



# DayCor® LUMINAR<sup>HD</sup>

## HANDHELD HIGH DEFINITION CORONA CAMERA



**Luminar<sup>HD</sup>** is a handheld corona camera with features that enhance performance and guarantee high sensitivity, high resolution & clear results. The information collected by **Luminar<sup>HD</sup>** is pinpointed, comprehensive and encompassing ambient conditions, location and corona strength. Findings are displayed in real time on a high definition display, assisting inspectors investigate faults and get a wider understanding of the asset condition. **Luminar<sup>HD</sup>** supports corona management and includes an interface to **coronaWise** software with auto-detect and data transfer. By using this camera, engineers benefit from attaining fast results, clearly seeing active faults, and creating inspections

history as a basis to analysis and trending. **Luminar<sup>HD</sup>** incorporates Ofil's benchmarked DayCor® proprietary technology ensuring daytime operation and highest sensitivity to UV radiation emanated by corona. **Luminar<sup>HD</sup>** is ergonomically designed and built for extended uninterrupted operation.

- >> Highest sensitivity to corona and RIV sources
- >> Powerful continuous optical & digital zoom
- >> Adjustable high resolution TFT LCD
- >> Uninterrupted continuous operation
- >> HD 720p videos & high resolution images

- >> Built-in GPS with internal antenna
- >> Bluetooth & Wi-Fi communications
- >> Powerful LED flashlight and backlit keyboard
- >> Signals amplification & Noise reduction control
- >> Interface to **coronaWise** - Corona Management SW

### TESTED & CERTIFIED SENSITIVITY TO UV & RIV

**Luminar<sup>HD</sup>**, the top line sensitive corona camera, was tested and certified by RWE Germany for detecting 1pC from 15 meters, 3.6dBµV (RIV) @ 1MHz @ 10m in outdoors & indoors. UV photons emanating from corona are counted and presented as values that designate corona severity. **Luminar<sup>HD</sup>** has signals amplification function with noise reduction control, distinguishing between real and false.

### PRECISE LOCATION OF EMITTING SOURCES

The concurrently captured UV and visible images are merged accurately portraying a true pinpointed imaging of the electrical fault. Auxiliary data such as GPS, ambient conditions, narrations etc. are embedded and added as meta data.

### ERGONOMIC AND PRACTICAL

Spacious and big control buttons activate the most frequently used functions. Specially designed for wearing gloves. A large adjustable TFT LCD guarantees good view in sunny conditions, while a built-in powerful LED flash light and the adjustable backlit keyboard enable inspection tasks in darker conditions. A pictorial easy to navigate menu adds multiple operational features such as defining users preset profiles with personalized default settings.

### EFFECTIVE POWERFUL ZOOM

A continuous interchangeable optical wide to narrow fields of view of both the visible and UV channels provide powerful zooming. The high definition high resolution video recording adds significant digital magnification enabling excellent post processing possibilities of closer view into imperfections involved with corona discharges.

### DAYCOR® TECHNOLOGY INSIDE



**Luminar<sup>HD</sup>** is a high fidelity bi-spectral solar blind camera implementing Ofil's proprietary DayCor® technology [Registered Patent EP1112459B1]. **Luminar<sup>HD</sup>** offers over 3 hours ongoing continuous battery run time operation without overheating.

### Wi-Fi, BLUETOOTH, ETHERNET

**Luminar<sup>HD</sup>** supports wireless and wired communication through Wi-fi, Bluetooth or ethernet communication protocols. As such, **Luminar** can be fully controlled from remote centers, broadcasting recording to external monitors.

### HD VIDEO & IMAGE RECORDING & PLAYBACK

HD 720p video & stills are stored onto a micro flash card and displayed on the LCD. Media can be exported automatically to Ofil's **coronaWise** software, as plug-N-play.

