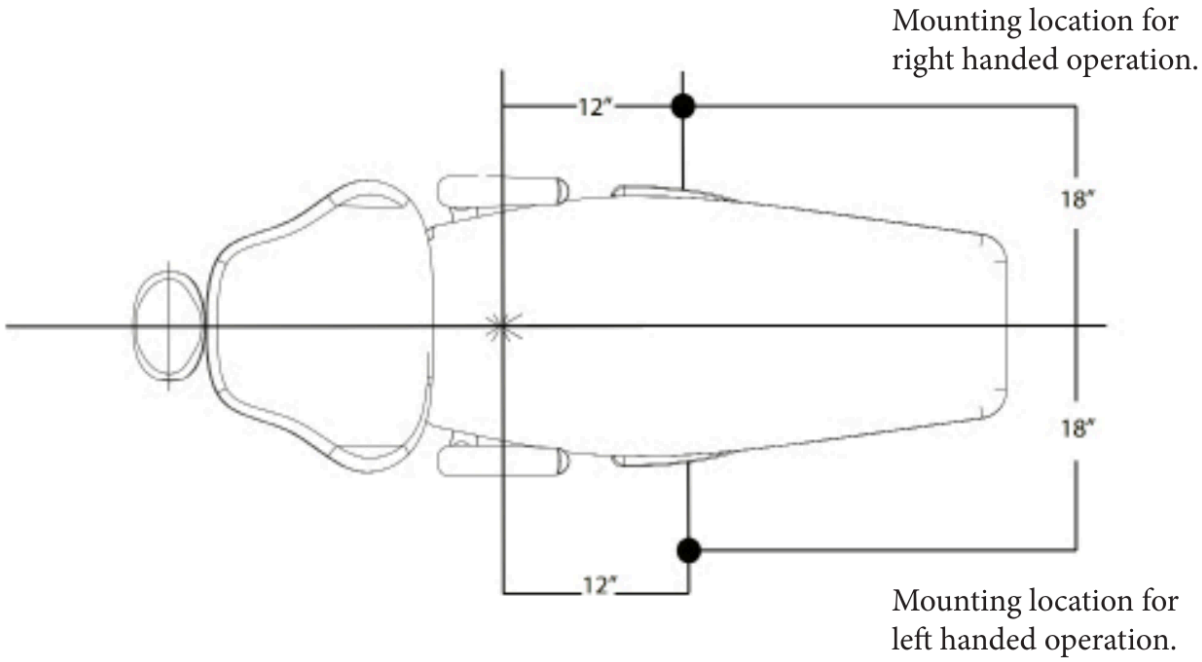
WARNING No modification of this equipment is allowed.

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)

SECTION 02

Ceiling bracket placement



A typical ceiling light location for a right-handed operator is shown above. For a left-handed operator, mount the bracket in the mirror position on the opposite side of the chair.

