



## User Manual

# DeLight Headlight-System with UniBeam/EndoBeam lamp

**Art. No.: 10111**  
**REV: 1.0 | 2025.12.12**

This manual includes all operating instructions for the “DeLight” Headlight-System. Please refer to the companion “Cleaning Manual DeLight” for complete cleaning instructions.  
Printed copies are available upon request.



---

Wieth Medical Systems e.K., hereinafter referred to as 'the manufacturer'.

Im Wiesengrund 15  
D-25336 Klein Nordende  
Germany



---

**IMPORTANT: Read this User Manual in its entirety prior to using the “DeLight” Headlight-System.**

**2025 Wieth Medical Systems e.K. ALL RIGHTS RESERVED**

The manufacturer reserves the right to alter the equipment specifications and descriptions in this publication without prior notice. No part of this publication shall be deemed to be part of any contract or warranty unless specifically incorporated by reference into such contract or warranty.

The information contained herein is merely descriptive in nature and does not constitute a binding offer for the sale of the product described herein. Neither the manufacturer nor its agent makes any representations for suitability for any purpose, other than specifically mentioned in this manual.

## **DISCLAIMER**

The manufacturer shall not be obligated in any manner in respect to bodily injury and/or property damage arising from the use of the device if such use is not in strict compliance with instructions and safety precautions contained in the relevant operating manuals and in all supplements thereto, in all product labels, and according to all terms of warranty and sale of this device, or in any change not authorized by the manufacturer



## **WARNING**

**User provided ancillary equipment and/or accessories are NOT validated or warranted by the manufacturer. The use of such user provided items is the sole responsibility of the party using such items.**

# Contents

---

<b>SAFETY INFORMATION - PLEASE READ PRIOR TO USE .....</b>	<b>5</b>
USING THIS MANUAL .....	5
SUPPORT .....	5
SUMMARY OF INSTRUMENT SYMBOLS.....	6
SAFETY GUIDELINES – PLEASE READ PRIOR TO USE .....	7
USER QUALIFICATION – PLEASE READ PRIOR TO USE .....	7
WARNINGS AND CAUTIONS.....	8
ELECTRICAL SAFETY .....	9
ELECTRIC INTERFERENCE SAFETY.....	9
FIRE AND EXPLOSION SAFETY .....	10
OPERATION ENVIRONMENT.....	10
CLEANING AND DISINFECTION.....	11
<b>CHAPTER 1 - REGULATORY INFORMATION .....</b>	<b>11</b>
1.1 INTENDED USE .....	11
1.2 USA REGULATIONS .....	11
1.3 CE CONFORMITY .....	11
<b>CHAPTER 2 - SYSTEM OVERVIEW .....</b>	<b>12</b>
<b>CHAPTER 3 - SYSTEM COMPONENTS .....</b>	<b>13</b>
3.1 “DELIGHT” HEADLIGHT-SYSTEM .....	13
3.1.1 PACKAGED COMPONENTS .....	13
3.1.2 “UNI-BEAM/ENDO-BEAM” – GENERAL VIEW .....	14
3.1.3 FRAME ADAPTER – GENERAL VIEW .....	14
3.1.4 “DELIGHT5.0 BATTERY UNIT” – GENERAL VIEW .....	15
3.2 - SPECIFICATIONS .....	16
3.2.1 - “UNI-BEAM/ENDO-BEAM” HEADLAMP.....	16
3.2.2 - “DELIGHT5.0 BATTERY UNIT” .....	16
3.2.3 PRODUCT LABELING .....	17
3.2.4 ENVIRONMENT .....	17
<b>CHAPTER 4 - PREPARING AND INSPECTING THE SYSTEM .....</b>	<b>18</b>
4.1 OVERVIEW - SYSTEM CONNECTION CHART .....	18
4.2 PREPARATION AND INSPECTION WORKFLOW .....	18
4.3 PREPARE THE “DELIGHT” HEADLIGHT-SYSTEM.....	19
4.3.1 CLEAN AND DISINFECT THE “DELIGHT” HEADLIGHT-SYSTEM PRIOR TO USE .....	19
4.3.2 INSPECT THE “DELIGHT” HEADLIGHT-SYSTEM PRIOR TO USE .....	19
4.4 CONNECT THE “UNI-BEAM/ENDO-BEAM” LAMP .....	20
4.4.1 CONNECT THE “UNI-BEAM/ENDO-BEAM” LAMP TO THE FRAME ADAPTER .....	20
4.5.1 CONNECT THE “DELIGHT5.0 BATTERY UNIT” .....	21
4.6 INSPECT SYSTEM FUNCTIONALITY .....	22
4.6.1 TEST THE BRIGHTNESS AND CLEAR ILLUMINATION SPOT .....	22
<b>CHAPTER 5 - “DELIGHT” HEADLIGHT-SYSTEM - DISPLAY AND FUNCTIONS .....</b>	<b>23</b>
5.1 DISPLAY FUNCTIONS.....	23
<b>CHAPTER 6 - USE OF THE „DELIGHT” HEADLIGHT-SYSTEM .....</b>	<b>24</b>

6.1 IMPORTANT SAFETY INFORMATION .....	24
6.2 USING THE ACCESSORIES FOR THE “DELIGHT” HEADLIGHT-SYSTEM .....	24
6.2.1 CHARGING THE “DELIGHT5.0 BATTERY UNIT” WITH THE POWER SUPPLY .....	24
6.2.2 ATTACHING THE YELLOW FILTER TO THE HEADLAMP .....	25
<b>CHAPTER 7 - STORAGE AND HANDLING .....</b>	<b>26</b>
7.1 CARE.....	26
7.2 SERVICING.....	27
7.3 TRANSPORTATION/STORAGE.....	27
<b>CHAPTER 8 - TROUBLESHOOTING .....</b>	<b>28</b>
8.1 TROUBLESHOOTING FOR THE “DELIGHT” HEADLIGHT-SYSTEM .....	28
<b>APPENDIX .....</b>	<b>29</b>
COMPATIBLE ACCESSORIES/SPARE PARTS.....	29

# Safety Information - Please Read Prior to Use

---

## Using this manual



---

Read this manual thoroughly before using the device and ensure that you understand the proper use of and care for the device. If you have any questions or comments regarding the use of the device, please contact your local authorized support (contact information below).

Note that the complete instruction manual set for this Headlight-System also includes the companion “**Cleaning Manual DeLight**”. The document can be provided in printed form upon request.

