## **BC-30**

# Multi-Spectral (UV+IR+VI) Cameras

## **Corona Defects Detection Systems for Substations Transmission Lines/ HV Electrical Lab/ Electric and Power LIVE INSPECTION**

BC-30 Daytime Corona Cameras is a non-destructive testing (NDT) technology widely used to detect corona defects for Substations and transmission

BC-30 employs UV detecting technology, out-of-band rejection UV filter technology and visual optical fusion algorithm technology. It can eliminate the disturbance of sunlight background and detect wear UV signals generated by corona.

BC-30 is an advanced multispectral camera with the combination of a UV camera, an infrared (IR) camera and a visible light camera allows performing a corona and thermal inspection simultaneously and efficiently.



### No tailing, pinpointing for precise positioning

Photons counting for quantitative analysis

Adjustable UV gain from 0-100%

Daytime and night application

**High Overlay Accuracy** 

UV, IR & Visible Camera

5 inch Large deluxe reflective 640\*480 pixels LCD

Closed enclosure, low heat, continuous stable operation

## 1. FEATURES

#### **High Sensitivity UV Sensor**

High-performance UV Sensor can detect weak Corona signal, 240-280nm out-of-band rejection Technology able to use in both daytime and night.

## Adjustable UV Gain

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

## **Rugged Reliable casing**

Rugged, reliable casing, applicable to the severe atmospheric environment for continuously stable operation Reliable material & craftsmanship to ensure excellent performance

#### **UV Photon Counting**

5 Kinds of ROI available. 4 sub ROI can give individual distribution of photons and accurate photon numbers obtained to precisely analyze severe defects

#### Still Pictures and Video

Still pictures and videos can be recorded and played back The 32G TF card can store all data for further analysis.

## **Ergonomic Design**

The camera is a compact design with a built-in Li battery. The one key/function operation is easy to use. Portable, 2.9 kg. Standard tripod mounting hole. Large size sun shading board.

## **Precise Defects Positioning**

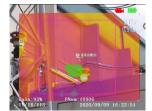
The one milliradian overlay accuracy can give the fusion of visible, IR, UV images. By adjust gains to obtain pinpoint UV signal and analyse the exact location of the defects

#### Simultaneous and Efficient

It is the Integration of faults, jointly locating partial discharges and abnormal temp spots

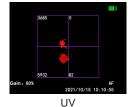
### **High Pixels IR Sensor**

It features with 640x480 pixels Infrared Sensor with ±2°C accuracy to display temperature points and their position in real-time



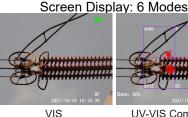


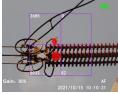
Show both corona and temperature defects in the same location