# TECHNICAL SPECIFICATIONS

## UV - OPTICAL PROPERTIES

|                             |   |
|-----------------------------|---|
| Minimum Discharge Detection | 1pC @ 15 m Tested & certified by RWE Germany: IEC 60270:2000                              |
| Minimum RIV Detection       | 3.6dB $\mu$ V (RIV) @1MHz@10m Tested & certified by RWE: NEMA107-1987                     |
| Minimum UV Sensitivity      | 2.2x10 <sup>-18</sup> watt/cm <sup>2</sup>  |
| Fields of View              | H: 10° - 1.6° V: 5.6°-0.9° Synchronized with visible channel, optic & digital, continuous |
| Focus                       | Full manual and auto focus for both channels  |
| UV Zoom                     | 6.25x Optical & Digital, Slaved to the visible channel, continuous                        |
| Spectral Range              | 240-280nm   |
| UV Frames Integration       | ON/OFF   ON: [Snapshot only   Amplification   False elimination filter]                   |
| UV Display Colors           | Polychromatic: Red, Green, White, Black, Yellow   |

## VISIBLE - OPTICAL PROPERTIES

|                                     |  |
|-------------------------------------|--|
| UV/Visible Overlay Accuracy         | Deviation < 1 miliradian   |
| Minimum Visible Light Sensitivity   | 0.7 Lux  |
| Video Standard                      | HD, 720p, 1280X720px   |
| Fields of View                      | H: 10° - 1.6° V: 5.6°-0.9° Synchronized with UV channel, optic & digital, continuous |
| Focus Range                         | 0.6m   1.96ft Automatic & manual   |
| Visible Zoom                        | 24x Optical & Digital, continuous  |
| UV & Visible Channels Display Modes | Combine UV & Visible, UV only, visible only  |

## DISPLAY

|            |   |
|------------|---|
| Type       | Color, sun readable, TFT LCD                  |
| Brightness | 1000 cd/m <sup>2</sup> , adjustable backlight |
| Resolution | WVGA, 800 x 480 pixels RGB                    |
| Size       | 5"  |
| Tilting    | Adjustable angles                             |

## I/O & CONTROLS

|                      |  |
|----------------------|--|
| Input                | Keypad with adjustable backlight, menu, automatic feed, mic, GPS, temperature & humidity |
| Output               | HDMI, Aux, 1GB Ethernet, Bluetooth, Wi-Fi, Mini USB, speaker (int. + ext.)               |
| Functions Activation | Buttons & menu   |
| GPS                  | Built-in, internal antenna   |
| Text Editor          | Built-in   |
| Data Export          | Auto detect, auto transfer interface to <b>coronaWise</b> software                       |
| Flashlight           | Built-in, Led, 2 steps   |

## ENVIRONMENTAL

|                            |  |
|----------------------------|--|
| Storage and Operation Temp | -20°C up to +55°C   -4°F up to +131°F, fanless |
| IP Rating                  | IP 54  |

## MEDIA CAPTURE & DATA STORAGE

|                                   |  |
|-----------------------------------|--|
| Video & Stills Capture & Playback | Internal, gallery display & playback video, audio & still pictures |
| Video Format                      | MOV res. 720p  |
| Stills Format                     | JPG  |
| Audio                             | M4A\1099   |
| Digital Storage                   | Memory flash card Micro SD   |

## PHYSICAL CHARACTERISTICS & POWER SOURCE

|                           |  |
|---------------------------|--|
| Weight                    | 2.2 Kg   4.85 lb   |
| Dimensions L x W x H      | L29 x W13 x H11.7cm   11.4" x 5.1" x 4.6"  |
| Nominal Power Consumption | 15 Watts   |
| Power Source              | Rechargeable (int & ext) battery run time >3 hours, Universal AC/DC 9.5V adapter |
| Mounting Point            | Standard 1/4" X20 thread tripod mount  |
| LED Indicators            | On\Off, sleep mode, recording mode, power source                                 |

## ACCESSORIES

Close-up Lens; **coronaWise** Software; Temp & Humidity Meter plug, Remote Control wired or wireless