This **User Manual (IFU)** together with the **Cleaning Manual** constitute the complete instructions for use of the device.

The following conventions are used in this manual:

Symbol	Description
 <b>WARNING</b>	A warning is a statement that alerts / indicates a potentially hazardous situation associated with the use or misuse of the device, which, if not avoided, could result in serious injury or death.
<b>CAUTION:</b>	A caution is a statement that alerts / indicates a potentially hazardous situation associated with its use or misuse which may, if not avoided, result in minor or moderate injury. It may also be used to alert against unsafe practices or potential equipment damage.
	An informational note provides additional information of interest to the user.

## Support








---

Europe	Other Country's
Optergo AB Furuhällsvägen 1 435 44 Mölnlycke Sweden  Tel. +4631-887728  info@optergo.com	

---

## Summary of instrument symbols

---

Symbol	Description
	Serial number
	Attention, see instruction
	Manufactured by
	Reference number
	Must not be disposed of as unsorted municipal waste but should be collected separately.
	CE Mark
	Non-sterile

## Safety Guidelines – please read prior to use

---

- This product was designed and manufactured to meet all safety requirements applicable to electronic medical equipment. However, anyone operating the system must be fully aware of the potential safety hazards. It should be operated and maintained in strict compliance with the safety precautions and operating instructions contained herein
- This product must be maintained and serviced by the manufacturer qualified service personnel. Operation and maintenance must be done in strict compliance with the operation instructions contained in the manual
- The system is not to be modified in any way. Any attempt to disassemble, repair, or modify this device by anyone other than the manufacturer authorized service technician presents risk to the patient or operator and may result in equipment damage. Equipment that has been disassembled, repaired, altered, changed, or modified by people other than the manufacturer's own authorized service personnel is excluded from the manufacturer's warranty and is not warranted by the manufacturer in any way.
- Where applicable, follow the official standards on the applicability of medical head lamps that are defined by the hospital's administrators or other official institutions. Before starting the use of the "DeLight" Headlight-Systems, thoroughly evaluate its properties, purposes, effects, and possible risks (their nature, extent and probability).
- Procedures and treatment should only be performed when the potential benefits outweigh the risks. Immediately stop the procedure if the patient risks exceed the potential benefits.
- Do not use the system if unsafe conditions exist. In the event of hardware failure that could potentially cause hazardous conditions (smoke, fire, etc.), turn the power off and unplug the power cord.
- In the event of product malfunction, discontinue operation and contact an authorized service person immediately.
- Report any serious incident that has occurred in relation to the device to the manufacturer and the competent authority of the Member State in which the user and/or patient is established. A serious incident includes  
A serious incident includes:
  - a) the death of a patient, user or other person,
  - b) the temporary or permanent serious deterioration of a patient's, user's or other person's state of health,
  - c) a serious public health threat.

## User Qualification – please read prior to use

---

- "DeLight" Headlight-System should only be used by a physician who is well trained and capable of performing examinations in which headlights are used (qualified healthcare professionals only). This manual does not explain or discuss how headlights are used during examinations.

- The manufacturer or vendor of the equipment makes no claim that the act of reading this manual renders the reader qualified to operate the system.
- It is important that this manual remains available, studied carefully, and reviewed periodically by the authorized operators.
- All external components connected to the “DeLight” Headlight-System should be medical grade only.

## Warnings and cautions

---

- Follow the warnings and cautions given below when handling the “DeLight” Headlight-System This information is to be supplemented by the warnings and cautions provided in each chapter.



### WARNING

- **CAUTION: Use only with lamp units compatible with the battery unit’s set mode. Refer to chapter 4.6 for identifying the set mode of this battery unit. Use with non-compatible lamp units may cause overheating, device damage or burn injuries to the patient or user.**
- After use of the “DeLight” Headlight-System, clean, reprocess and store it according to the instructions found in the “DeLight” Headlight-System companion “Cleaning Manual DeLight”. Using devices that have either been improperly or incompletely reprocessed or stored may cause cross-contamination or infection. Cleaning should be done immediately after using the “DeLight” Headlight-System to prevent blood or protein residues from solidifying.
- When using the device, make sure that you do not shine in the eyes of the patient or your staff. The light output is so low that the eye's closing reaction prevents damage to the retina, but the glare of the lamp is very strong as soon as one comes into the light field with one's eyes.
- The “DeLight” Headlight-System should not be used for eye examinations (pupil tests).
- Increased risk of dazzling. Note that the responsiveness of the eyes decreases under the influence of drugs, medication, or alcohol.
- Risk of retinal injury. The “DeLight” Headlight-System emits blue light (400-780 nm). Do not look directly into the light beam.
- The luminaire corresponds to risk group 2 (IEC/EN 62471). Do not look into the beam or illuminate eyes. Use the lowest effective intensity and avoid prolonged illumination of a single spot.
- Risk of heat build-up when the “DeLight” Headlight-System is in operation covered.
- The lamp and the battery unit of the “DeLight” Headlight-System are not autoclavable. The resulting temperatures would destroy the optical components used and the electronics.
- This device is designed to comply with IEC 60601-1-2. Electromagnetic interference may occur on the "DeLight" Headlight-System near portable and mobile RF (Radio Frequency) communications equipment, such as cellular phones. Check

electromagnetic interference from other equipment prior to use. Shielding or relocation of the device may be necessary if interference occurs.

## Electrical safety

---

- The charger supplied with the "DeLight" Headlight-System for the battery pack used in the "DeLight" Headlight-System may only be used for the "DeLight" Headlight-System.
- The charger supplied for charging the battery unit of the "DeLight" Headlight-System complies with all requirements relating to electrical safety for class I medical devices. To minimize the risk of electric shock, the power cord of the charging station must be connected to an approved earthed socket. Do not use an adapter to connect the system to an ungrounded outlet. Do not add power strips or chain extension cords. Do not attach non-specified equipment to the system.
- Do not operate the system if damaged wires or open leads are detected.
- Do not remove or open any components of the "DeLight" Headlight-System. Only qualified personnel are authorized to service and maintain the system.
- Make sure that you only put the "DeLight" Headlight-System into operation in the configuration supplied to ensure optimal use. If components other than those listed in this manual are used, optimal operation cannot be guaranteed.



