



**Portable LED Light System
User Manual**



OPERATING INSTRUCTIONS

SunBurst™ Portable LED Light System

1. Components of the SunBurst Lighting System

Check to see that the following components are included in the shipping packaging:

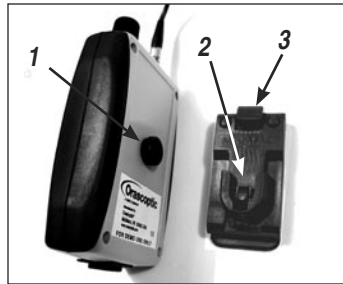
1. Control Unit

This unit contains an integrated Li-Ion Battery, the controls for the LED light, and a light to warn of a low battery.



2. Belt Clip

- The Control Unit contains a retainer (1) onto which the belt clip is secured. To attach the belt clip, slide the corresponding slot (2) in the clip over the retainer until a “click” is heard and the clip is secured.
- To remove the clip from the Control Unit, press this button (3) and slide the belt clip off of the Control Unit.



3. LED Light Cable

The five components of the LED Light Cable are as follows:

- Headlamp (4)
- Lens Adapter (5)
- Smock Clip (6)
- Plug (7)
- Grommet (not pictured)

Note: Temple clips (not pictured) suitable for use with your specific frame are also included.



4. Battery Supply/Battery Charger

This unit contains an integrated Li-Ion Battery, the controls for the LED light, and a light to warn of a low battery.



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2. SunBurst Controls and Connectors

1. On/Off Switch and Brightness Control

Controls the light intensity of the LED (1). When positioned to "off", the device is only on the battery monitoring function; "1" represents the lowest power, "3" the highest. Battery life is the longest with the lowest light intensity and is reduced with increasing light intensity.



2. Battery Status Light

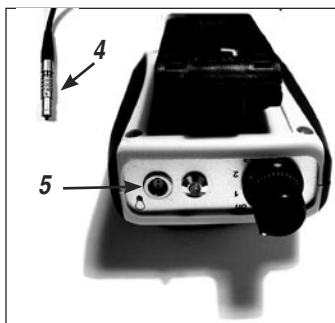
This light (2) will begin to weakly illuminate when the battery charge falls below 30%. This illumination will increase in intensity as the charge of the battery drops. When this occurs, recharge the battery at the next available opportunity.

3. LED Cable Socket

The LED Cable plugs into the control unit in this socket (3).

Note: When plugging the LED cable into the control unit, the red dot on the plug (4) must match up with the red dot on the socket (5). The red dot on the plug is located on a sliding sleeve which acts to lock the plug in place.

To remove the plug from the socket, lift the sliding sleeve and remove the plug. When the sleeve is lifted, the plug slides easily out.



4. Battery Charger Connection Port

The battery charger connects to this port (6). The charger's plug will only fit the port in one orientation; if the plug doesn't fit the port, turn the plug around and try again. Don't force it.



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3. Charge The Battery

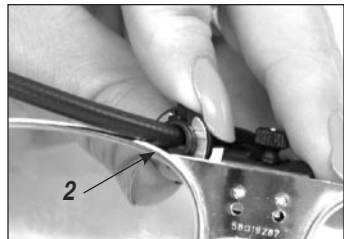
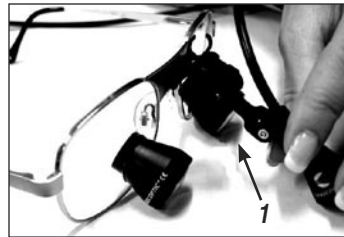
The SunBurst battery in the control unit is not completely charged on delivery. The battery must be fully charged before its first use.

1. Plug the charger into the Control Unit.
2. Plug the charger into the electrical outlet.
3. While charging, the light (1) on the charging unit will show red. When the battery is fully charged, the light will be green and the charger will switch to a maintenance mode.



4. Operate the SunBurst Lighting System

1. Attach the LED headlight to your loupe (1) by tightening the jaws of the mounting hinge to the light mounting block on the bridge of your loupe frame (you may have to first attach the mounting block to your loupe frame if it is not already attached).
2. Insert the cable/grommet through the cable guide (2) and rotate the grommet so that it locks in place.
3. Secure the cable to the temple using the supplied temple clip.
4. Put the loupe/light on and adjust it to a comfortable working position.
5. Secure the cable with the smock clip (3) so that the cable does not hinder the view or the work of the user.



