



# REVEAL<sup>®</sup>



## USER GUIDE

Model: REVEAL<sup>®</sup> FC

Ver. 3-24

## DESIGNS FOR VISION, INC. REVEAL® FC

The Designs for Vision REVEAL® FC system combines bright, portable light with evaluation glasses creating a lightweight fluorescent guided system.

### INDICATIONS FOR USE

The Designs for Vision REVEAL® FC is an illumination device used to aid in autofluorescent visualization. When illuminated with the REVEAL® FC headlight, autofluorescent tissue provide an emission spectra that can be seen using the REVEAL® FC Loupes. This device is intended to be used by medical professionals, requiring no specific training other than what is contained in this manual.

### CONTRAINDICATIONS

None known

### WARNINGS



*Save these instructions. This manual contains important safety and operating instructions*



*Always examine the unit and accessories for damage before commencing use. Damaged accessories must not be used and must be replaced. Use original Designs for Vision, Inc. parts and accessories only. The use of unapproved parts may void the warranty.*

*To reduce the risk of battery explosion, follow these instructions and those marked on the battery*

*Do not Autoclave*

*For indoor use only*

*If the equipment is used in a manner not specified by Designs for Vision, Inc., the protection provided by the equipment may be impaired*

*A spent battery should not be used. Contact Designs for Vision Inc. for ordering a replacement*

*Replace with Designs for Vision, Inc. battery only. Using unapproved batteries may not work and will void the warranty*



*This equipment and accessories do not contain serviceable parts. All repairs need to be conducted by Designs for Vision, Inc. service personnel*

*Do not let liquids enter openings or ports. Do not immerse parts in solutions. Allowing liquids to enter openings or ports may void warranty.*

*Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or in an oxygen rich environment*

*Care must be taken when operating this equipment around other equipment to avoid reciprocal interference. Potential electromagnetic or other interference could occur to this or to the other equipment. Try to minimize this interference by not using other equipment in conjunction with this device*

*No modification of this equipment is allowed. Performing unauthorized modification on the equipment, accessories or the product labelling may void the warranty*

*Remove battery from power pack if this device is not in use and will be stored for some time. Maintain storage at environmental conditions listed below*



*Improper use of battery may cause them to get hot, ignite or explode. Always follow all safety precautions listed in this manual*

*Never make changes or modifications to the battery pack*

*Do not short circuit*

*Do not expose to fire*

*When replacing battery, be careful to not crimp or crush wires inside of power pack*

*Protect battery from fluids and damp environments*

*Charge batteries with supplied charger only*



*Waste of electrical and electronic equipment must not be disposed as unsorted municipal waste. It must be collected separately, and must be disposed as per local regulations*



*Do not use within 8 inches of electrocautery devices to maintain proper function*



*Always use a cloth to clean/disinfect products*



*Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.*



***Do not plug or unplug the headlight to/from the power pack while the power pack is on.***



***Do not use any REVEAL<sup>®</sup> headlight without REVEAL loupes/Observation Glasses***



***Before using your headlights/power pack make sure to charge the power packs***



*Your Loupe System is to be used exclusively for the indicated purpose described.*



*Loupes must be stored in provided instrument box after every use*



*Do not remove or tamper with marking and/or ID numbers on your device. Will void the warranty.*




*Do not force the protective case closed. Re-position loupes if necessary. May cause damage if placed in case improperly. Do not remove rubber protective insert from case*

