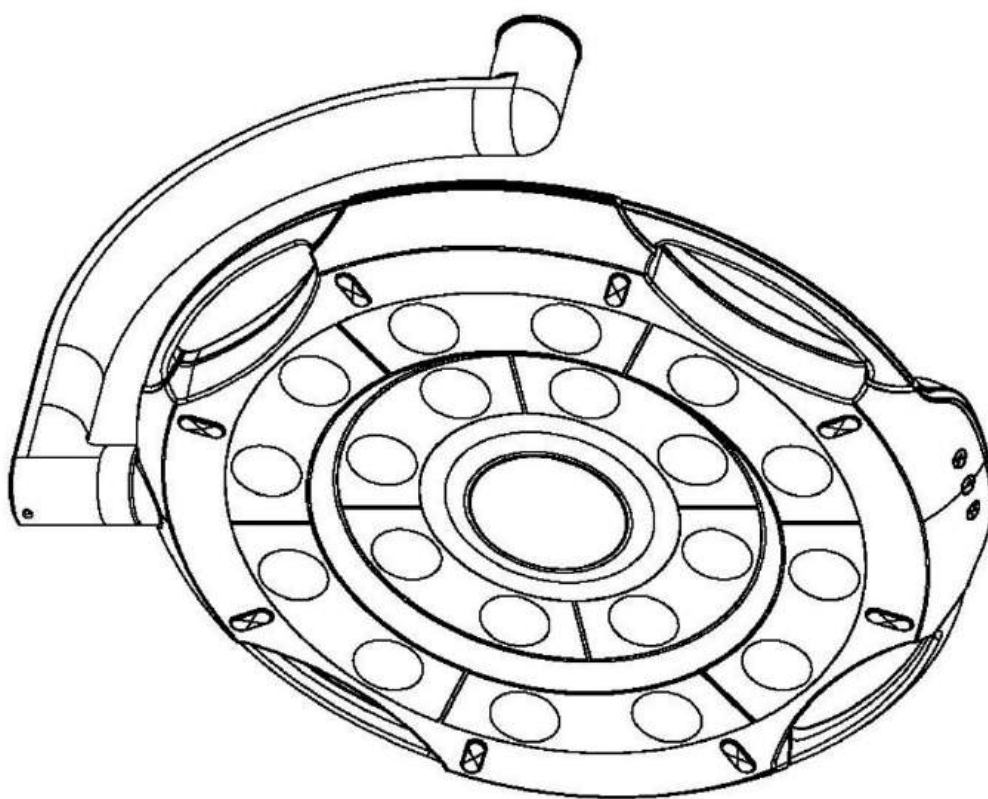


IL-480 LED Dental Operating Light

Operating Instructions



1 General information

1.1 Dear Customer,

We are pleased that you have equipped your practice with the IL-480 LED Dental operating Light. You now have a light that features LED technology. It is characterized by high illuminance, lamp longevity and lower energy consumption. Its mechanical adjust ability in 2 axes ensures optimal position ability.

The technical documentation supplied is also part of the product.

Always keep this documentation within reach. Please perform maintenance and cleaning based on the corresponding instructions.

Familiarize yourself with the lamp by reading these Operating Instructions before putting it into operation.

1.2 Identification of danger levels

To prevent personal injury and material damage, please observe the warning and safety information provided in this document.

Such information is highlighted as follows:

DANGER	WARNING	CAUTION	NOTICE	IMPORTANT
An imminent danger that could result in serious bodily injury or death.	A possibly dangerous situation that could result in serious bodily injury or death	A possibly dangerous situation that could result in slight bodily injury.	A possibly harmful situation which could lead to damage of the product or an object in its environment.	Application instrucionts and other important information.

1.3 Warranty and liability

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.

Exclusion of liability

In the event that the system owner fails to fulfill its obligation to perform maintenance activities or ignores error messages, we and our authorized dealers cannot assume any liability for any damage thus incurred.

1.4 Intended use

The operating light is used to illuminate the treatment area during dental treatment. The light may be used only by trained and qualified personnel.

This device is not intended for operation in areas subject to explosion hazards. Proper use also includes compliance with the present operating instructions and the relevant cleaning and care instructions. No setting for use while handling light-activated restorative materials.

2 Safety information

2.1 Blinding

WARNING

Due to the extreme brightness of the LED technology employed, directing the light beam into the patient's or user's eyes should be avoided! Briefly looking into the light beam is harmless.