### WARNING

- **Do not place a power strip on the floor.**
- **Do not connect an additional power strip to the system.**
- **Do not connect items which are not specified as part of the "DeLight" Headlight-System. Using incompatible equipment can result in patient or operator injury and/or equipment damage, and will increase the leakage current.**

### CAUTION:

- *The use of ACCESSORY equipment not complying with the equivalent safety requirements of this equipment may lead to a reduced level of safety in the resulting system. Consideration relating to the choice shall include: 1.) use of the accessory in the PATIENT VICINITY, and 2.) evidence that the safety certification of the ACCESSORY has been performed in accordance with the appropriate IEC 60601-1 and/or IEC 60601-1-1 harmonized national standard. (Refer to the Appendix for a list of compatible accessories.)*

## Electric interference safety

---

This equipment generates and can radiate radio frequency energy. The equipment may cause radio frequency interference with other medical and non-medical devices as well as radio communications. To provide reasonable protection against such interference, the system complies with the IEC 60601-1-2 standard. If the device is suspected of interfering with other nearby electrical equipment, power down the device to see if the interference is eliminated. If the "DeLight" Headlight-System is determined to be

the source of interference, additional shielding or relocation of the device or neighboring equipment may be necessary.

Use of improperly shielded and grounded cables may result in the equipment causing radio frequency interference in violation of the local regulations. The manufacturer is not responsible for any interference caused by using cables other than those recommended or by unauthorized changes or modifications to this equipment.

Do not use devices that intentionally transmit RF signals (cellular phones, transceivers, high frequency surgical equipment or radio-controlled products) including their accessories in the vicinity (<30cm) of this equipment including cables as it may cause performance outside the published specifications. Keep the power of these types of devices turned off when located near this equipment. The medical staff in charge of this equipment is required to instruct technicians and other people who may be around this equipment to fully comply with the above requirement.

## Fire and explosion safety

---

- Conductive fluids that drain into the active circuit components of the system may cause short circuits, potentially resulting in electrical fire.
- To avoid electric shocks and burns potentially caused by application of the wrong type of fire extinguisher, ensure that the fire extinguisher at the site has been approved for use on electrically induced fires.
- Do not operate the equipment in the presence of flammable or explosive liquids, vapors or gases such as flammable anesthetic, oxygen or nitrous oxide. Do not plug in or turn on the system if hazardous substances are detected in the environment. If flammable substances are detected after the system has been turned on, do not attempt to turn off the system or unplug it. Evacuate and ventilate the area before turning the system off.
- Do not operate in the vicinity of explosive gas concentrations while using high-frequency accessories.

## Operation environment

---

- For use in professional healthcare environment.
- Do not place any objects on the LED housing of the "DeLight" Headlight-System or cover the LED housing with a cloth. These objects can prevent proper cooling, overheating and cause the LED unit to fail.
- The system should not be exposed to a wet or humid environment.
- When charging the battery pack with the supplied charging station, make sure that the main plug and the charging socket are accessible.
- Avoid exposing the system to direct sunlight or other heat sources.

## Cleaning and Disinfection

---



Before first time use, reprocess the device according to the instruction provided in the companion "Cleaning Manual DeLight".

- Switch off the Headlight and let it cool down!  
Cleaning should be done immediately after using the "DeLight" Headlight-System to prevent blood or protein residues from solidifying.  
Now start cleaning and disinfecting **according to the companion instruction "Cleaning Manual DeLight"**.
- After use, reprocess and store according to the "Cleaning Manual DeLight". Improper and/or incomplete reprocessing or storage can create an infection control risk, cause equipment damage, or reduce performance.

## CHAPTER 1 - Regulatory Information

---

### 1.1 Intended use

---

The internally powered "DeLight" Headlight-System is intended for short-term local illumination of the body, with the exception of the eyes, to support diagnosis, therapeutic or surgical intervention. It may only be used by qualified healthcare professionals within clinical Healthcare facilities in professional healthcare environment.

### 1.2 USA regulations

---

**CAUTION:**

- *Federal U.S. law restricts this device to sale by or on the order of a physician.*

### 1.3 CE conformity

---



Wieth Medical Systems e.K.  
Im Wiesengrund 15  
D-25336 Klein Nordende  
Germany

This device complies with the (EU) requirements of MDR 2017/745 concerning medical devices. Classification: Class I.

The "DeLight" Headlight-System and the accessories contain a lithium polymer battery and components that are not suitable for disposal in normal household waste.

In the European Union, the adjacent symbol indicates that when the last user wishes to discard this product, it must be sent to appropriate facilities for recovery and recycling. Contact your local manufacturer's representative for additional information on the collection and recovery programs available for this product.



## CHAPTER 2 - System Overview

---

The following table provides catalog and model numbers for "DeLight" Headlight-System.

**Table 1. "DeLight" Headlight-System Catalog Numbers**

Catalog Number	Description
10065 10155	UniBeam lamp or EndoBeam lamp
10101	DeLight5.0 Battery Unit
10032	Magnetic LED Cable
10114	Magnetic Extension Cable
10136	Power Supply



In this document, the "DeLight" Headlight-Systems lamp may be referred to as the "UniBeam"/"EndoBeam", "Headlamp" and/or "Headlight".

The "DeLight" Headlight-Systems control may be referred to as the "DeLight5.0 Battery Unit" and/or "Battery Unit".

# CHAPTER 3 - System Components

## 3.1 “DeLight” Headlight-System

### 3.1.1 Packaged components

The “DeLight” Headlight-System and accessories come packaged in a portable case. Open the packaging and carefully remove the “DeLight” and any accessories. Verify that all of the following items are included in the packaging:

**1. UniBeam/  
EndoBeam lamp**



**2. LED Cable**



**3. Extension Cable**



**4. DeLight5.0**



**5. Battery Charger**



**6. User Manual**

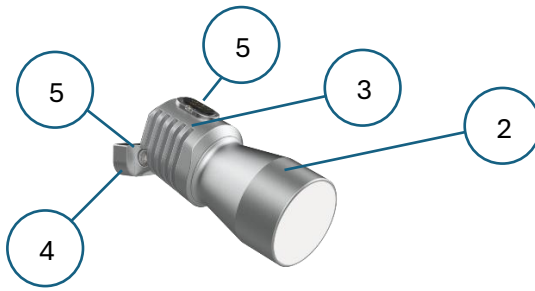


Item #	Name of Item	Function
1	UniBeam/EndoBeam lamp	Headlight
2	Magnetic LED Cable	Connects the Headlamp and the Battery Unit
3	DeLight5.0 Battery Unit	supplies the headlamp with electricity, the light intensity can be adjusted and the battery and brightness status can be read
4	Power Supply	is required for charging the lithium battery
6	User Manual and Cleaning Manual	Provides information and instructions for using and cleaning the “DeLight” Headlight-System



**The User is advised to dispose the Lithium Battery in accordance with local guidelines!**

### 3.1.2 “UniBeam/EndoBeam” – general view

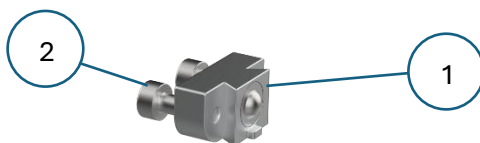


Item#	Name of Item	Function
1	Hinge	allows the headlight to be adjusted in the angle
2	Optical system	bundles the light
3	LED body with cable connector	Holder for LED with optical system
4	Press-on Adapter	Attaches the headlamp to the frame adapter
5	Magnetic connector	Holds the LED cable magnetically in place and supplies the LED with electricity

#### **CAUTION**

Please do not use any other tools to tighten the screws except the provided tools. This could damage the screws and/or the thread.