## SPECIFICATIONS

|  |      |  |  |
|--|------|--|--|
| LED DayLite® HDI™  |      | Model Number: DVI-LEDSC                  |  |
| POWER REQUIREMENTS   |      |  |  |
| <i>Battery Power</i> : 7.4VDC, 3.5Ah 18650 Li-Ion<br><i>For Charging</i> : <sup>A)</sup> Cell-Con Charger Model 2240<br>Input : 100-240VAC, 50/60 Hz, .35A<br>Output : 8.4 VDC, 1.3A max |      | <i>USB Power:</i><br>Input : 5VDC, 0.18A |  |
| SPECTRAL CHARACTERISTICS   |      |  |  |
| Excitation Spectrum( <i>Headlight</i> ):   |      | 395-430nm                                |  |
| Emission Spectrum( <i>Evaluation Glasses</i> ):  |      | 430 – 700nm                              |  |
| ILLUMINATION <i>Measured with a cosine corrected light meter</i>   |      |  |  |
| At 12"<br>UltraMini REVEAL® FC:  | High | 10 mW/cm <sup>2</sup> ±10%               |  |
|  | Low  | 5.5 mW/cm <sup>2</sup> ±10%              |  |
| At 16"<br>UltraMini REVEAL® FC:  | High | 6.5 mW/cm <sup>2</sup> ±10%              |  |
|  | Low  | 3 mW/cm <sup>2</sup> ±10%                |  |
| RUNTIME <i>Measured with a fully charged battery</i>   |      |  |  |
| UltraMini® ReVeal FC:  | High | 10 hours +/-10%                          |  |
|  | Low  | 19 hours +/-10%                          |  |
| DIMENSIONS   |      |  |  |
| POWER PACK:  |      | 3.60" x 1.95" x .95"                     |  |
| WEIGHT:  |      | 4.9 oz.                                  |  |
| REVEAL® FC:  |      | 1.33" x .770"                            |  |
| WEIGHT:  |      | .7 oz                                    |  |



| TRANSPORT & STORAGE   |   |
|---|---|
| TEMPERATURE:  | -40°C to 70°C   |
| RELATIVE HUMIDITY:  | 10% to 100% including condensation  |
| ATMOSPHERIC PRESSURE:   | 500 to 1060 hPa   |
| ENVIRONMENTAL OPERATING CONDITIONS                                    |   |
| TEMPERATURE:  | 10°C to 40°C  |
| RELATIVE HUMIDITY:  | 30% to 75%  |
| ATMOSPHERIC PRESSURE:   | 700 to 1060 hPa   |
| APPROVALS   |   |
| IEC 60601-1, IEC 60601-1-2, Class A, CISPR 11, IEC 62133, IEC 62366-1 |   |
| EQUIPMENT CLASS:  | <br>Class II |
| INGRESS OF WATER:   | IPX0 (ordinary equipment), IPX1   |
| MODE OF OPERATION:  | Continuous  |
| PROTECTION FROM SHOCK:  | NO APPLIED PARTS  |
| OVERCURRENT PROTECTION  | Firmware Controlled Protection  |
| METHODS OF STERILIZATION:   | Not Intended to be Sterilized   |
| OXYGEN RICH ENVIRONMENT:  | Not Intended for Oxygen Rich Environments   |
| PATENTS:  | 8,851,709; 8,215,791; 7,690,806<br>HDI™ 11,099,376 B1, 10,215,977<br>B1, REVEAL 11,099,376 B1 |

A) External charger provided with an approved detachable power supply cord which can be easily and safely remove from supply mains

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## DEVICE DESCRIPTION

The REVEAL® FC generates a 3” spot at a 16” working distance. This light provides illumination for autofluorescence guided applications ***and should be used with the REVEAL® FC observational glasses***

The Reveal® FC includes these main components:

- Power Pack LEDSC
- Desktop Charger w/Power Cord
- REVEAL® FC Headlight
- REVEAL® FC Observational Glasses

Accessories include:

- Two Holsters w/Belt Clips
- Hex Drivers
- Cable Wrap Kit
- Operation Manual
- Registration Card
- T-Mount Bracket
- Carrying Case
- Smart Device Emission Filter

## USING YOUR LOUPES

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### HOW TO START:

Your Reveal Observational Glasses are designed with special emission filters that work together with the excitation light produced by the headlight. The observation glasses block out all the excitation light while transmitting all other wavelengths.



