



## ZH380 Corona Detection Camera

ZH380 UV camera uses 240-280nm out-of-band rejection UV imaging technology, which can filter out the interference of the sunlight. Its SDK provides developing options for corona inspection systems such as portable, online, UAV, or robot (Aibo) systems.

ZH380 can help you see the corona discharge, invisible to human eyes since it is a weak radiation emitted by electric facilities. ZH380 provides output, including video stream and photon counting for quantitative analysis. The photon number indicates the corona intensity. ZH380 camera comprises a high-performance detector, UV enhanced components, UV optical components, and signal processing units, which can also be customized for different applications according to your existing system configurations.

ZH380 camera has advantages of high detection sensitivity, excellent anti-interference ability, low power consumption, robust scalability, etc. This daytime UV module can apply to high voltage electrical equipment such as substations, transmission and distribution lines, railway lines, generators, transformers, mines, petroleum, heavy industry, fire prevention and inspection services.

|  |  |
|--|--|
| Daytime filter, not affected by sunshine | Power, serial and video all-in-one plug-in port            |
| Low power consumption, Light weight      | Counting of UV photons , Adjustable of UV gains and colors |
| Output video with no delay or trailing   | SDK provided, RS232 communication                          |
| Working temperature from -25°C to 55°C   | Enclosed design for a harsh environment                    |



## FEATURES

### High Sensitivity Detector

A high-performance ultraviolet detector is used, which is very suitable for detecting the weak ultraviolet rays generated by the corona.

### UV Photon Counting

Photons counting to evaluate the intensity of corona discharge is available. Data are flexible to use for various developments.

### Small, Light & Stable

Compact. Dedicated aerial plug cable and power adapter. It can work for a long time in harsh environments with stable performance.

### Out-of-band Rejection Filter

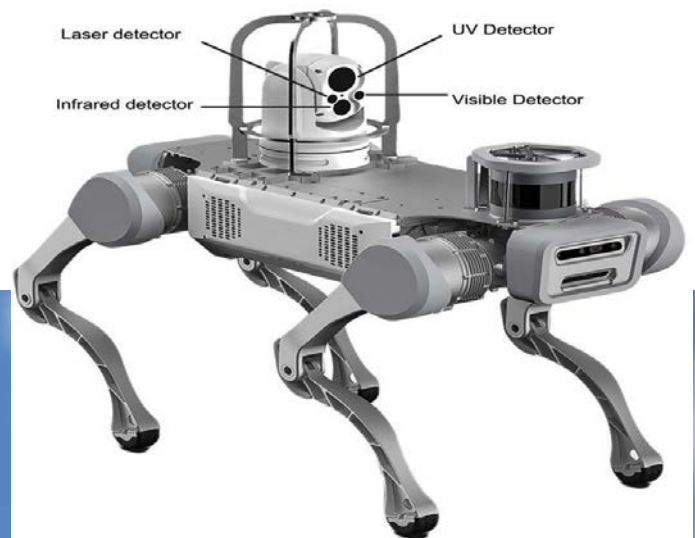
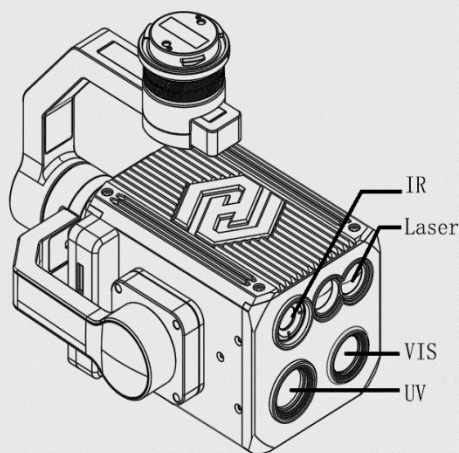
A high-performance filter has the characteristic of deep cut-off 240 to 280nm waveband and high transparency. To ensure the operation can run under sunlight.

### Adjustable UV Gain

Gain adjustable. If used for integrated development, it can adjust to read the current UV gain voltage through the serial port.

### Customer Customisation

As a mono UV detection component, it is highly expandable provided with SDK for different customized applications.