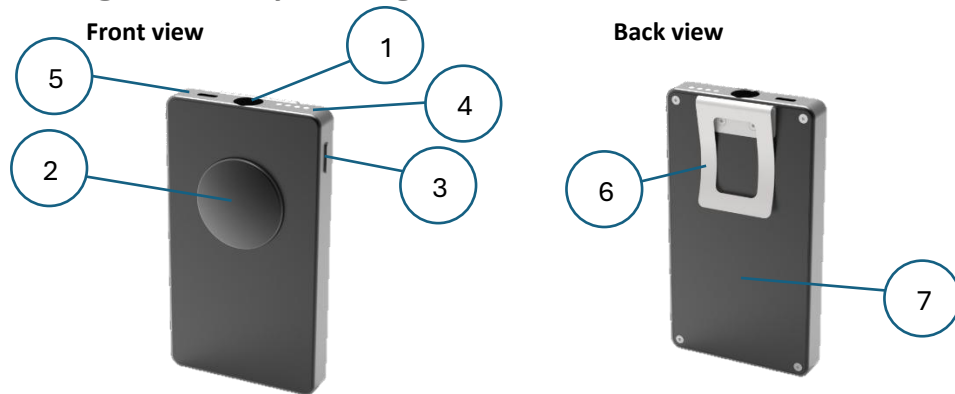
### 3.1.3 Frame adapter – general view



**CAUTION:** The adapter is just an example of a frame adapter. The appearance and mounting of your adapter may differ.

Item#	Name of Item	Function
1	Lamp interface	Press-on attachment to the lamp
2	Frame interface	Attachment system for mounting on spectacle frame

### 3.1.4 “DeLight5.0 Battery Unit” – general view



Item#	Name of Item	Function
1	2-pin magnetic socket	2-pin magnetic socket for the cable plug to the headlamp
2	ON/OFF-button and dimming button	Switching the LED on and off per click Increasing/decreasing the LED intensity per click&hold (alternating)
3	Side button	Turns on the status LEDs to read the battery status
4	Multifunctional indicator LEDs	Displays different statuses (see chapter XY)
5	USB-C socket	USB-C socket for charging the battery unit
6	Belt clip	Mounts the “DeLight5.0 Battery Unit” to the belt
7	Type plate	product labeling and other product information

## 3.2 - Specifications

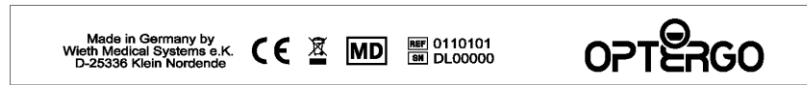
### 3.2.1 - “Unibeam/EndoBeam” Headlamp

Function/Feature	Description	Details
Optical System	Spot size of the light / distance from the eye	UniBeam lamp: 85mm / 40cm 50mm / 25cm
		Endo Beam lamp: 60mm / 40cm 30mm / 25cm
Light intensity	Continuous intensity adjustment Highest Brightness / distance from the eye	UniBeam lamp: Up to 36.000 Lux / 40cm Up to 112.000 Lux / 25cm
		EndoBeam lamp: Up to 50.000 Lux / 40cm Up to 158.000 Lux / 25cm
Battery runtime	Runtime of battery. (highest)	Up to 40 hours
	Runtime of battery. (lowest)	Up to 8 hours
Size	Box Size (lamp only)	UniBeam lamp: (38 x 17 x 17) mm
		EndoBeam lamp: (32 x 17 x 17) mm
Weight	Weight lamp only	UniBeam lamp: 10g
		EndoBeam lamp: 8g
Usability	Usability duration	>5 years
LED Cable	Length and diameter	0.5 m / approx. 2.6mm
Extension Cable	Length and diameter	0.7m / approx.. 2.6mm

### 3.2.2 - “DeLight5.0 Battery Unit”

Function	Feature	Value
Electrical spec.	Nominal voltage	3.7V
	Nominal capacity	6000mAh
	Nominal power	22,2Wh
Housing	Size	(125 x 70 x 14) mm
	Usability duration	>5 years (except Lithium battery)

### 3.2.3 Product labeling



(number ranges in the figure are examples!)

LAMP UNIT	COMPATIBLE MODES
ProgBeam	1 2 3
EndoBeam	1 2 3
UniBeam	1 2 3
MaxBeam	1 2 3

CAUTION: Use only with lamp units compatible with this battery unit's set mode. Refer to user instructions (IFU) for identifying the set mode of this battery unit. Use with non-compatible lamp units may cause overheating, device damage or burn injuries to the patient or user.

### 3.2.4 Environment

Environment	Value
<b>Operating Conditions</b>	
Temperature	+5°C (41°F) to +40°C (104°F)
Relative Humidity	<85% RH, non-condensing
<b>Transportation Conditions</b>	
Temperature	+5°C (41°F) to +50°C (122°F)
Relative Humidity	<85% RH, non-condensing
<b>Storage Conditions</b>	
Temperature	+5°C (41°F) to +50°C (122°F)
Relative Humidity	<85% RH, non-condensing