Figure 1

Your observational glasses have the T-mount pre-installed on the frame.

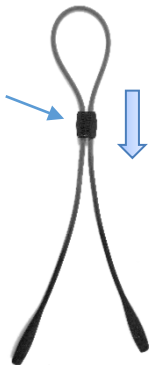


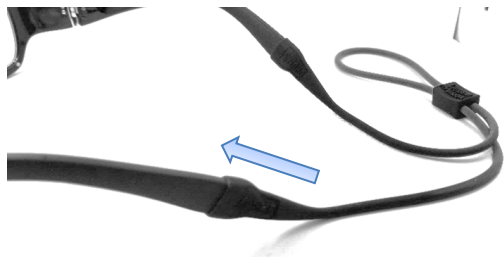
**FIG. 3**

Figure 2

### ATTACHING THE RETAINING STRAPS

Your Reveal® Observational Glasses come with retaining straps to help them remain comfortably in place during procedures. The straps are slid over the ends of the temples (*Fig. 4*). It is then secured to the head by using the adjustable slider shown in Figure 3.





**FIG. 4**

## LED DAYLITE® HDI™ INITIAL SETUP AND CHARGING

Remove the components from the shipping container, checking that all parts on the packing list have been received. Carefully remove the headlight, power pack(s), desktop charger and charger cord from the packaging carton.

*NOTE: The batteries need to receive a full charge **before** initial operation*

The desktop charger is designed to meet multi-national regulatory requirements and has multi-input voltage capability

**Fig. 5**



to accommodate various line voltages from 100-240 VAC. The unit is to be charged with the supplied charger only.

Plug the cord into the jack connector on the front of the power pack (Fig. 5).

Plug the power cord into the charger and connect the desktop charger to the AC outlet. *NOTE: International cords are available through Designs for Vision; refer to the list on page 25.*

The power button light will start pulsing to indicate the unit is in “Smart Charge” mode.

**FIG. 6**

The status indicator (Fig. 6) will display the current state of charge. The LED will change colors as the battery charges; going from **RED** to **ORANGE** to **GREEN**. When the power button light remains steady, the unit is fully charged.

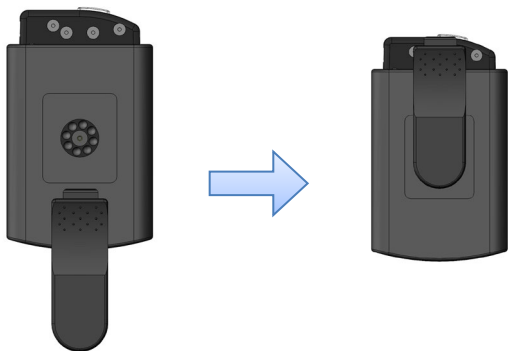


You can now disconnect the cord from the power pack to run on battery. The belt clip on the rear of the holster will allow you to carry it around with you.



## HOLSTER OPERATION

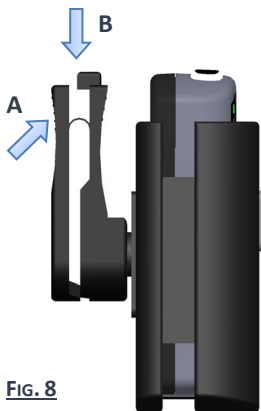
In addition to the holsters, Ratcheting Belt Clips have been included to allow for a full 360° rotation of the unit, even while it is attached to you. To place the belt clip on to the holster, simply slide it up over the raised circular ratchet disk until an audible 'click' is heard (*Fig. 7*). The clip on the back of the leather case is designed to clip onto a belt.



**FIG. 7**

Squeeze the clip together to open. Arrow A (*Fig. 8*) shows where to press. The power pack can rotate to your desired position.