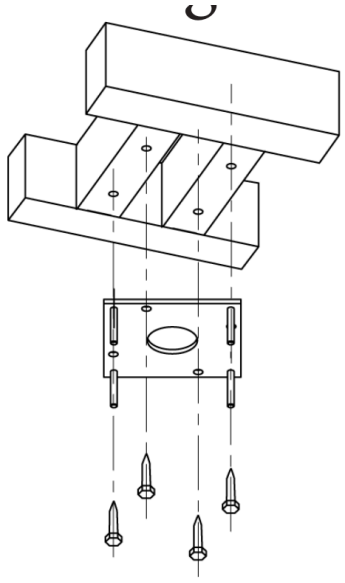


Fig. 1 Ceiling brace and mounting plate

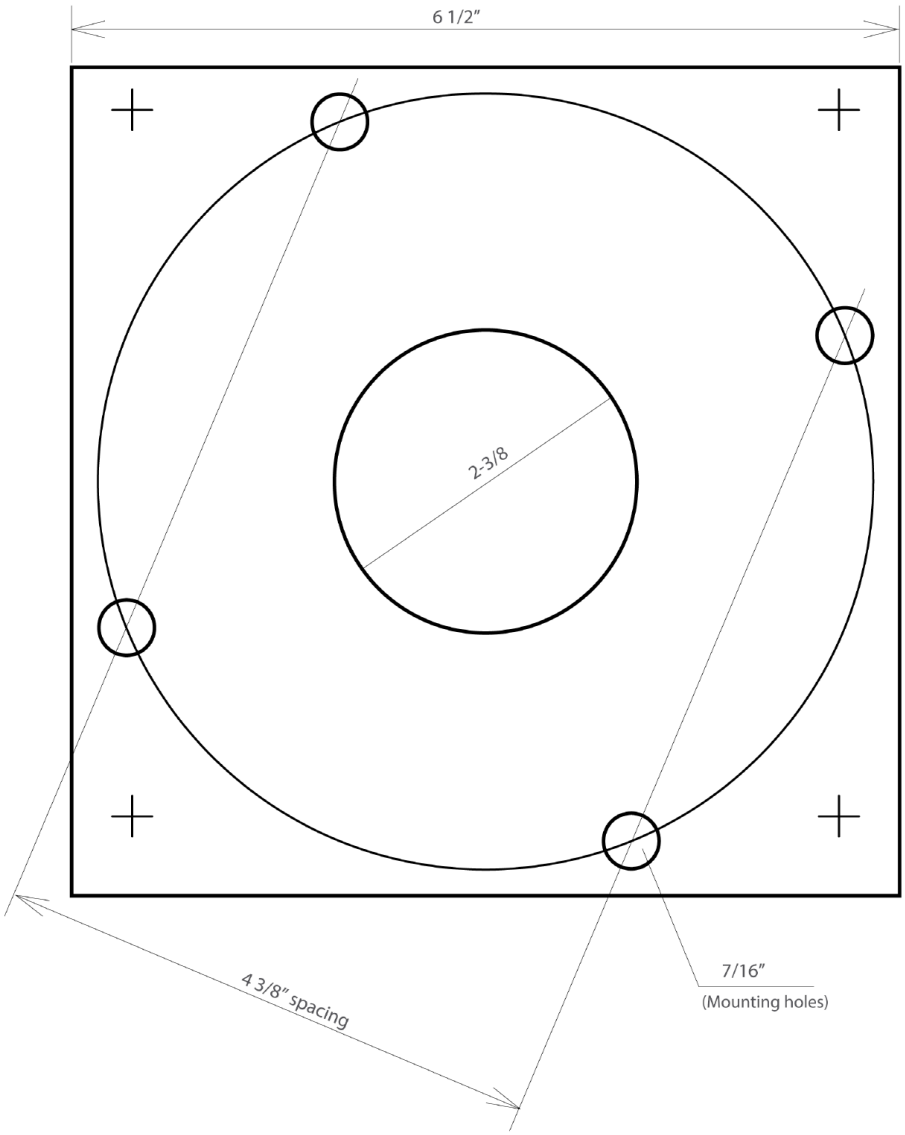
Ceiling brace requirements

⚠ **WARNING** The ceiling structure must be able to support **220 LB (100 KG)** dead weight.

- Fit a brace between the ceiling joists.
- Secure the ceiling bracket mounting plate to the joists with the supplied 4" lag bolts.
- For concrete, use the concrete fasteners in the bracket mounting kit.