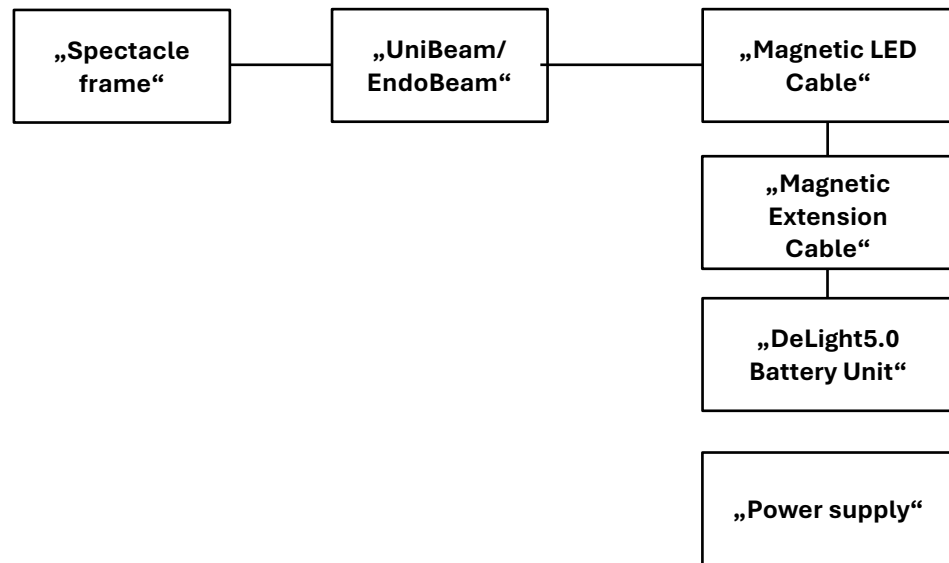
# CHAPTER 4 - Preparing and Inspecting the system

---

This chapter provides an overview of the system's setup, and instructions for system preparation and inspection.

## 4.1 Overview - system connection chart

---



## 4.2 Preparation and inspection workflow

---



### WARNING

- The “DeLight” Headlight-System must be inspected for device integrity before use. Do not use the “DeLight” Headlight-System if it appears damaged or has missing parts. Using an instrument that is damaged or incomplete may compromise the patient or operators’ safety and may result in equipment damage or personal injury. If the “DeLight” Headlight-System appears damaged or has missing parts, contact your local authorized support before using the device.
- **CAUTION:** Use only with lamp units compatible with the battery unit’s set mode. Refer to chapter 4.6 for identifying the set mode of this battery unit. Use with non-compatible lamp units may cause overheating, device damage or burn injuries to the patient or user.
- The “DeLight” Headlight-System was not cleaned and disinfected before shipping, therefore, it **MUST** be cleaned and disinfected prior to its first use. Refer to the “Cleaning Manual DeLight” for the cleaning and disinfection procedures for this device. Failure to clean and disinfect the device will increase the risk of patient infection.



- Wear personal protective equipment such as protective gloves, eyewear, and facemask to ensure user safety. Failure to do so could lead to infection control risk.
- The following table illustrates the preparation and inspection process for the “DeLight” Headlight-System. Before each use, it is the operator’s responsibility to prepare and inspect all equipment/accessories to be used in conjunction with the “DeLight” Headlight-System as per their respective instructions for use. Should any irregularities occur, refer to Chapter 8 Troubleshooting.
- If the illumination spot is not clear and bright, do not use the device (see Troubleshooting)

**Table 2. “DeLight” Headlight-System - Preparation and Inspection Process**

Item#	Section	Description
1	4.3	Prepare the “DeLight” Headlight-System
2	4.4	Connect “UniBeam/EndoBeam” lamp to the spectacle frame
3	4.5	Set up the “DeLight5.0 Battery Unit”
4	4.6	Inspect system functionality.



**Spare/Backup Equipment:** Preparation of another “DeLight” Headlight-System is recommended to avoid unexpected procedure termination/interruption due to equipment failure or malfunction.

## 4.3 Prepare the “DeLight” Headlight-System

### 4.3.1 Clean and disinfect the “DeLight” Headlight-System prior to use

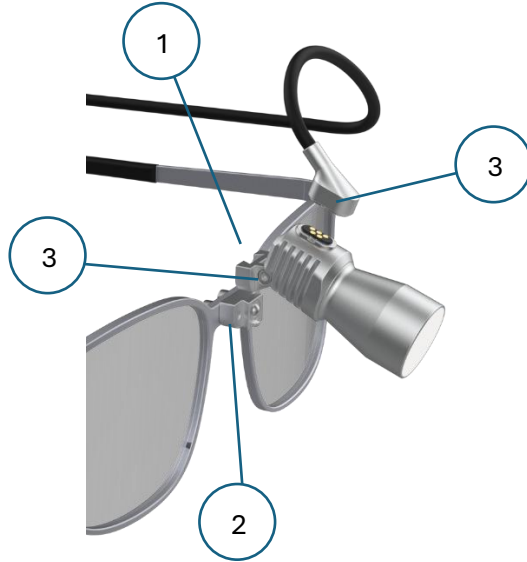
- Refer to the “Cleaning Manual DeLight” for detailed instructions.

### 4.3.2 Inspect the “DeLight” Headlight-System prior to use

- Visually inspect the Headlamp with all bracket parts incl. Battery unit and cables for excessive scratching, deformation, loose parts, missing parts, or other irregularities. Also confirm that the electrical contacts of the connectors are completely dry and clean.
- Visually inspect the external surface of the cables and connectors for dents, swelling, scratches, holes, bends, adhesion of foreign bodies, missing parts, protruding objects, or other irregularities.
- Visually inspect the cover lens (located at the front of the lamp) for scratches, cracks, stains, openings around the lenses, or other irregularities.

## 4.4 Connect the “UniBeam/EndoBeam” lamp

- Use the following steps to set up the “UniBeam/EndoBeam” lamp with the Frame adapter.



Item#	Description
1	Press-on adapter of the headlamp
2	Press-on frame adapter
3	Hinge screw
4	Magnetic connector of the LED Cable

### 4.4.1 Connect the “UniBeam/EndoBeam” lamp to the frame adapter

1. Connect the “UniBeam/EndoBeam” lamp with the press-on adapter of the headlamp (1) to the press-on frame adapter (2), by sliding and pressing it from the top, until it clicks into place. By loosening the screw on the hinge of the headlamp (3), you can modify the angle of the headlamp. Tighten the screw to secure the headlamp in the correct position.
2. Connect the 5-pin magnetic connector of LED-cable magnetically to the “UniBeam/EndoBeam” lamp.