Each increment is followed by an audible click. To remove the power pack from the clip, depress the button on the top of the belt clip while pulling up on the power pack, which is shown by arrow B (Fig. 9).



*NOTE: Make sure power pack is properly seated before commencing use.*

## UNDERSTANDING THE STATUS INDICATOR

The LED DayLite® HDi™ incorporates an advanced status monitoring system. The following table describes what each indication signifies:

|  |  |
|--|--|
|   | <b>SOLID GREEN:</b> FULLY CHARGED BATTERY  |
|   | <b>SOLID/PULSING RED:</b> LOW BATTERY  |
|   | <b>FAST BLINK RED:</b> GENERAL ERROR. PLEASE CONTACT DESIGNS FOR VISION, INC. FOR FURTHER ASSISTANCE |
|  | <b>SLOW BLINK RED:</b> BATTERY SPENT. PLEASE CONTACT DESIGNS FOR VISION, INC. FOR FURTHER ASSISTANCE |

*NOTE: A spent battery should not be used. Contact Designs for Vision Inc. for ordering a replacement.*

The LED DayLite® HDi™ also incorporates a Low Battery Warning system. With approximately ten (10) minutes of battery power remaining, the headlight will flash three times. At five (5) minutes remaining, the headlight will flash another three times. At 30 (thirty) seconds remaining, the headlight will flash continually until the battery is completely depleted.

## REPLACING THE BATTERY

At the end of its useful life, the battery will need to be discarded and replaced with a new one. To accomplish this,



**FIG. 10**

you will need the hex driver supplied with the unit. Loosen the screw at the bottom of the power pack until it is removed from the battery door. Slide the door down and out to expose the battery (Fig. 10).

Unplug the black connector on the battery on the inside of the unit. *Note: Replace with Designs for Vision, Inc. battery only. Using unapproved batteries may not work and will void the warranty.* Insert the new battery being very careful to install in the proper orientation. Plug the battery into the connector then place the battery in the pack. Make sure all wires are tucked into the compartment. Replace door and tighten screw. *NOTE: You will need to fully charge the battery before the fuel gauge will read properly.*

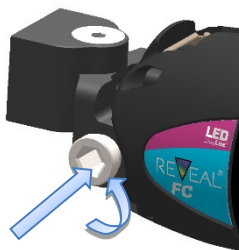
### USING THE REVEAL<sup>®</sup> FC HEADLIGHT

Place the headlight onto the t-mount bracket for your frame.

The headlight can be adjusted

*NOTE: If the battery is installed improperly, the unit will not function*

up and  
down to  
align  
with  
your



point of view. The headlight

**FIG. 11**

can then be locked into that position using the provided driver (if equipped). Locate the hex in the locking shaft of the headlight (Fig. 11). Place the driver into this opening and turn clockwise to tighten the shaft. To unlock the position, loosen the shaft by turning counter-clockwise. *NOTE: The shaft will only turn a limited distance. Do not force in either direction.*

## CONNECTING YOUR HEADLIGHT



***Before inserting or removing any headlight, cable from the power pack make sure the power pack is OFF***

Plug the headlight cable into the headlight (Fig. 12). The

**FIG. 12**



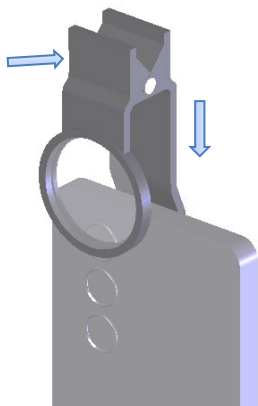
micro USB connector can only be plugged in one way. The indicator on the connector must be facing in the direction shown. Connect the large end of the headlight cable to the headlight

port on the top or side of the power pack.

Clips and a cable wrap are also supplied to be used in conjunction with your frame to direct the cable away from your face.