CEILING INSTALLATION

Ceiling bracket mounting plate



Dimensions

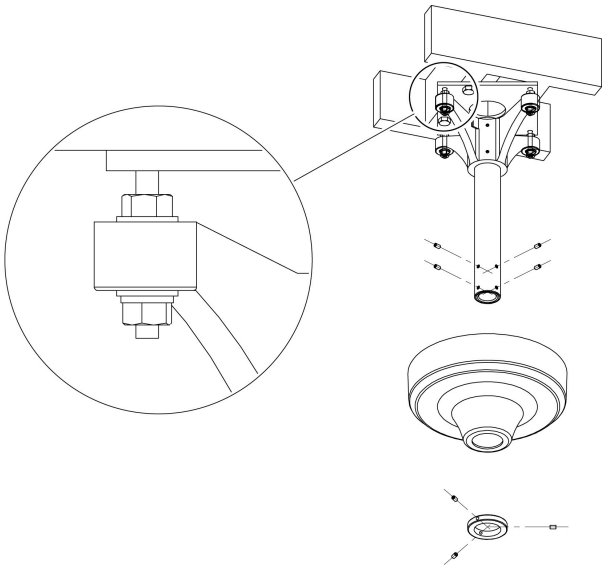
Plate	**6½" square**
Center hole	**2⅜" dia.**
Mounting holes	**4 × 7/16"**
Hole spacing	**4⅜"**

NOTE Drawing not to scale. Lay out the holes from the dimensions.

CEILING INSTALLATION

Mount the plate, post and flange

The device must be installed by qualified technicians only.



1. **Secure the mounting plate** to the ceiling joists with the supplied 4" lag bolts, or to concrete with the supplied concrete fasteners.
2. **Slide the light post** through the ceiling flange.
3. **Seat the roll pin** in the ceiling flange grooves, then tighten the set screws to lock the post.
4. **Level the ceiling flange** with the nylon insert nuts on the studs it attaches to.

Fig. 2 Mounting plate, post and ceiling flange

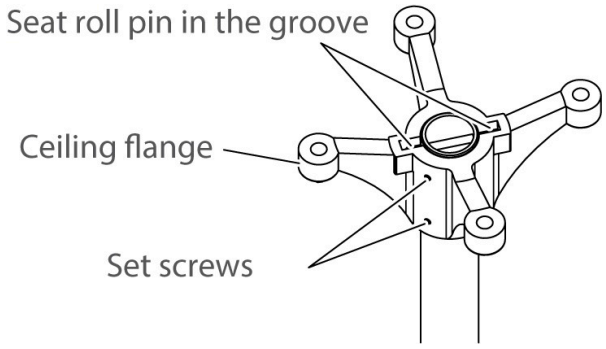


Fig. 3 Roll pin seated in the flange groove; set screws

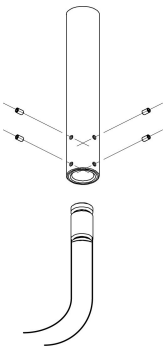


Fig. 4 Light post and set screws

CEILING INSTALLATION

Power pack and light arm

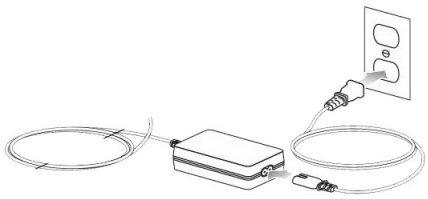


Fig. 5 DC power pack

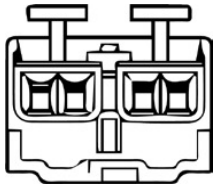


Fig. 6 Terminal block

Power pack

Input	**110–240 V AC**
Output	**24 V DC, 1.25 A**

- The power pack needs a receptacle. Hard-wiring the power pack input is not recommended.
- Place it inside the ceiling or in the plastic ceiling bracket cover.
- Follow all local electrical codes.

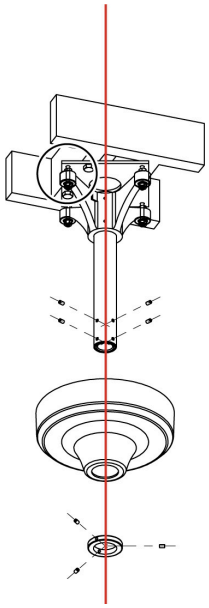


Fig. 7 Cord routed through the cover, post and bracket

Wire and mount the arm

1. **Run the light cord** through the retaining ring and the ceiling bracket cover, into the light post, and out through the access hole in the ceiling bracket.
2. **Connect the cord to the power pack** with the white terminal block supplied with it.
3. **Fit the light arm** on the ceiling post column and tighten the 4 set screws.
4. **Check the arm rotation.** You may need to rotate the arm to move its stop to the position you want.

