

MS640-S

Corona Detection Camera



The MS640-S is a handheld multi-spectral imaging device equipped with a high-sensitivity ultraviolet detector, a high-definition visible light sensor, and an infrared detector. Through high-precision image registration, it merges two or more images acquired by different sensors to accurately locate defects such as corona discharge, temperature anomalies, missing areas, or surface damage; it also enables quantitative analysis and diagnosis of these defects based on photon counts and temperature measurements.

The device features a 5.5-inch 1080P touch screen display, as well as intelligent application capabilities including Bluetooth, Wi-Fi, 5G, GPS, temperature and humidity monitoring, laser ranging, rapid image capture, and automatic naming functions.

Featuring ergonomic design and a compact, lightweight build, this device is equipped with three ultra-long-life lithium-ion batteries, making it ideal for individual field operations - an excellent tool for substations, distribution lines, high-voltage testing, and O&M services.

Key Features

- 20° × 11.2° wide-angle field of view – higher testing efficiency
- Bluetooth, Wi-Fi, GPS, 5G, temperature and humidity sensors, laser ranging
- Quick import, rapid shooting, automatic naming, batch reporting
- Infrared imaging with 640 × 512 pixels, automatic focus, and secondary-resolution thermal map
- Photon count and temperature threshold alarm configuration



MS640-S Specifications

UV light	
UV Spectral Range	240~280nm
Discharge sensitivity	1Pc@10m
RIV sensitivity	3.6dBμV(RIV)@1MHz@10m
UV sensitivity	2.0×10^{-18} watt/cm ²
Focusing distance	1.0m- ∞
UV Integral Function	X2、X4、X8、X16
Visible light	
Focusing distance	1.0m- ∞
Sensitivity	0.01 Lux
Resolution	3840×2160
Digital zoom	5x
Video display	
Image display	UV, Infrared, Visible Light, and UV+Visible Fusion
Superimposition Accuracy	≤ 1mrad
Screen Type	5.5-inch touchscreen
Screen brightness	1000cd/m ²
Resolution	1080P
Corona color	12 colors: red, white, blue, yellow, cyan, green, etc.
Screen Information	Power alarm, gain information, photon count, date, function, focus mode, alarm information

Infrared optical	
Spectral range	8-14um
Temperature measurement range	-20°C to +550°C
Infrared resolution	640x512
FOV	32°x26°
Focal length	13mm
Digital Zoom	1x-5 x
Control and Operation	
Control input	Button and Touchscreen Control
LED Light	One-touch control (Turn on/Off)

Laser ranging	0.5-40m
Voice recording	Supports microphone voice input
Device characteristics	Bluetooth, Wi-Fi, GPS, 5G, temperature and humidity, list naming, batch reporting
Physical characteristics	
Weight	1.3 kg
Dimension	30cm×15.5cm×11.2cm
Power	DC 7V, 14W
Working temperature	-20°C — +55°C
Encapsulation	IP54
Battery	Ultra-high-performance lithium-ion battery – ≥ 2.5 h
Accessories	Main unit / 64 GB storage card / Card reader / Lens cover / 3 batteries / Charger / Microphone / Strap / Carry case / User manual

◆ Secondary analysis

The infrared function supports point, line, and area temperature measurement, as well as settings for emissivity, pseudo-color, and environmental parameters; RAW images can be further processed using software.

◆ Integrated Zoom

Enables continuous 1–5x zoom under combined UV and visible light illumination, facilitating both wide-angle rapid detection and long-distance zoom detection.

◆ Threshold Alarm

Set an alarm threshold for the number of discharge photons according to diagnostic guidelines; field testing ensures that any discharge defects are fully detectable.

◆ Automatic Reporting

Generate reports in compliance with industry standards; customizable corporate report templates are available; automatically name images based on imported lists and create batch reports – significantly boosting work efficiency.