The power pack **MUST BE OFF** when plugging any light into the pack. Once the headlight is plugged in, press the power button on the top of your battery pack. The headlight will turn on at high intensity. The power button will illuminate and the status indicator will display the current state of charge. A second press of the power button will lower the light intensity of the headlight. A third press turns the power pack off. **ONLY** remove the headlight plug from the power pack when it is **OFF**

## USING THE SMART DEVICE CLIP-ON FILTER





**FIG. 13**







To capture images of auto fluorescence with the Reveal FC, slide the clip-on filter over your camera on any mobile device. Press inwards on the top of the clip then slide the clip down until it covers the camera's lenses on the device. By attaching the filter, the mobile device will be able to

visualize the autofluorescence.

## DESCRIPTION OF SYMBOLS

|   |                             |
|---|-----------------------------|
|   | <i>ATTENTION / CAUTION</i>  |
|  | <i>CAUTION: HOT SURFACE</i> |



|   |  |
|---|--|
|   | <i>INDICATES CONFORMITY WITH MDR EU 2017/745</i>                         |
|  | <i>INDICATES WHERE THE UNIT CAN BE TURNED ON AND OFF</i>                 |
|  | <i>INDICATES BATTERY STATE OF CHARGE</i>                                 |
|  | <i>INDICATES WHERE THE UNIT CAN BE CHARGED</i>                           |
|  | <i>READ ACCOMPANYING DOCUMENTS</i>                                       |
|  | <i>WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) DIRECTIVE SYMBOL</i> |

## REPLACEMENT PARTS

| <b>DESCRIPTION</b>            | <b>PART NUMBER</b> |
|-------------------------------|--------------------|
| REVEAL® FC                    | 4949-3402-1000     |
| Battery                       | 4912-0000-1018     |
| Li-Ion Battery Charger        | 4912-0000-2019     |
| United States Plug & Cord Set | 4706-0000-0038     |

|                               |                |
|-------------------------------|----------------|
| European Plug & Cord Set      | 4706-0000-0030 |
| Australian Plug & Cord Set    | 4706-0000-0032 |
| South African Plug & Cord Set | 4706-0000-0039 |
| Indian Plug & Cord Set        | 4706-0000-0033 |
| English Fused Plug & Cord Set | 4706-0000-0034 |
| Japanese Plug & Cord Set      | 4706-0000-0037 |
| Headlight Cable               | 4911-0001-0022 |
| Retaining Strap (Pink/Purple) | 0025-6000-8878 |
| Cloth, Lens Cleaning          | 0010-0000-0005 |
| Clip-on Filter                | 1025-07FC-0000 |

## ELECTROMAGNETIC INFORMATION

This equipment is designed to comply with IEC 60601-1-2. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. Harmful interference to other devices can be determined by turning this equipment ON and OFF. Try to correct the interference using one or more of the following:

- Reorient or relocate the receiving device
- Increase the separation between the equipment
- Consult Designs for Vision, Inc. for help

**Table 201 – Guidance and Manufacturer’s Declaration – Emissions**  
*All Equipment and Systems*

|  |
|--|
| <b>Guidance and Manufacturer’s Declaration – Emissions</b> |
|--|

The LED DayLite® HDi™ is intended for use in the electromagnetic environment specified below. The customer or user of the LED DayLite HDi™ should ensure that it is used in such an environment.

| <b>Emissions Test</b>      | <b>Compliance</b> | <b>Electromagnetic Environment-Guidance</b>  |
|----------------------------|-------------------|--|
| RF Emissions<br>CISPR 11   | Group 1, Class A  | The LED DayLite® HDi™ uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.                               |
| Harmonics<br>IEC 61000-3-2 | Class A           | The LED DayLite® HDi™ is suitable for use in all establishments (not including domestic) and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes. |
| Flicker<br>IEC 61000-3-3   | Complies          |  |