⚠ **WARNING** Cut off the power supply before installation.

SECTION 03

EDI LED light head

In the box

- Light head (version as ordered)
- Wrench for removing the front screen
- Instruction manual

> ⚠ **WARNING** Clean the head before first use (page 12). Never use the head if any part is faulty.

Fit the head to the arm

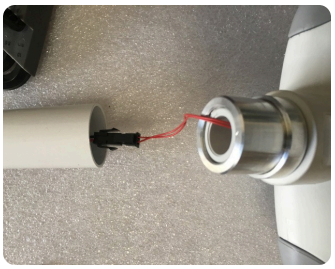


Fig. 8 Connect the wire harness



Fig. 9 Secure the head to the arm

Features

- Versions with a switch or with a proximity sensor
- Two LEDs mirrored into two parabolic reflectors for even, shadow-free light
- Intensity set with the switch or the sensor
- Touch-free sensor reduces cross-infection
- Automatic lighting with TPC Mirage touchpad control
- Removable, sterilizable handles
- Front splash screen reduces internal contamination
- 24 V AC/DC electrical connection

Parts of the head



Fig. 10 Light head: reflector, LED module, handles



Fig. 11 On/off and intensity switch



Fig. 12 Sensor (optional)

1	On/off and intensity switch	2	LED module
3	Reflector	4	Handle
5	Front shield	6	Sensor (with or without automatic lighting)
7	Electronic board	8	Front screen wrench

SECTION 04

Operation

Position the head about 700 mm (27.5") from the patient. The light spot is designed for this distance; nearer or farther, its size and evenness change.

Head with switch

- Press the switch briefly to the left or right to turn the light on or off. It beeps once.
- The light always comes on at maximum intensity.
- To dim, hold the switch to the left or right until you reach the intensity you want. It beeps once at minimum.
- To return to maximum, switch the light off and on again.

⚠ **CAUTION** Handle the switch gently. Move it only side to side, never push or pull it.

Head with sensor (optional)

- Bring your hand within 3 cm (1¼") of the sensor to turn the light on or off. It beeps once.
- To dim, hold your hand still near the sensor until you reach the intensity you want.
- To return to maximum, switch the light off and on again.

Automatic lighting

With this function the light comes on automatically whenever power is switched on from the touchpad. Available on TPC Mirage units only.