#### **CAUTION**

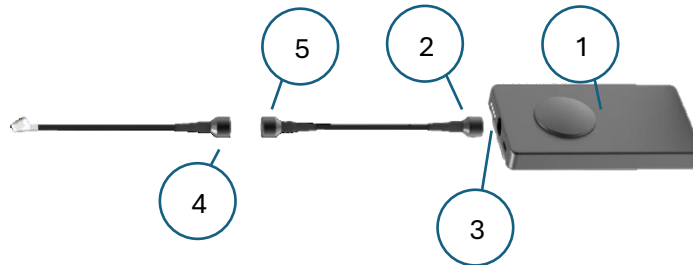
Please do not use any other tools than provided. This could damage the screw and / or the thread in the adapter.

Do not use the headlamp if the screws are not thoroughly tightened.

## 4.5 Set up the “DeLight5.0 Battery Unit”

---

- Use the following steps to set up the “DeLight5.0 Battery Unit”.
- Before using the “DeLight” Headlight-System, please ensure that the “DeLight5.0 Battery Unit” is fully charged. The charging of the Battery Unit is described in chapter 6.2.



### 4.5.1 Connect the “DeLight5.0 Battery Unit”



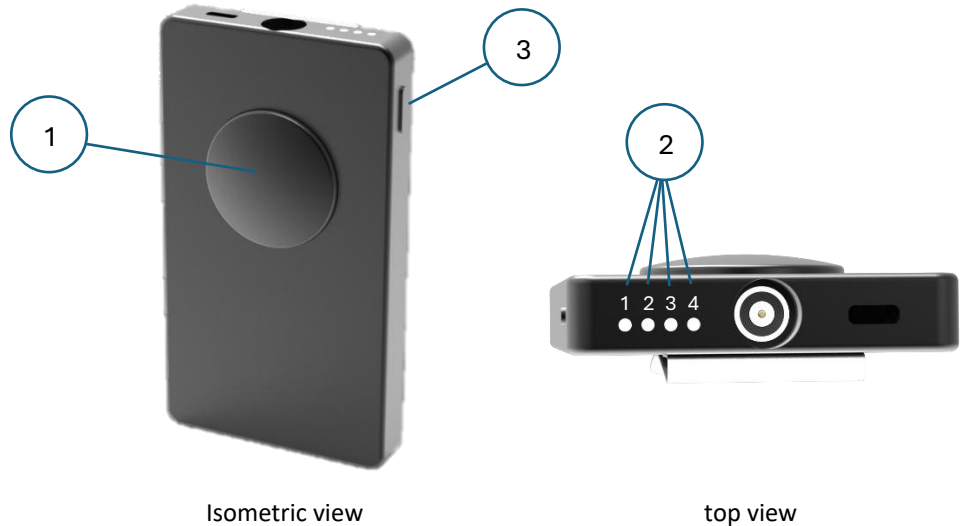
1. Connect the “DeLight5.0 Battery Unit” (1) to the extension cable by connecting the male plug (2) at the end of the extension cable magnetically to the socket (3) on the top of the battery unit (use the magnet to find the correct side).
2. Connect the 2-pin magnetic connector of the LED cable (4) magnetically to the female plug of the extension cord (5).

#### **CAUTION**

- If the “DeLight5.0 Battery Unit” is already connected to the Headlamp, avoid looking directly at the light source of the Headlamp when the device is ON as this could cause temporary blindness due to the illumination.

## 4.6 Inspect system functionality

If the “DeLight5.0 Battery Unit” has not yet been turned on, follow these steps:



1. Press the (1) round ON/OFF button on the front side of the “DeLight5.0”.
2. While turning the device on, check the 4 status LEDs on top of the DeLight5.0 battery unit (2). One of the first 3 LEDs will blink 3 times, after the three times blinking the battery status will be steadily shown for 5s.
3. The blinking LED displays the *set mode* of the unit, either 1, 2 or 3. Only use the device when the *set mode* is compatible with the lamp unit used. If the *set mode* is not compatible, contact your local qualified service personnel, see chapter “Support”. Refer to the following table to check the compatibility:

LAMP UNIT	COMPATIBLE MODES
ProgBeam	1 <del>2</del> <del>3</del>
EndoBeam	1 2 <del>3</del>
UniBeam	1 2 <del>3</del>
MaxBeam	1 2 3

**CAUTION** Use with non-compatible lamp units may cause overheating, device damage or burn injuries to the patient or user.

**CAUTION** Avoid looking directly into the light of the Headlight when the light is ON, as this could cause temporary blindness due to the high intensity illumination.

### 4.6.1 Test the brightness and clear illumination spot

1. Hold the Headlamp in front of an object with which you can best evaluate the light quality.
2. Verify that the Headlamp displays a clear and bright illumination spot.



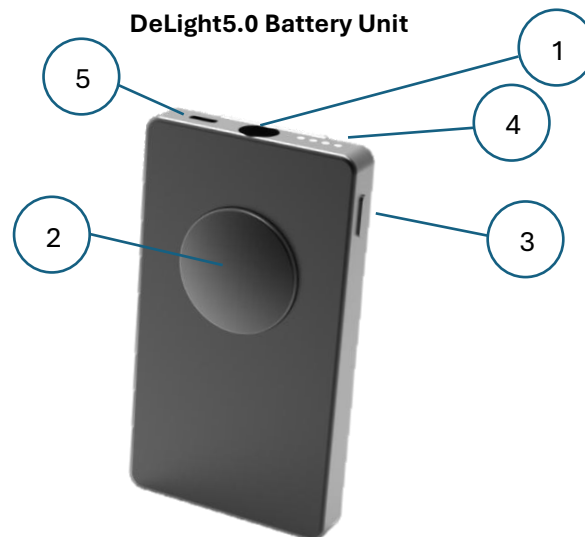
## WARNING

- The use of the Headlamp without a clear and bright illumination spot is not permitted and can endanger the patient. Under no circumstances should you use the Headlamp if you have doubts about the quality and quantity of the light output.

# CHAPTER 5 - “DeLight” Headlight-System - Display and functions

This chapter provides descriptions and functionality of the “DeLight” Headlight-System and interfaces.

