



# DayCor® RANGER•EYE HD

## High Definitions HD Corona Camera Core

RANGEReye<sup>HD</sup> is a corona imager that incorporates a UVc detector and a HD visible camera that enable seeing and recording corona discharges in daylight. Corona, which is invisible to the human eye, can be seen only with bi-spectral UV-Visible corona cameras. RANGEReye<sup>HD</sup> is a high definition, highly sensitive bi-spectral corona camera with Ofil's proprietary DayCor® technology inside, capable of pinpointing corona sources, visualizing them, recording and transmitting in real time to a remote receiver or a monitor. Due to its small dimensions and high performance, RANGEReye<sup>HD</sup> fits well into roof mounts and is an excellent choice for fast moving driven inspections of overhead high voltage grid lines. RANGEReye<sup>HD</sup> assists in the diagnosis of medium/high voltage systems by locating deficiencies that are related to electrical fields, or caused by bad design, structural & mechanical problems, contamination, eroded insulation, loss of hydrophobicity and other. RANGEReye<sup>HD</sup> fits also fixed mounts. Users of RANGEReye<sup>HD</sup> benefit from fast results, high resolution video clips, reliable data & pinpointed information, in real time.

- » HD camera
- » Rugged & Light weight
- » Recording & playback
- » Highest sensitivity to UV
- » Built-in recorder
- » Bi-Spectral UV-Visible
- » Fit for speedy inspections
- » Corona events counting
- » Powerful optical zoom
- » Camera core for OEM

### HIGH SPEED LONG DISTANCE INSPECTION

RANGEReye<sup>HD</sup> detects and captures distant corona signals while on the move, without smearing the output footage and without missing corona events. Throughout inspection HD video is transmitted, in real time, without neither image processing nor frames integration, to a remote LCD. Videos are sharp, and clear, showing pinpointed information.

### DAYCOR® TECHNOLOGY INSIDE

RANGEReye<sup>HD</sup> is a solar blind bi-spectral UV-Visible camera that incorporates Ofil's exclusive proprietary DayCor® technology [Registered Patent EP1112459B1]. ROMeye<sup>HD</sup> provides reliable accurate data, showing the original occurrences of corona anchored to the emitters, operating continuously without overheating.

### EASY INSTALLATION

RANGEReye<sup>HD</sup> is designed for driven inspections, it is encapsulated in a rugged durable housing that can be easily mounted on any standard ¼" thread mount. Installation is simple and standard.

### HD VIDEO RECORDING & STORING

RANGEReye<sup>HD</sup> records High Definition videos with corona events count, date & time and (if attached) external GPS. Videos are stored internally onto a portable memory and transmitted to a remote monitor.

### REMOTELY CONTROLLED

RANGEReye<sup>HD</sup> is controlled through a set of communication commands: RS232, Ethernet or Wi-Fi.

### ENHANCED INSPECTION FEATURES

RANGEReye<sup>HD</sup> has a powerful optical and digital zoom for both visible & ultraviolet spectral ranges, and interchangeable fields-of-views.

# TECHNICAL SPECIFICATIONS

## ULTRA VIOLET (UV) - OPTICAL PROPERTIES

Sunlight Rejection	Absolute – at all sunlight and all weather conditions, target can be inspected with the sun in the field of view
Minimum Discharge Detection	1pC @ 15 m, Innogy SE - Eurotest, Test Regulation IEC 60270:2000 PD Measurement
Minimum UV Sensitivity	$1.9 \times 10^{-18}$ watt/cm <sup>2</sup>
Minimum RIV Detection	3.6dBµV (RIV) @1MHz@10m
Fields of View H x V	H: 10° - 1.6°   V: 5.6°-0.9° Continuous. UV & visible channels synchronized
Focus	Full manual and auto focus for both UV & Visible channels
UV Zoom	2x (Opt.), 6.25x (Dig.), synchronized with the visible channel, continuous
UV Frames Integration	On   Off
UV Display Colors	Poly chromatic: Red, Green, White, Black, Yellow
Spectral Range	240-280nm

## VISIBLE - OPTICAL CONFIGURATION

UV/Visible Overlay Accuracy	Deviation < 1 miliradian
Minimum Visible Light Sensitivity	0.07Lux
Fields of View	H: 10° - 1.6°   V: 5.6°-0.9° Continuous. UV & visible channels synchronized
Visible Zoom	25x optical & digital, continuous
Noise Suppression	Yes
Focus Range	0.6m   1.96ft to infinity, automatic & manual

## DATA STORAGE

Video Out Standard	HD 720p 60fps
Video Format	MOV
Image Format	JPG
Storage	FAT-32, exFAT

## I/O CONTROLS AND OPERATION

Video Interface	HDMI
Control Functions	1GB Ethernet, RS232, USB, Inbound/Outbound, Wi-Fi
UV & Visible Output Combination Modes	Combine (UV & Visible), UV only, visible only

## PHYSICAL CHARACTERISTICS & POWER SOURCE

Storage and Operation Temp	-20 °C up to +55°C   -4°F up to +131°F
Block Camera Weight	1650 gr   3.10lb
Camera Core Weight	1265 gr   2.12lb
Camera with Enclosure Dimensions L x W x H	L259 x W128 x H117 mm   L10.2" x W5.03" x H4.6"
Camera Core Dimensions L x W x H	L255 x W124 x H87mm   L 10" x W4.88" x H3.42"
Nominal Power Supply & Consumption	12V DC, 12 Watts
Vibration and Shock	ETSI EN 300 019-2-5 V3.0.0 (2002-12), IEC 60068-2-64

## ACCESSORIES

CoronaWise - Corona Management Software; Inspection Guide

Specifications are subject to changes without notice. Imagery used for illustration purposes only.