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6. Connect the cable to the Control Unit as previously described.
Note: Make sure that the battery status light (4) is not lit, indicating a full battery charge.
7. Turn the brightness control (5) to the desired intensity.
Note: The life of the battery is shortened as the intensity of the light increases.
8. When using the light or when storing the unit, never bend the cable tightly to avoid damaging the cable.



5. Technical Data

Weight of the reflector lamp:	approx. 0.7 oz. (20 g)
Weight of control unit:	6.0 oz. (170 g)
Diameter of the reflector lamp:	approx. 1.24 in. (31.5 mm)
Dimensions of control unit:	approx. 2.4 in. (62 mm) x 3.8 in. (97 mm) x 1.0 in. (26 mm)—W x L x H
Voltage/Capacity:	3.7 V DC / 4800 mAh
Battery type:	Li-Ion battery
Battery charge time:	Up to 8 hours (90% after 4 hours)
Battery life:	Level 3 (max) - approx. 7 hours Level 2 - approx. 14 hours Level 1 (minimum) - approx. 35 hours
Light intensity:	Up to 40,000 lumens, measured at a distance of 30 cm.
Environmental temperature for operation and storage:	32°F to 104°F (0 to 40° C)
Specification of emitted interference:	Class B pursuant to 55011
Specification of interference resistance:	Non life support devices (IEC 60601-1-2)

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6. Safety Precautions/Warnings

1. Only Orascopeptic -supplied power supplies (part number RM-SUNBST-CHR) are to be used to power the SunBurst LED batteries.
2. In order to avoid the risk of permanent damage (such as blindness), do not aim the lamp directly into the eyes. Persons with the risk of eye damage must wear protective eyewear.
3. The control unit and the battery must be used exclusively for the purpose described.
4. Under no circumstances should you open the housing of the charger or the control unit. Never take the devices apart or undertake modifications.

Misuse of the battery can cause the battery to become hot, explode, or ignite and may cause serious injury. Make sure that the following safety precautions are expressly followed:

- Never open the battery charger or control unit.
 - Never make any changes/modifications to the battery charger or control unit.
 - Do not bring the battery charger or control unit into contact with fire or severe heat (over 158°F (70°C))
 - Do not use outside
 - Do not short circuit (do not connect via a conductor or reverse polarity)
 - Protect from fluids and damp environments
 - Do not use a damaged device
 - Maintain storage and operational temperature of 32°F to 104°F (0-40°C).
5. Never try to use non—Orascopeptic—supplied charger units or control units.
 6. The charger must never be used outside.
 7. Do not use the control or charger units if the housing or plugs are damaged.
 8. If you determine that the charger or control unit is hot, emits an odor, or changes color or shape, turn it off immediately and disconnect from the power network. The device may not be used again and must be immediately returned to Orascopeptic.
 9. If you should find that acid is leaking from the battery and has come into contact with skin or clothing, wash the area immediately with running water, because this may lead to skin irritation.
 10. Do not store within reach of children.

7. Disposal Instructions

We will take our devices back pursuant to the ElektroG (Return and disposal of electrical and electronic devices). They will either be reevaluated or recycled in accordance with legal provisions.

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8. Clean the Lamp

The lamp is manufactured using only high quality components. This is an optical precision instrument that must be cleaned and handled with the greatest care. Basic contaminations may only be removed with a soft, clean dry cloth in order to avoid scratching the lenses.

- Do not immerse the lamp in water, sterilization fluid or ultrasound cleaning solutions. The product is not waterproof.
- Only use disinfection cloths for severe contamination. Disinfection spray must not be used under any circumstances to avoid severely damaging the light.
- Only clean the lamp with a disinfection cloth.
- Do not use gasoline, cleaning solutions or aggressive solvents for cleaning.
- Make absolutely sure that your disinfection cloth:
 - Is suitable for alcohol – sensitive surfaces and for medical facilities, such as a dentist's chair;
 - Contains no type of 1-propanol, Aldehyde, phenol or a quaternary ammonium bond, (such as CaviCide®);
 - Has a broad-spectrum effect against bacteria, fungi and viruses.
- Sterilization is not to be done with an autoclave or the following chemicals: glutaraldehyde or agents containing iodide. To avoid damaging the lamp, do not use cleaning methods other than those prescribed.

