

Corona Cameras Selection Guide

Ofil 2020 range of corona cameras includes a variety of solutions to match budgets, needs, applications, locations or any other consideration. Ofil's cameras incorporate the core DayCor® technology offering high sensitivity to corona PD, true output and optimal working experience.

Ofil corona cameras are classified as non-destructive and non-intrusive (NDT). Ofil suggests solutions, systems and OEM components that are either commercial off-the-shelf (COTS) or customized to specific customers' requirements.

TARGETED APPLICATION ☆ FREQUENCY OF INSPECTION ☆ ENHANCING THE SPECTRUM

The first argument to consider when selecting a corona detection system should be the targeted application, because the requirements that are typical to monitoring long overhead transmission lines or big substations differ from those of overhead distribution lines or of indoor installations. Another argument to consider is the required frequency of inspection. As such, some components that are defined as critical might call for more frequent inspections, as are installations in contaminated industrial or coastal areas. Frequency involves having available inspection instruments. UV inspection adds valuable information in real time and complements information that is being gained with IR cameras. Both technologies do not overlap neither in their captured data, nor in the required inspection conditions and lines load. Therefore, it is recommended to practice separate inspection sessions with dedicated high-quality cameras for each technology.

BUDGET

When it comes to budget, Ofil is always attentive to its customers' needs and constraints and as a rule tries to find the most appropriate and cost-effective solution for its customers.

DayCor® technology

- **UV filters** - Highest UV transmission
- **UV optics** – High efficiency + adaptive FOV
- **Precise mechanics** - Corresponding responsive engines
- **Electronics and algorithms** – Signals processing and functions
- **Solar blind | Visible blind systems** – Highest sun light rejection

DayCor® Handheld Systems



Systems are designed for inspectors and for inspections. Inspectors who need to carry a camera, hold it and operate in dangerous electrical environment, or mount the camera on a tripod in a laboratory and remotely control will find a user friendly camera, simple to operate providing clear readable output. Inspections are called to collect information about the condition of assets and of selected monitored objects. As such only valid and reliable information, as DayCor® cameras provide, can be accepted.

The variants of Ofil handheld systems differ in their physical properties, mode of operation, sensitivity to UV sources, price, and recommended working distances. This document lists each product with its prominent features and price indication. Additional information can be found in Ofil's website: www.ofilsystems.com.

Models: DayCor® Luminar-HD | DayCor® Superb OD | DayCor® Superb XD | DayCor® UVollé-VX | DayCor® UVollé SX | DayCor® UVollé SC | DayCor® UVollé VC | DayCor® Scalar

DAYCOR® SCALAR

Visible-blind corona camera dedicated to indoor inspection. Scalar is offered at a very attractive low price and is affordable to small, medium, or big companies with installations inside buildings, laboratories, underground spaces, mines, motor workshops, factories, data centers, electrical distribution companies etc.

Scalar is an efficient, affordable, very reasonably priced tool that provides instant imaging of existing corona or arcing and high-quality recordings.

FUNCTIONALITY - Scalar provides a clear view of corona and arcing on motors, switchgear, electrical cabinets etc., and has a powerful LED flashlight that enables inspecting very dark compartments. DayCor® Scalar captures corona events, stores video clips and still images with playback.

PHYSICAL PROPERTIES – a sleek design, palm grip, carried by a shoulder strap, 0.9Kg (2lb) 28 x 12 x 9 cm (11 x 4.7 x 3.5")

MODE OF OPERATION – Manual; On screen menu + swift buttons; Very simple straight forward operation; Preset stored settings variations can be provoked at any time streamlining operation and assist getting to the desired results; Backlit buttons facilitate maneuvering in poor lit conditions. A rechargeable battery provides extra-long operation duration. Camera can also be operated when plugged into the wall.