## 5.1 Display functions



Item#	Name of Item	Function
1	2-pin magnetic socket	2-pin magnetic socket for the cable plug to the headlamp
2	ON/OFF-button and dimming button	Switching the LED on and off per click Increasing/decreasing the LED intensity per click&hold (alternating)
3	Side button	Turns on the status LEDs to read the battery status
4	Battery indicator	Displays the battery level in 4 steps per click on the side button 4 LEDs      75-100% 3 LEDs      50-75% 2 LEDs      25-50% 1 LED        10-25%

## CHAPTER 6 - Use of the „DeLight” Headlight-System

### 6.1 Important safety information

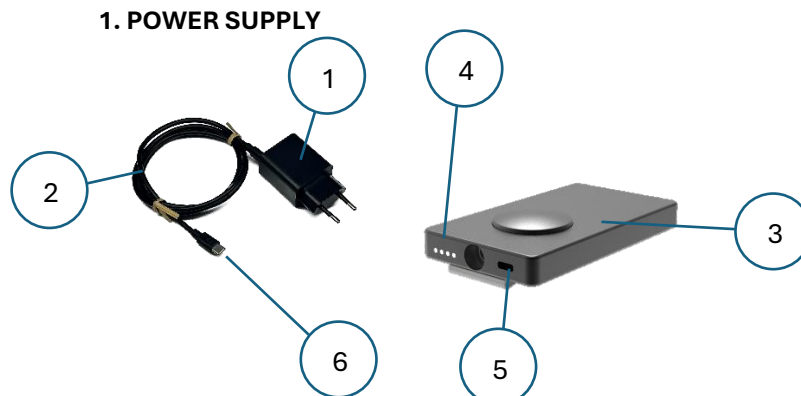


#### WARNING

- The “DeLight” Headlight-System should only be used by a physician. It is the responsibility of the personnel using this equipment to be well trained in the use of clinical “Headlight” techniques. This manual only provides basic instructions and precautions related to the operation of this equipment.
- The “DeLight” Headlight-System **MUST** be cleaned and disinfected prior to use. Refer to the “Cleaning Manual DeLight” for complete cleaning instructions. Failure to do so may pose an infection control risk.
- In case of instrument failure/malfunction during a procedure, it is recommended to always keep a spare Headlight System in the room ready for use.
- Perform all device inspections described in these instructions prior to use. Do not use the “DeLight” Headlight-System if it is not functioning correctly. Using an impaired or damaged device may result in patient injury.
- Wear personal protective equipment to guard against dangerous chemicals and potentially infectious materials during use of the device.
- Do not use the "DeLight" Headlight System if the light is not of the quality and quantity required to be able to carry out an adequate examination.

### 6.2 Using the accessories for the “DeLight” Headlight-System

#### 6.2.1 Charging the “DeLight5.0 Battery Unit” with the power supply



Item#	Name of Item	Function
1	Power supply	Charges the lithium battery
2	Power cable	Supplies the lithium battery with electricity
3	“DeLight5.0 Battery Unit”	Control unit with integrated battery
4	4x status LEDs	4 LEDs blinking 75-100% charged 3 LEDs blinking 50-75% charged 2 LEDs blinking 25-50% charged 1 LED blinking 0-25% charged
5	USB-C socket	USB-C socket for charging the “DeLight5.0 Battery Unit”
6	USB-C plug	2x USB-C plug on the power supply cable for charging the “DeLight5.0 Battery Unit”

**CHARGING:**

1. PUT ONE USB-C PLUG OF THE POWER SUPPLY CABLE (5) INTO THE POWER SUPPLIES USB-S SOCKET AND ONE SIDE INTO THE “DeLight5.0 Battery Unit” USB-C socket (5).
2. PUT THE POWER SUPPLY INTO AN EARTHED AC SCOKET.

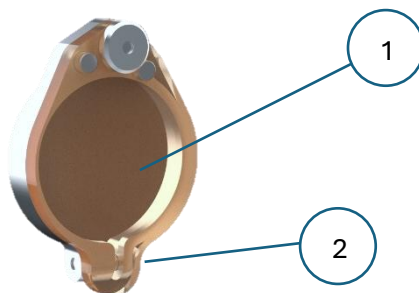


**WARNING**

- Use only original power supplies! Never a power supply that was not supplied with the system. The use of non-original power supplies can have serious consequences and endangers the safety of patients and users

**6.2.2 Attaching the yellow filter to the Headlamp**

**1. YELLOW FILTER**



Item#	Name of Item	Function
1	Yellow filter	Prevents certain light spectra from escaping
2	Yellow filter fixing screw	Secures the filter on the Headlamp

---

---

**Mounting the filter on the Headlamp**

Step I: Insert the filter on the front side of the lamp  
Step II: Secure the yellow filter by slightly tightening the screw

---

**CAUTION:**

Please do not use any tools to tighten the knurled screws. This could damage the screws and / or the thread.

## CHAPTER 7 - Storage and Handling

---

**WARNING**

- The “DeLight” Headlight System and its parts must be cleaned and disinfected prior to use. Refer to the “Cleaning Manual DeLight” for complete cleaning instructions. Failure to properly reprocess the device may pose an infection risk.

### 7.1 Care

---

Once the use of the “DeLight” Headlight-System is completed, please perform the following:

- Turn the “DeLight” Headlight-System OFF and disconnect the Extension cable from the “DeLight5.0 Battery Unit” and the LED cable from the lamp.
- Clean and disinfect prior to use, refer to the “Cleaning Manual DeLight”
- Please make sure that cleaning is performed immediately after use

**CAUTION**

- Do not apply spray-type cleaning agents to avoid equipment damage

**WARNING**

- Make sure the “DeLight” Headlight-System is cleaned before using it again.
- When cleaning the “DeLight” Headlight-System, make sure you wear appropriate personal protection equipment

**! Do not clean the “Power Supply” connector socket, the terminals, and the AC mains power inlet.**

## 7.2 Servicing

---

This product must be serviced by the manufacturer's personnel or a Company certified by the manufacturer .

The probability of failure of the "DeLight" Headlight-System increases as the number of procedures performed and/or the total operating hours increase. The product and equipment must be inspected before each use. In addition to the inspection before each procedure, it is highly recommended that the person in charge of medical equipment maintenance inspect the items periodically.

Do not use the "DeLight" Headlight-System if any irregularity is suspected. Follow the procedures in Chapter 8 Troubleshooting, to resolve the issue. If you are unable to resolve the issue, contact your local authorized support.

The system does not contain any user-serviceable parts. Do not modify or attempt to repair it; patient or operator injury and/or equipment damage may result.

## 7.3 Transportation/Storage

---

### **CAUTION**

- Do not store the "DeLight" Headlight-System in its transport case. Routine storage in a non-ventilated, humid environment may result in contamination and/or damage the device.

**Please refer to the accompanying document "Cleaning Manual DeLight" for additional information on transport and storage!**

# CHAPTER 8 - Troubleshooting

---

## 8.1 Troubleshooting for the “DeLight” Headlight-System

---

This table provides a list of common potential problems you may experience, and possible solutions to these problems. If the problem persists, do not use the “DeLight” Headlight-System and contact your local authorized support.