SECTION 05

Vertical arm tension

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



Fig. 13 Tension nut



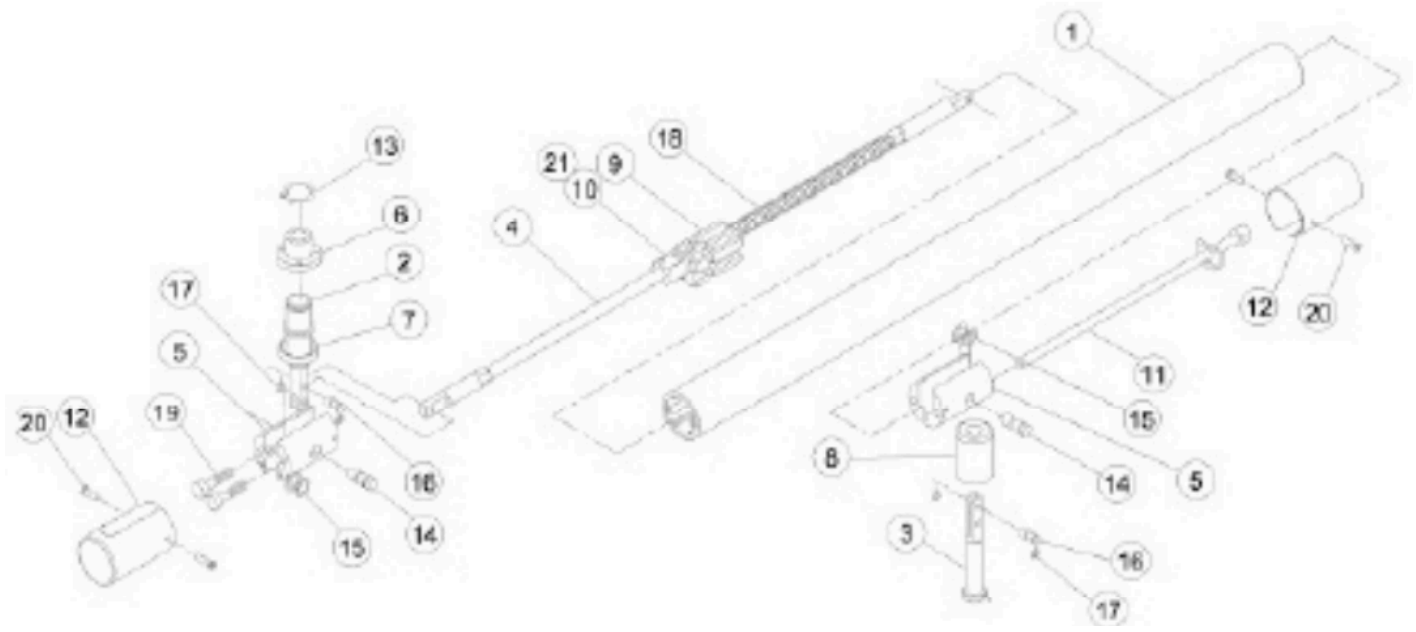
Fig. 14 Friction screw

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

⚠ **CAUTION** Adjust the friction screw in quarter turns only.

SECTION 06

Light arm replacement parts



NO.	DESCRIPTION	PART NO.
1	Flex arm cover	56021
2	Knuckle, rigid arm	56022
3	Knuckle, head	56023
4	Spring rod	56024
5	Extension support	56025
6	Bushing	56026
7	Bezel	56027
8	Bushing	56028
9	Spring tensioner block	56029
10	Friction block	56030
11	Tensioner rod	56031

NO.	DESCRIPTION	PART NO.
12	End cap cover	56032
13	Retainer ring	56033
14	Long pin	56034
15	Retainer ring, small	56035
16	Short pin	56036
17	Retainer ring, small	56037
18	Spring	56038
19	Socket head cap screw	56039
20	End cap screw	56040
21	Friction screw	56041

SECTION 07

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

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.

SECTION 08

Troubleshooting

	PROBLEM	CAUSE	SOLUTION
01	**Light does not come on**	No power to the light	Check for 24 V AC/DC power
		LED has failed	Replace the LED
		Power pack has failed	Replace the power pack
		Light switch is damaged	Replace the light switch
02	**Light intensity is low**	The light is in a dimmed setting; dimmer settings are held in memory	Switch: with the light on, hold the toggle one way to change the setting. Sensor: hold your palm at the sensor.
03	**Light turns on and off when the head is moved**	Open in-line power or loose connector	Check the light head to rigid arm connector and inspect the arm wire
04	**Sensor light switches or dims on its own**	Electromagnetic interference on the sensor board	Open and inspect the sensor PCB; move any metal objects away from it
05	**Vertical arm drifts down**	Tension too low	Increase the arm tension (page 10)
06	**Vertical arm drifts up**	Friction screw loose	Tighten the friction screw (page 10)
07	**Light drifts left or right**	Light post not level	Level the light post
08	**Power pack green light flashes and the light will not come on**	Power pack is failing	Replace the LED light power pack

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