TESTED CERTIFIED SENSITIVITY TO UV SOURCES – 50pC @1m, as required for short distance inspection

FIELD OF VIEW – 15°x11°

SPECTRAL RANGE	SENSITIVITY	RECOMMENDED WORKING DISTANCES	FOV	LCD	WEIGHT	LED	PRESET PROFILES	RECORD & PLAY
310-320 Visible Blind	pC @ 1 m officially certified	0.5-5m	15° x 11°	4.3"	0.9Kg	Built-in	4	Video & Stills

DAYCOR® UVOLLÉ [SX | VX] [SC | VC]



UVollé cameras are light weight & compact handheld solar blind UV corona detection solutions for in/outdoor working environments, optimized for inspection distances of up to 30 m (33 ft). UVollé cameras feature an outstandingly bright LCD for inspectors to get a detailed view of objects even in full sunny conditions. UVollé cameras have an extended run time battery, effective for their ongoing uninterrupted operation without getting overheated. The pinpointed image of corona

leads inspectors to faults' location, reducing the time spent over faults investigation. UVollé cameras are used by electrical utilities, fabs owners of high & med voltage installations, workshops, services contractors, manufacturers of components for the electrical grid that need to perform quality tests, HV labs and other. Camera variants differ in their screen width and ability to record stills/video clips.

Moderately priced, UVollé professional solar blind cameras provide instant accurate imaging of existing corona or arcing and high-quality recordings. Recordings are valuable for trending analysis and management reports.

FUNCTIONALITY – UVollé displays live corona signals as they are getting discharged, revealing in real time their emitting sources while indicating corona severity. Zooming, gain control, manual & auto focus assist maintenance teams look into findings and further investigate. A protecting hood supports sunny working conditions while a powerful LED flashlight and backlit buttons support working in dark spaces. DayCor® UVollé captures corona events with additional overlaid information such as GPS temperature & humidity conditions and audio annotations, stores video clips and still images and provide for their playback.

PHYSICAL PROPERTIES – X series have wide VGA 5" LCD. Cameras are designed for comfortable hand grip and are carried by a shoulder strap.

MODES OF OPERATION – Manually or remotely controlled; On screen featured menu + swift hotkey buttons to the frequently used functions.

TESTED CERTIFIED SENSITIVITY TO UV SOURCES – the ability to detect 1pC from 12m (39 ft) enables seeing corona from distances of 0.5 (1.64 ft) m up to 30 m (98.5 ft).

OPTIONAL ACCESSORIES – Set of lenses for close up and wide FOV, TRH/GTRH sensors

SPECTRAL RANGE	SENSITIVITY	RECOMMENDED WORKING DISTANCES	FOV	LCD	WEIGHT	LED	ANNOTATION	ZOOM
240-280 Solar Blind	1 pC @ 12 m officially certified	1.5-30m & 0.5-1.5 with close-up lens	6.4° x 4.8° & 10° x 7.5° w/ext lens	(VX) 5" (VC) 4.3"	1.39Kg	Built-in	Audio	Visible & UV

DAYCOR® LUMINAR HD



Luminar HD is Ofil's flagship daytime handheld corona camera. It is a solar blind UV imager with outstanding detecting capabilities and excellent exposition of the detected issues. Luminar HD performs well outdoors and indoors, examining remote and nearby objects. The camera has a powerful zoom and flexible focus range that match inspection practices in the field of OH transmission lines, on the one hand, and of motors and stators in workshops on the other hand. Luminar HD cameras appeal to maintenance teams due to the integrity of their output, reliable performance, and data accuracy. To assist inspectors to distinguish between false alarm and real corona, Luminar HD operators can activate the noise reduction and signals amplification tools. And, to see more details of suspicious objects, Luminar HD uses an excellent bright sun readable WVGA monitor to display the HD video. Luminar HD offers a friendly camera-user interaction. Users interact with the camera by clicking on buttons or through onscreen menu navigation. An extended run time battery and innate heating management ensure uninterrupted prolonged camera operation. Data from the onboard GPS, voice annotations and humidity & temperature plug-in sensor are attached to the recorded media adding meta data for data management and reports. The camera can be remotely controlled wirelessly.