Problem with	Possible Solutions
the LED lamp does not light up	<ul style="list-style-type: none"><li>• Verify that the system is turned on.</li><li>• Verify that the LED cable from the “DeLight” Headlight-System is securely connected on both sides.</li><li>• Verify that the Extension cable from the “DeLight” Headlight-System is securely connected on both sides.</li><li>• Verify clean electrical contacts of the cable plugs and sockets</li><li>• Verify that the battery is fully charged</li><li>• Verify sufficient distance from potential RF sources that could cause interference.</li><li>• <b>If the issue is still not resolved, do not use the “DeLight” Headlight-System. Contact your local authorized support for further instructions.</b></li></ul>







---




# Appendix

## Compatible accessories/spare parts

The following table outlines compatible accessories/spare parts to be used with the “DeLight” Headlight-System.

*Table 3. “DeLight” Headlight-System - Accessories\* Compatibility*

Component name	Illustration	Art. No.	Type
UNIBEAM LAMP		Art. No. 10065	reusable
ENDOBEAM LAMP		Art. No. 10155	reusable
MAGNETIC LED-CABLE		Art. No. 10032	reusable
MAGNETIC EXTENSION CABLE		Art. No. 10114	reusable
DELIGHT5.0 BATTERY UNIT		Art. No. 10101	reusable
POWER SUPPLY INCL. CABLE		Art. No. 10136	reusable
YELLOW FILTER		Art. No. 10049	reusable

			
<b>BELT CLIP</b>		<b>Art. No. 10154</b>	<b>reusable</b>
<b>FRAME ADAPTER</b>	 <b>(example only)</b>	<b>Art. No. n/a</b>	<b>reusable</b>

**Limited Warranty:**

- (a) THE MANUFACTURER WARRANTS THAT THE “DELIGHT” HEADLIGHT-SYSTEM SHALL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEARS FROM THE DATE OF SHIPMENT, AND ALL OTHER PRODUCTS OF THE MAUNFACTURER SHALL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF SHIPMENT (AS APPLICABLE, THE “WARRANTY REMEDY PERIOD”). ALL “DELIGHT” HEADLIGHT-SYSTEM COMPONENTS MANUFACTURED BY THIRD PARTIES ARE SUBJECT TO THE APPLICABLE MANUFACTURER'S WARRANTIES.
- (b) IF A NONCONFORMITY IS DISCOVERED IN A PRODUCT DURING THE WARRANTY REMEDY PERIOD UNDER NORMAL AND PROPER USE, THEN THE MANUFACTURER SHALL, AT ITS OPTION, EITHER REPAIR OR REPLACE ANY ALLEGEDLY DEFECTIVE PART OR PARTS AT ITS EXPENSE. IT IS A CONDITION PRECEDENT TO THE MANUFACTURER UNDERTAKINGS THAT WRITTEN NOTICE OF SUCH NONCONFORMITY IS PROVIDED TO THE MANUFACTURER PROMPTLY AFTER SUCH DISCOVERY, BUT IN NO EVENT LATER THAN 14 BUSINESS DAYS THEREAFTER, AND WITHIN THE APPLICABLE WARRANTY REMEDY PERIOD. SUCH NOTICE SHALL DESCRIBE THE FULL EXTENT AND NATURE OF THE PROBLEM.
- (c) THE MANUFACTURER SHALL HAVE NO OBLIGATION HEREUNDER WITH RESPECT TO ANY PRODUCT THAT (I) HAS BEEN IMPROPERLY STORED, INSTALLED, OPERATED OR MAINTAINED OR HAS OTHERWISE BEEN USED IN A MANNER CONTRARY TO THE INSTRUCTIONS FOR USE; (II) HAS BEEN REPAIRED OR ALTERED NOT IN ACCORDANCE WITH THE INSTRUCTIONS FOR USE; (III) HAS BEEN SUBJECT TO MISUSE, UNAUTHORIZED USE, NEGLIGENCE, ACCIDENT (INCLUDING FIRE, WATER, EXPLOSION, SMOKE, VANDALISM, ETC.), MOISTURE INTRUSION DURING CLEANING, OR ANY OTHER CAUSE BEYOND THE MANUFACTURER CONTROL; OR (IV) HAS FAILED AS A RESULT OF ORDINARY WEAR AND TEAR. WITHOUT DEROGATING FROM THE ABOVE, THE WARRANTY FOR THE PRODUCTS IS VOID IF AT ANY TIME ANYONE OTHER THAN THE MANUFACTURER AUTHORIZED PERSONNEL REMOVES A PRODUCT CASING AND/OR ATTEMPTS TO MAKE OR MAKES ANY INTERNAL CHANGES, REMOVALS, ATTACHMENTS OR ADDITIONS TO THE PRODUCT OR COMPONENTS THEREOF
- (d) DEFECTIVE PARTS REPLACED BY THE MANUFACTURER SHALL BE RETURNED TO THE DESIGNATED MANUFACTURER’S FACILITY AT THE MANUFACTURER EXPENSE. TITLE AND RISK OF LOSS WITH RESPECT TO SUCH PARTS SHALL PASS TO THE MANUFACTURER UPON DELIVERY TO THE MANUFACTURER’S FACILITY. PRODUCTS OR PARTS THEREOF MAY BE RETURNED FOR REPAIR, REPLACEMENT OR ADJUSTMENT ONLY WITH THE MANUFACTURER PRIOR WRITTEN CONSENT, OR IN ACCORDANCE WITH THE “DELIGHT” HEADLIGHT-SYSTEM SERVICE PROGRAM TERMS. NO CREDIT ALLOWANCES WILL BE GIVEN OR REPLACEMENTS SHIPPED UNLESS DEFECTS ARE VERIFIED BY THE MANUFACTURER OR THE MANUFACTURER’S AUTHORIZED PERSONNEL.
- (e) TO THE EXTENT ALLOWABLE BY APPLICABLE LAW, THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, PROMISES, OR REPRESENTATIONS OF QUALITY OR PERFORMANCE WHETHER WRITTEN, ORAL OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY, SATISFACTORINESS, FITNESS FOR ANY PARTICULAR PURPOSE OR USAGE OF TRADE ARE HEREBY DISCLAIMED. THE REMEDIES STATED HEREIN CONSTITUTE THE EXCLUSIVE REMEDIES AND WIETH MEDICAL SYSTEMS E.K. ’S ENTIRE LIABILITY FOR ANY BREACH OF WARRANTY.