**Table 202 – Guidance and Manufacturer’s Declaration – Immunity  
All Equipment and Systems**

**Guidance and Manufacturer’s Declaration – Immunity**

The LED DayLite® HDi™ is intended for use in the electromagnetic environment specified below. The customer or user of the LED DayLite® HDi™ should ensure that it is used in such an environment.

| <b>Immunity Test</b>                             | <b>IEC 60601 Test Level</b>   | <b>Compliance Level</b>   | <b>Electromagnetic Environment – Guidance</b>   |
|--|---|---|---|
| ESD<br>IEC 61000-4-2                             | ±8kV Contact<br><br>±2kV, ±4kV,<br>±8kV, ±15kV<br>Air   | ±8kV Contact<br><br>±15kV Air   | Floor should be wood, concrete or ceramic tile. If floors are synthetic, the r/h should be at least 30%.                        |
| EFT<br>IEC 61000-4-4                             | ±2kV 100kHz<br>Repetition<br>frequency  | ±2kV 100kHz<br>Repetition<br>frequency  | Mains power quality should be that of a typical commercial or hospital environment.   |
| Surge<br>IEC 61000-4-5                           | ±0.5kV, ±1kV<br>Line-to-line<br><br>±0.5kV, ±1kV,<br>±2kV<br>Line-to-<br>ground   | ±1kV<br>Line-to-line<br><br>±2kV<br>Line-to-<br>ground<br><br>With client<br>modifications  | Mains power quality should be that of a typical commercial or hospital environment.   |
| Voltage<br>Dips/Dropout<br><br>IEC<br>61000-4-11 | 0% U <sub>r</sub> : for<br>0.5 Cycle<br><br>At 0°, 45°, 90°,<br>135°, 180°,<br>225°, 270°,<br>315°<br><br>0% U <sub>r</sub> : for | 0% U <sub>r</sub> : for<br>0.5 Cycle<br><br>At 0°, 45°,<br>90°, 135°,<br>180°, 225°,<br>270°, 315°<br><br>0% U <sub>r</sub> : for | Mains power quality should be that of a typical commercial or hospital environment.<br><br>If the user of the LED DayLite® HDI™ |

|   |  |  |  |
|---|--|--|--|
|   | 1 Cycle and<br>70% $U_T$ : for<br>25/30 Cycles<br><br>Single Phase:<br>at 0° | 1 Cycle and<br>70% $U_T$ : for<br>25/30 Cycles<br><br>Single Phase:<br>at 0° | requires<br>continued<br>operation during<br>power mains<br>interruptions, it is<br>recommended<br>that the LED<br>DayLite® HDi™ be<br>powered from an<br>uninterruptible<br>power supply or<br>battery. |
| Power<br>Frequency<br><br>50Hz or 60 Hz<br><br>Magnetic<br>Field<br><br>IEC 61000-4-8 | 30 A/m   | 30 A/m   | Power frequency<br>magnetic fields<br>should be that of<br>a typical<br>commercial or<br>hospital<br>environment.  |

**Table 204 – Guidance and Manufacturer’s Declaration – Emissions  
Equipment and Systems that are NOT Life-Supporting**

| <b>Guidance and Manufacturer’s Declaration – Emissions</b>  |
|---|
| The LED DayLite® HDi™ is intended for use in the electromagnetic environment specified below. The customer or user of the LED DayLite® HDi™ should ensure that it is used in such an environment. |

| <b>Immunity Test</b>  | <b>IEC 60601 Test Level</b>  | <b>Compliance Level</b>   | <b>Electromagnetic Environment - Guidance</b>  |
|---|--|---|--|
| <p>Conducted Disturbances induced by RF Fields</p> <p>IEC 61000-4-6</p> | <p>3 V</p> <p>0.15 MHz-80 MHz</p> <p>6 V in ISM bands between 0.15MHz and 80MHz</p> <p>80% AM at 1 kHz</p> | <p>3 V</p> <p>0.15 MHz to 80 MHz</p> <p>6 V in ISM bands between 0.15MHz and 80MHz</p> <p>80% AM at 1 kHz</p> | <p>Interference may occur in the vicinity of equipment containing a transmitter.</p> |
| <p>Radiated RF EM Fields</p> <p>IEC 61000-4-3</p>                       | <p>3 V/m</p> <p>80MHz-2.7GHz</p> <p>80AM at 1KHz</p>   | <p>3 V/m</p> <p>80MHz-2.7GHz</p> <p>80AM at 1KHz</p>  |  |