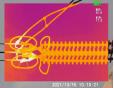




IR









**UV-VIS Combined** IR-VIS Combined

**UV-IR-VIS Combined** 



# 2. TECHNICAL SPECIFICATIONS

Field Of Vision (W x S)   10" x 8"   Spectral Range   240mm ~ 280mm   Minimum Discharge Sensitivity   1Pc/10m   Minimum RIV Sensitivity   3.6dBj.W (RIV) @ 10m   Minimum UV Sensitivity   2 x 10" wattcm"   Prival   720 x 76 6   Focus Range   1.5m ~ CO   Auto   Common   Co	UV - OPTICAL PROPERTIES		
Minimum Discharge Sensitivity   3.68 ByV (RIV) @ 10 m	Field Of Vision (W x S)	10° x 8°	
Minimum RIV Sensitivity         3.6dBµV (RIV) @ 10m           Minimum UV Sensitivity         2 x 10⁻¹¹ watt/cm²           Pixel         720 x 576           Focus Range         1.5m − CO           Focus Range         1.5m − CO           WisiBLE - OPTICAL PROPERTIES         Wisible Light Sensitivity           Focus Range         1.5m − CO           Focus Range         4.00           Focus Range         640 x 480           Tomp Range         -20°C ~ +600°C           Temp Accuracy         ±2 x 23%           Display Modes         Combine (UV+Vis.  R+Vis.   UV+IR), UV only, IR only, Vis only           Display Brightness         800 cd/m³           Field of View         1.2 x 9.9°           SAVE AND PLAYBACK         Video           Video         Provided           Still Images         Provided           Data Save         32G TF Card           Video Fornat         MP4           Stills Format         JPG           Playback Function         Images Fusion Algorithm           Colours         Life Without Attenuation           Images Fusion         Images Fusion Algorithm           Colours         Rechargeable Battery           Working Hours         ≥ Hours     <	Spectral Range	240nm ~ 280nm	
Minimum UV Sensitivity         2 x 10 <sup>-18</sup> watt/cm <sup>2</sup> Pixel         720 x 576           Focus         Auto           VISIBLE - OPTICAL PROPERTIES           Minimum Visible Light Sensitivity         0.1 Lux           Focus Range         1.5m ~ CO           Focus Range         4uto           IR - OPTICAL PROPERTIES AND DISPLAY           Pixels         640 x 480           Temp Range         -2°C ~ +600°C           Temp Accuracy         ±2 or ±2%           Display Modes         Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only           Display Type         5.7-inch Color Transflective Sunlight Readable LCD           Display Brightness         800 cd/m³           Field of View         12.4* x 9.9*           SAVE AND PLAYBACK           Video         Provided           Save           Still Images           Video Format         MP4           Stills Format         JPG           Playback Function         Video and Still Images           CHARACTERISTICS           Detector         Life Without Altenuation           Images Fusion <th co<="" th=""><th>Minimum Discharge Sensitivity</th><th>1Pc/10m</th></th>	<th>Minimum Discharge Sensitivity</th> <th>1Pc/10m</th>	Minimum Discharge Sensitivity	1Pc/10m
Pixel         720 x 576           Focus Range         1.5m − ∞           Focus         Auto           VISIBLE - OPTICAL PROPERTIES           Minimum Visible Light Sensitivity         0.1 Lux           Focus Range         1.5m − ∞           Focus         Auto           IR - OPTICAL PROPERTIES AND DISPLAY           Pixels         640 x 480           Temp Accuracy         ±2 or 22%           Display Modes         Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only           Display Type         5.7-inch Color Transflective Sunlight Readable LCD           Display Brightness         800 cd/m³           Field of View         12* x 9.9°           SAVE AND PLAYBACK           Video         Provided           Still Images         Provided           Still Images         Provided           Video Format         MP4           Stills Format         JPG           Playback Function         Video and Still Images           CHARACTERISTICS         Life Without Attenuation           Images Fusion         Images Fusion Algorithm           Colours         Mechangeable Battery           Working Hours         22 Hours	Minimum RIV Sensitivity	3.6dBμV (RIV) @ 10m	
Focus Range         1.5m - ○○           Focus         Auto           VISIBLE - OPTICAL PROPERTIES           Winimum Visible Light Sensitivity         0.1 Lux           Focus Range         1.5m - ○○           Focus         Auto           IR - OPTICAL PROPERTIES AND DISPLAY           Pixels         640 x 480           Temp Range         -20°C ~ +600°C           Temp Accuracy         ±2 or ±2%           Display Modes         Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only           Display Type         5.7-inch Color Transflective Sunlight Readable LCD           Display Brightness         800 cdm³           Field of View         12.4* x 9.9°           SAVE AND PLAYBACK           Video         Provided           Still Images         Provided           Still Images         Provided           Still Is Format         MP4           Stills Format         MP6           Playback Function         Video and Still Images           CHARACTERISTICS           Detector         Life Without Attenuation           Images Fusion Algorithm         Images Fusion Algorithm           Colours         Rechargeable Battery           W	Minimum UV Sensitivity	2 x 10 <sup>-18</sup> watt/cm <sup>2</sup>	