Luminar HD is offered to utilities, maintenance contractors, HV laboratories, professional inspectors, thermographers, and companies with mounted system that need the handheld option.

FUNCTIONALITY – Provides instant accurate information about the condition of the inspected assets. Luminar HD displays corona signals and the discharging sources with indications of the discharge severity. Powerful zoom, gain control, corona magnification, false alarm removing, manual & auto focus, rainbow corona selection. The captured video clips and still images of corona include corona events counting, GPS data, ambient measured conditions, and audio narration added by inspectors.

PHYSICAL PROPERTIES –robust, operates continuously without overheating, comfortable hands grip, electro-magnetic shielding, IP 54, carried by a shoulder strap

MODE OF OPERATION – Manual and/or remotely controlled; simple straight forward operation via keyboard and featured menu, can be mounted on a tripod

TESTED CERTIFIED SENSITIVITY TO UV SOURCES –1pC from a distance of 15m (49.2 ft) enables seeing corona from distances of 3m (9.8 ft) up to 100 m (328 ft).

OPTIONAL ACCESSORIES – Set of lenses for close up, TRH sensor

SPECTRAL RANGE	SENSITIVITY	RECOMMENDED WORKING DISTANCES	FOV	LCD	WEIGHT	GPS	COM.	ZOOM
240-280 Solar Blind	1 pC @ 15 m officially certified	3-100m & 0.6m with close-up lenses	10° - 1.6° Horizontal	5" Folding 1000 cd/m ²	2.2Kg	Built- in	Wi-Fi Bluetooth Ethernet	Visible & UV

DAYCOR® SUPERB [OD | XD]

Superb is Ofil's trouper model for over a decade. Superb is noted for its robust body, simple operation via keyboard commands, outstanding optics, and high sensitivity to UV. DayCor® Superb is fit for outdoors and indoors operation. When outdoors a harness assists in carrying the camera leaving both hands free to take notes, speak on the phone etc. without losing the focus on the inspected object. When indoors, mainly in HV laboratories, a combination of tripod and a remote control come in. Superb is offered in 2 models: OD with a 5" adjustable LCD, and XD with an extra-large adjustable 6.5" LCD. A featured keyboard helps operators identify immediately the targeted functions and makes operation intuitive and simplified. Superb is being used by manufacturing companies, owners of substations and high voltage installations, motor workshops, services providers, high voltage laboratories and academies.



Superb is a proven high-performance corona detection camera, highly demanded by researchers, workshops and testing laboratories. Superb is renowned for its high sensitivity, reliable continuous operation, and high-quality captured media.

FUNCTIONALITY – Superb displays corona signals and the discharging sources with indications of the discharge severity. Onboard functions include a powerful zoom for both UV and visible, gain/sensitivity control, corona magnification, manual & auto focus, audio annotation and media playback. A folding adjustable LCD with a hood helps in sunny conditions. Inspection is recorded onto an onboard SD card.

PHYSICAL PROPERTIES – a robust design with IP 54 and electromagnetic shielding. Carried by a supportive harness or mounted on a tripod.

MODE OF OPERATION – Manually direct access to functions via keyboard or remotely controlled

FIELDS OF VIEW – 5°x3.75°

OPTIONAL ACCESSORIES – Set of lenses for wide field of view and close up. Reporting software, Remote control, Flight table

SPECTRAL RANGE	SENSITIVITY	RECOMMENDED WORKING DISTANCES	FOV	LCD	WEIGHT	ANNOTATIONS	ZOOM
240-280 Solar Blind	1pC @ 15 m	3-100m 0.5m with close-up lenses	5° x 3.75° 10°x7.5° w/ext lens	5" OD Folding 6.5" XD Folding	2.2Kg	Text + Audio	Visible & UV