**Table 206 – Recommended Separation Distances between portable and mobile RF Communications equipment and the LED DayLite® HDi™ Equipment and Systems that are NOT Life-Supporting**

**Recommended Separations Distances for the LED DayLite® HDi™**

The LED DayLite® HDi™ is intended for use in the electromagnetic environment in which radiated disturbances are controlled. The customer or user of the LED DayLite® HDi™ can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF Communications Equipment and the LED DayLite® HDi™ as recommended below, according to the maximum output power of the communications equipment.

| Test Frequency (MHz) | Band <sup>a)</sup> (MHz) | Service <sup>a)</sup>   | Modulation <sup>b)</sup>                           | Max Power (W) | Distance (m) | Immunity Test Level (V/m) |
|----------------------|--------------------------|---|--|---------------|--------------|---------------------------|
| 385                  | 380 - 390                | TETRA 400   | Pulse Modulation <sup>b)</sup><br>18 Hz            | 1,8           | 0,3          | 27                        |
| 450                  | 430 - 470                | GMRS 460, FRS 460   | FM <sup>c)</sup><br>±5 kHz deviation<br>1 kHz sine | 2             | 0,3          | 28                        |
| 710                  | 704 - 787                | LTE Band 13, 17   | Pulse Modulation <sup>b)</sup><br>217 Hz           | 0,2           | 0,3          | 9                         |
| 745                  |                          |   |  |               |              |                           |
| 780                  |                          |   |  |               |              |                           |
| 810                  | 800 - 960                | GSM 800-900<br>TETRA 800,<br>iDEN 820,<br>CDMA 850,<br>LTE Band 5 | Pulse Modulation <sup>b)</sup><br>18 Hz            | 2             | 0,3          | 28                        |
| 870                  |                          |   |  |               |              |                           |
| 930                  |                          |   |  |               |              |                           |

|   |             |   |  |   |     |    |
|---|-------------|---|--|---|-----|----|
| 1720  | 1700 - 1990 | GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS | Pulse Modulation <sup>b)</sup><br>217 Hz | 2 | 0,3 | 28 |
| 1845  |             |   |  |   |     |    |
| 1970  |             |   |  |   |     |    |
| 2450  | 2400 - 2570 | Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7            | Pulse Modulation <sup>b)</sup><br>217 Hz | 2 | 0,3 | 28 |
| 5240  | 5100 - 5800 | WLAN 802.11 a/n   | Pulse Modulation <sup>b)</sup><br>217 Hz | 2 | 0,3 | 9  |
| 5500  |             |   |  |   |     |    |
| 5785  |             |   |  |   |     |    |
| NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the LED DayLite® HDi™ may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.   |             |   |  |   |     |    |
| <sup>a)</sup> For some services, only the uplink frequencies are included.<br><sup>b)</sup> The carrier shall be modulated using a 50 % duty cycle square wave signal.<br><sup>c)</sup> As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case. |             |   |  |   |     |    |

**WARNING:** Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.



**WARNING:** Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

**WARNING:** Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the LED DayLite® HDi™, including cables specified by Designs for Vision, Inc. Otherwise, degradation of the performance of this equipment could result.

**NOTE:** The EMISSIONS characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take

mitigation measures, such as relocating or re-orienting the equipment.

**NOTE:** The LED DayLite® HDi™ may be adversely affected by EM DISTURBANCES possibly resulting in a loss of light output.


