

TD40S

UAV Four-light UV Camera

The TD40S UAV features a quad-light ultraviolet camera system, equipped with a solar-blind ultraviolet camera, an infrared thermography camera, a high-definition visible light camera, and a laser rangefinder module. This allows for simultaneous ultraviolet signal and temperature detection of targets, enabling timely detection of corona discharge and thermal defects. The TD40S offers multiple modes, including UV-VIS overlay and UV-IR overlay, for precise location of discharge points and thermal defects, allowing for all-weather operation. It is a multi-purpose device, capable of close-range monitoring when used in conjunction with UAV inspections, and simultaneously performing infrared and ultraviolet line inspection tasks when integrated with inspection plans.

Technical features

Ultraviolet | Infrared | Visible Light | Laser Four-in-One

Low noise interference, use a solar-blind detector

Multiple image modes including UV|VIS, UV|IR

Precisely locate corona discharge and thermal defects

The inspection task for both UV and IR can be completed in one pass

Small size, light weight, and easy to operate



Application

Power industry

Electrified railway

Research institutions



ULIRVISION

Technical Parameters

	Model	TD40S
	Application	Power Industry
UV Optical Characteristics	Min. UV Sensitivity	$2.0 \times 10^{-18} \text{ watt/cm}^2$
	Min. Discharge Sensitivity	1.0pC@10m
	Wavelength Range	240~280nm
	FOV	$17^\circ \times 13^\circ$
	Magnification	1-12X
	Focus Range	3m~ ∞
	Detector Lifetime	No degradation
IR Optical Characteristics	Type	Uncooled focal plane array microcalorimetry
	Resolution	640×512
	Pixel pitch	12μm
	Wavelength Range	8~14μm
	NETD	40mK
	FOV	$29.3^\circ \times 23.4^\circ$
	Spatial Resolution	0.8mrad
	Focus	Fixed focus
VIS Optical Performance	Magnification	1-12X
	Min. Illumination	0.3Lux
	Resolution	500W
	Focus	Auto/Manual
	Focus Range	1m~ ∞
Laser Ranging Performance	Magnification	4X optical zoom, 12X digital zoom
	Wavelength	905nm
Imaging Performance	Detection Distance	150m
	Image Mode	UV/IR/VIS/UV-VIS Overlay/UV-IR Overlay/IR-VIS Split/UV Overlay and IR Split
	UV Overlay Accuracy	$\leq 1 \text{ mrad}$
	UV IFOV	$\leq 5 \text{ mrad}$
	UV Palettes	white, red, green, purple, black, blue, orange, wine red
	IR DDE	IVE Image Enhancement Algorithm
Image Storage	IR Palette	12 selectable palettes (including Iron Red, Rainbow, Black Hot and White Hot)
	Image Resolution	1440×1080
	Image Format	JPEG Format
	Video Format	MP4 Format
	Date Export	TF card
Communication Interface	Storage	64G
Power System	Communication Protocol	TD40S-Protocol, MAVlink, S. BUS
	Communication Interface	DJI SkyPort V2
Environment Parameters	Power Input	DC: 13.6V (DJI X-Port)
	Power Consumption	8.5W
	Working temperature	-20°C~+50°C
	Storage Temperature	-30°C~+60°C
Physical Characteristic	Humidity	90%(Non-condensing)
	Protection Level	IP54
	Dimensions	112mm×80mm×75mm
Others	Weight	$\leq 450 \text{ g}$
	Supported Devices	DJI M350、M400