2.2 Electromagnetic compatibility

Medical electrical devices are subject to special precautionary measures with regard to electromagnetic compatibility (EMC).

They must be installed and operated in compliance with the specifications provided for the respective treatment center in the document "Installation Requirements".



Portable and mobile RF communications equipment may interfere with medical electrical equipment. Therefore, the use of mobile wireless phones in practice or hospital environments must be prohibited. This may result in incorrect operation of the unit.

2.3 Care and cleaning agents

Only water or mild detergents should be used regularly to remove dust and disinfectant residues from the surface of the lamp.

3 Operations

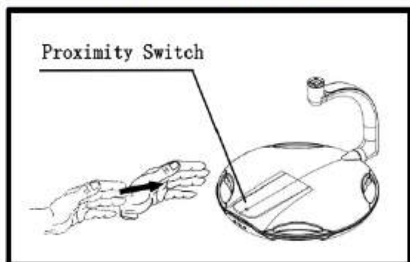
3.1 Operating the light via the proximity switch

IL-480 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 proximity switch is attached to the top of the IL-480.

3.1.1 Turn on and turn off the dental operating light



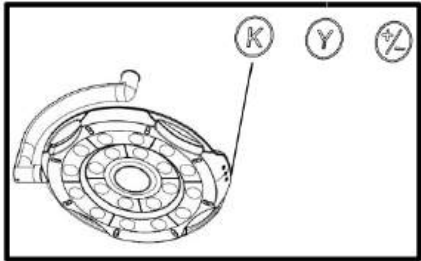
- ✓ The operating light is switched OFF,
Move your hand past on the proximity switch
→ The IL-480 is turned ON.
- ✓ The operating light is switched ON in the normal mode.
Move your hand past on the proximity switch
→ The IL-480 is turned OFF.

3.2 Brightness and color temperature levels

Brightness color temperature	20000LUX	40000LUX	6000LUX	80000LUX
5300K	✓	✓	✓	✓
4800K	✓	✓	✓	
4400K	✓	✓	✓	
4000K	✓	✓	✓	

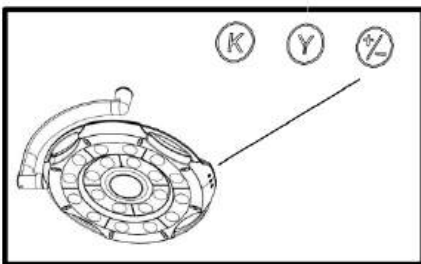
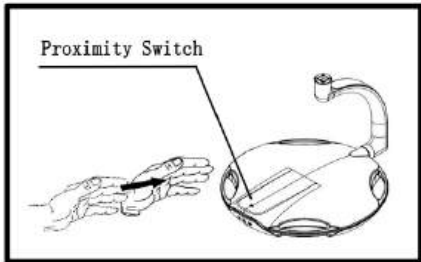
When the dental light enters the Composite Mode, the effective radiation absorbed on the camphorquinone polymerization-sensitive spectrum is less than 3.0 W/m², and the brightness more than 6500 LUX.

3.3 Color temperature levels adjustment of White light



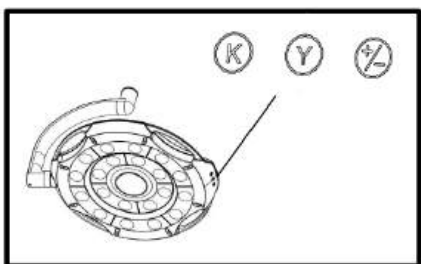
- ✓ The operating light is switched ON in the normal mode (white light).
- 1. Shortly press the touch switch "K" and release.
- 2. The color temperature has four adjustable levels: 4000,4400,4800K, 5300K,cycle adjustment.
- 3. As soon as the desired brightness has been reached, Shortly press the touch switch "K" and release.
- The current brightness setting is saved for the normal mode.

3.4 Brightness adjustment of mixed light



- ✓ The operating light is switched ON in the mixed light mode (Color temperature 4500K).
- 1. Hold your hand on the proximity switch for at least 3s.
- Or shortly press the touch switch "light icon" and release.
- 2. The operating light 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. When the brightness of reaches the maximum or minimum level, the operating light will emit a beep sound as a reminder.
- 3. The illuminancehas four adjustable levels: 20000, 40000, 60000, 80000 LUX.
- 4. As soon as the desired brightness has been reached, pull your hand back from below the proximity switch or Or shortly press the touch switch "light icon" and release.
- The current brightness setting is saved for the mixed light mode.