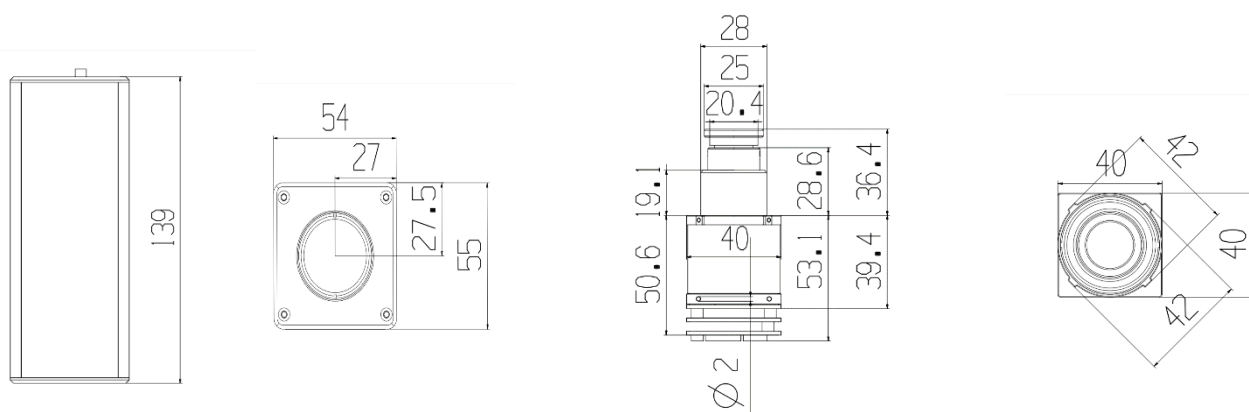
## TECHNICAL SPECIFICATIONS

| UV - IMAGE INTENSIFIER                |   |
|---------------------------------------|---|
| Cathode Sensitivity                   | ≥40mA/W@255nm   |
| Quantum Efficiency                    | ≥25%  |
| MCP Gain                              | ≥105@1750V  |
| Resolution of Image Intensifier       | >18 lp/mm   |
| FILTER                                |   |
| Out-of-band Rejection                 | 240nm ~ 280nm   |
| Center Wavelength                     | 265nm   |
| LENS                                  |   |
| FOV                                   | 21.5°x12.5° (Wide-angle, Digital Output)<br>13°x10° (Optional, Analog Output)<br>5°x3.75° (Optional, Telephoto lens, Analog Output) |
| Focal Length                          | 30mm (Optional: 50mm for 13° lens)<br>(Optional: 112mm for 5° telephoto lens)   |
| INPUT / OUTPUT                        |   |
| Image Resolution                      | 1280 x 720 (Optional: 720H x 576V for Analog Output)  |
| Output                                | HDMI & LVDS Digital (Optional: PAL for Analog )   |
| Communication Control                 | RS-232  |
| Interface                             | J30J-21ZK Aviation Plug   |
| PHYSICAL CHARACTERISTICS              |   |
| Size with Shell (Plug Not Included)   | 100 x 50 x 50mm (152 x 53 x 53mm for 13° lens)<br>(196 x 76 x 68mm for telephoto lens)  |
| Weight with Shell (Plug Not Included) | 300g (500g for 13° lens)<br>(750g for telephoto lens)   |
| Size of Inner UV Module Core          | 90 x 42 x 40mm (145 x 45 x 45mm for 13° lens )<br>(188 x 68 x 60mm for telephoto lens)  |
| Weight of Inner UV Module Core        | 160g (320g for 13° lens)<br>(500g for telephoto lens)   |
| Operating and Storage Temperature     | -25°C ~ +55°C   |
| Operating Humidity                    | ≤95% (No Condensation)  |
| Power Supply                          | DC 12V  |
| Power Consumption                     | ≤4W   |

## Configurations & Optional accessories



Digital High Resolution UV Imaging Module Core ( $13^{\circ} \times 10^{\circ}$  )



Core Drawing View of  $13^{\circ} \times 10^{\circ}$  UV Imaging Module

Basic Configuration: Basic module; SDK; Carrying Case; Manual.

**Optional accessories:** Connection Cables; External Power Supply; Control & Display Unit.



BC-10 Basic Unit



Cables & Power Supply



Control & Display Unit (Options)



**SHANGHAI UVIR TECHNOLOGY CO., LTD.**

5F, Building 11, No.199, Guangfulin East Rd, Songjiang, Shanghai, China

Tel: +86-21-51830882

E-mail: [uvir@uvirsys.com](mailto:uvir@uvirsys.com)