**NOTE:** The LED DayLite® HDi™ is intended to be used during HF SURGERY. Keep headlight cable securely attached to the body using supplied clips. Headlight cable should not come in contact with HF EQUIPMENT/CABLES. If interference occurs, increase separation distance between the LED DayLite® HDi™ and the HF EQUIPMENT.

## **INSPECTION AND PREVENTATIVE MAINTENANCE**

- Clean lenses with a standard glass cleaner and a soft, lint-free cloth, making sure not to scratch the surface.
- Not intended to be sterilized. It is recommended for disinfection that all the exposed plastic sections of the headlight, power pack and accessories be wiped with Lysol IC or Clorox VersaSure surface

disinfectant/cleaner or an equivalent plastic-safe cleaner.

- Wipe the sections rather than spraying onto plastic parts. *Note: Do not let liquids enter openings or ports. Do not immerse parts in solutions. Using solutions other than recommended may void warranty. Allowing liquids to enter openings or ports may void warranty.*
- Wipe cables with plastic-safe cleaners, if necessary. Do not allow cleaners to get onto the cable connectors as it may cause the electrical terminals to corrode
- Internal batteries must be replaced every 24 months to ensure proper operation
- Your Designs for Vision, Inc product utilizes precision Anti-Reflective coatings. Clean lenses with a standard glass cleaner and a soft, lint-free cloth, making sure not to scratch the surface.

- Not intended to be sterilized. *Do not autoclave.* It is recommended for disinfection that all exposed plastic sections be wiped with Clorox Verasure surface disinfectant/cleaner or an equivalent plastic-safe cleaner.  *Do not use alcohol, phenol, ammonia, or iodine complex solutions. If a cleaner that contains alcohol must be used, make sure it contains no more than 20% alcohol. For additional cleaner options go to [www.DesignsForVision.com](http://www.DesignsForVision.com)*
- *Do not immerse parts in solutions. Using solutions other than recommended may void warranty. Allowing liquids to enter openings may void warranty.*
- Avoid extreme temperatures and environmental conditions
- Protect your loupes, always store in the instrument box provided with the rubber insert in place.

## WARRANTY

The REVEAL® FC headlight is warranted against imperfections and defects in materials and workmanship for four years. The power pack is warranted for two years. The internal batteries, charger, and cables are warranted for one year. Any damage caused by improper maintenance as described in the manual may not be covered by the warranty

Designs for Vision, Inc (the “Company” warrants its Surgical Loupes as to material, manufacturing and workmanship, to the original purchaser for the life of his or her practice.

This warranty is limited to the repair (by the Company) or replacement of the surgical Loupes, at the sole option of the Company. This warranty does not cover any consequential, special or incidental damages and it does not cover any damages caused by modification, alteration, repair or service by or damage caused by misuse or improper maintenance. This warranty does not extend to frames made by

manufacturers other than the Company even if provided by the Company.

We trust that our product meets with your satisfaction. If you have any questions or problems or claims under this warranty with this product, please call our Customer Service Department at the listed toll-free number 1-800-345-4009. One of our Customer Service Representatives will inform you of the necessary procedures for the adjustment or return of the instrument.

- If your eyeglass prescription changes and you want it updated into your loupes, contact Designs for Vision Customer Service Department and request a quote.
- Contact our Customer Service Department *before* you send your glasses in for repair.
- If these telescopes must be returned for any reason, *before* you ship them, please Contact Customer Service at: [DesignsforVision.com/Service.htm](https://www.DesignsforVision.com/Service.htm)

- Pack in a box with packing list and copy of invoice
- Ship to: Designs for Vision, Inc.

4000 Veterans Memorial Hwy.  
Bohemia, NY 11716-1024  
Attn: Repairs



SEE WHAT'S RIGHT ABOUT  
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TECHNICAL SUPPORT/CUSTOMER SERVICE

1.800.345.4009

Outside the US-Call Local Distributor



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