Do not pull on the cable during cleaning!

9. Troubleshooting

Problem	Solution
1. The operational unit is turned on, but the display lamp does not light up.	<ul style="list-style-type: none">- Make sure that the lamp is properly connected to the control unit.- Charge the battery.
2. The lamp does not light up enough.	<ul style="list-style-type: none">- Set the brightness control to a higher setting.- The battery is too weak.- Charge the battery.
3. Power to the charger is interrupted before the end of the charge cycle (such as a power outage).	As soon as power has been restored, the charge cycle will start again.
4. The charger display stays red (even after 8 hours of charging) and does not change to green.	Send the lighting system with the charger to Orascope for evaluation.
5. The charger display is red even though there is no connection to the control unit.	Separate the charger from the electrical outlet for a few seconds. If the display is still red after reconnection, send the device in to Orascope.

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10. Limited Manufacturer's Warranty

This limited manufacturer warranty from Kerr Corporation applies for all countries to the extent that no other warranty exists at that location. Pursuant to the following contractual provisions, Kerr Corporation guarantees material, construction and design to be free of deficiencies from the time of first purchase.

1. This limited liability applies for the end purchaser of the product. (Client) Legal claims by the client or claims by the client against the seller/dealer of the device are neither excluded nor limited.
2. The guarantee is for 12 months from the time of purchase by the original purchaser. In the event of subsequent sale or other change of ownership, the warranty will run for the rest of the twelve month period. It remains otherwise unchanged.
3. During the warranty period, defective units (according to unilateral decision by Kerr Corporation), will be repaired or replaced either by Kerr Corporation or by authorized customer service. The client will receive either the repaired unit or a comparable replacement unit from Kerr Corporation. Exchanged parts or accessory parts become the property of Kerr Corporation.
4. There is no extended or renewed warranty period for repaired or replaced parts.
5. This limited warranty does not apply for painted or otherwise personalized parts.
6. For expendable parts (such as Li-ion batteries) the warranty is for 12 months from the time of sale.
7. This limited warranty does not apply to abnormal signs of use. In addition, this limited warranty does not apply if
 - a) The deficiency has been caused by misuse of the instructions for operation, inappropriate use, contact with fluids or moisture or extreme heat or climatic conditions and/or short term variations in relevant influences or to corrosion, oxidation, unauthorized intervention or attempts at connection, unauthorized opening or repair, repair attempts with unacceptable replacement parts, abnormal installation, accidents, forces majeures, spillage of food or drinks, chemical influences or other influences over which Kerr Corporation has no control (including deficiencies to operational parts such as batteries that only have a limited lifespan, as well as damage to cables), unless the deficiency is caused by a material, construction or fabrication error.
 - b) The client does not report the deficiency within 30 days after it was discovered within the Kerr Corporation warranty period or to an authorized customer service agent.
 - c) The serial number has been removed, scratched off, crossed out or changed or is illegible.
 - d) The deficiency was caused by the fact that the device was used with a part not approved for use by Kerr Corporation, was connected to such a part or was otherwise used inappropriately.
 - e) The deficiency was caused by the short circuit of the battery or the breakage of the seal of the battery housing or manipulation of it or by the fact that the battery was used to an inappropriate end.

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8. This limited warranty is the only legal remedy of the client against Kerr Corporation as well as Kerr Corporation's only and exclusive liability to the client for deficiencies and functional disruptions of the device. This limited warranty replaces all other warranties and declarations of liability, whether in written or oral form, or other (not urgently enforceable) legal provisions, contractual provisions or non-allowed negotiations. Kerr Corporation is in no way liable for ancillary, causal or collateral damage, costs or expenses. If the client is a legal person, Kerr Corporation assumes no liability for collateral damages, costs or expenses.
9. For assertion of a warranty claim, the original purchase receipt with purchase date is to be enclosed.
10. Changes to this limited warranty require the previous written approval of Kerr Corporation.

U.S. Technical Support: 800-369-3698

Outside the U.S. Call Your Local Distributor

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