3.5 Switching between mixed light and composite function

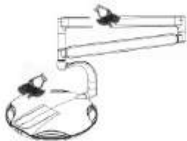


- ✓ The operating light is switched in the normal mode (white light) or composite function.
- Shortly press the touch switch "Y" and release, the dental light enters the Composite Mode
- The "light icon" and "K" switch will not work.
- The proximity switch can only be used to turn on or turn off the dental light, and cannot be used to control dimming.
- Shortly press the touch switch "Y" and release again,
- the dental light enters the normal mode (white light).

4 Care and cleaning instructions

4.1 Base

To maintain the value and safe functioning of your operating light, it is necessary to have it cared for, cleaned and disinfected by the practice team regularly. This will minimize the risk of contamination for patients and users and ensure proper functioning. The national requirements and recommendations for hygiene and disinfection must be observed, e.g. Robert Koch-Institute (RKI), American Dental Association (ADA), Centers for Disease Control and Prevention (CDC), etc.



4.2 Cleaning and disinfecting lamp components

Only water or mild detergents should be used regularly to remove dust and disinfectant residues from the surface of the lamp.

The light components including the light exit window and the support arms can be only cleaned by water or neutral detergents.

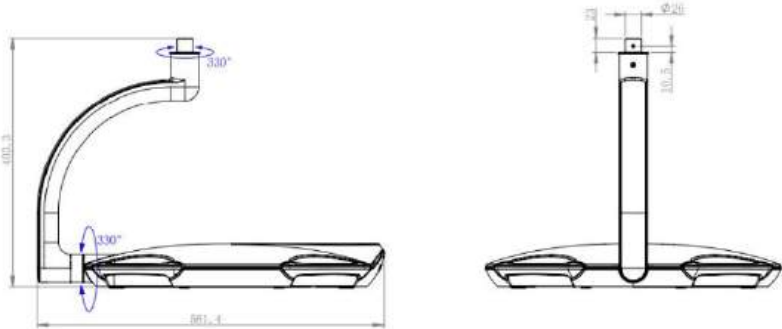

5 Product specifications

5.1 Standards

The IL-480 operating light complies with the following standards:

- IEC 60601-1
- IEC 60601-1-2
- ISO 9680

5.2 Technical Data

Model designation:	IL-480				
Weight:	3.95kg				
Light source:	12 White light-emitting diodes (LED) and 8 White light-emitting diodes (LED)				
Illuminance:	Adjustable from <20,000 to >80,000 lux acc. to ISO 9680				
Light control:	Non-touch sensor or touch switch				
Color temperature:	4, 000K – 5, 300K				
Color Rendering Index(Ra):	90 +/- 3%				
Unit Model power connection:	AC 24V				
Power consumption of operating light:	Rated Power <25VA				
Degree of protection against ingress of water:	Ordinary equipment (IPX 0 - without protection against ingress of water)				
Modes of operation:	Continuous operation				
Expected service life:	15 Years				
Transport and storage conditions:	Temperature: -40℃ — +70℃	Relative humidity: 10% — 95%			
Operating conditions:	Ambient temperature: 10℃ — 40℃	Relative humidity: 30% — 85%			
Dimension of Light head, Movement and installation interface					
Illuminance diagram					

Caution: This unit has been thoroughly tested and inspected to assure proper performance and operation!

6 Disposal

Disposal your product is marked with the adjacent symbol. Within the European Economic Area, this product is subject to Directive 2002/96/EC as well as the corresponding national laws. This directive requires environmentally sound recycling/disposal of the product. The product must not be disposed of as domestic refuse! Please observe the disposal regulations applicable in your country.

Disposal procedure

Please note that this product is subject to the stipulations in EC Directive 2002/96 governing waste electrical and electronic equipment and must be disposed of in line with these special requirements within the European Union (EU). Prior to dis-assembly / disposal of the product, it must be fully prepared (cleaned / disinfected / sterilized). Please contact your local dental equipment specialist for country-specific information on disposal.

WARNING

The use of ACCESSORIES, transducers and cables other than those specified, with the exception of transducers and cables sold by the MANUFACTURER of the IL-480 dental operating light as replacement parts for internal components, may result in increased EMISSIONS or decreased IMMUNITY of the ME EQUIPMENT or ME SYSTEM.