Focus Auto  VISIBLE - OPTICAL PROPERTIES  Minimum Visible Light Sensitivity 0.1 Lux Focus Range 1.5m - CO Focus Auto  IR - OPTICAL PROPERTIES AND DISPLAY  Pixels 640 x 480 Temp Range 20°C ~ +600°C Temp Accuracy 22 or ±2% Display Modes Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only Display Type 5.7-inch Color Transflective Sunlight Readable LCD Display Brightness 800 cd/m³ Field of View 12.4° x 9.9°  SAVE AND PLAYBACK  Video Provided Still Images Provided Still Images Provided Video Format Stills Format JPG Playback Function Video and Still Images CHARACTERISTICS  Detector Life Without Attenuation Images Fusion Lingues Fusion Algorithm Colours Multiple Colours Selectable  POWER SOURCE  Battery Rechargeable Battery  Vorking Hours Adapter ENVIRONMENTAL  Storage and Operation Temp -20°C ~ +55°C	Pixel	720 x 576	
VISIBLE - OPTICAL PROPERTIES           Minimum Visible Light Sensitivity         0.1 Lux           Focus Range         1.5m − ∞           Focus         Auto           IR - OPTICAL PROPERTIES AND DISPLAY         Focus           Pixels         640 x 480           Temp Range         -20°C ~ +600°C           Temp Accuracy         ±2 or ±2%           Display Modes         Combine (UV+vis, IR+Vis, UV+IR), UV only, IR only, Vis only           Display Brightness         800 cd/m³           Field of View         12.4° x 9.9°           SAVE AND PLAYBACK         Video           Video         Provided           Still Images         Provided           Still Format         JPG           Video Format         MP4           Video Format         JPG           Playback Function         Video and Still Images           CHARACTERISTICS         Video and Still Images           Detector         Life Without Attenuation           Images Fusion         Images Fusion Algorithm           Colours         Multiple Colours Selectable           POWER SOURCE         Battory           Battory         Rechargeable Battery           Working Hours         ≥2 Hours	Focus Range	1.5m ~ <b>○</b>	
Minimum Visible Light Sensitivity         0.1 Lux           Focus Range         1.5m ~ ∞           Focus IR - OPTICAL PROPERTIES AND DISPLAY         Auto           Pixels         640 x 480           Temp Range         -20°C ~ +600°C           Temp Accuracy         ±2 or ±2%           Display Modes         Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only           Display Type         5.7-inch Color Transflective Sunlight Readable LCD           Display Brightness         800 cd/m³           Field of View         12.4° x 9.9°           SAVE AND PLAYBACK         Provided           Still Images         Provided           Still Images         32G TF Card           Video Format         MP4           Stills Format         JPG           Playback Function         Video and Still Images           CHARACTERISTICS           Uife Without Attenuation           Images Fusion         Images Fusion Algorithm           Colours         Multiple Colours Selectable           POWER SOURCE           Battory         Rechargeable Battery           Working Hours         22 Hours           Adapter         DC14.8V (18.5W)           ENVIRONMENTAL	Focus	Auto	
Focus Range	VISIBLE - OPTICAL PROPERTIES		
Focus   Auto     IR - OPTICAL PROPERTIES AND DISPLAY     Pixels	Minimum Visible Light Sensitivity	0.1 Lux	
R - OPTICAL PROPERTIES AND DISPLAY	Focus Range	1.5m ~ <b>○</b>	
Pixels         640 x 480           Temp Range         -20°C ~ +600°C           Temp Accuracy         ±2 or ±2%           Display Modes         Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only           Display Type         5.7-inch Color Transflective Sunlight Readable LCD           Display Brightness         800 cd/m³           Field of View         12.4° x 9.9°           SAVE AND PLAYBACK           Video         Provided           Still Images         Provided           Still Images         32G TF Card           Video Format         MP4           Stills Format         JPG           Playback Function         Video and Still Images           CHARACTERISTICS           Detector         Life Without Attenuation           Images Fusion         Images Fusion Algorithm           Colours         Multiple Colours Selectable           POWER SOURCE           Battery         Rechargeable Battery           Working Hours         ≥2 Hours           Adapter         DC14.8V (18.5W)           ENVIRONMENTAL           Storage and Operation Temp         -20°C ~ +55°C	Focus	Auto	
Temp Range         -20°C ~ +600°C           Temp Accuracy         ±2 or ±2%           Display Modes         Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only           Display Type         5.7-inch Color Transflective Sunlight Readable LCD           Display Brightness         800 cd/m³           Field of View         12.4° x 9.9°           SAVE AND PLAYBACK           Video         Provided           Still Images           Data Save         32G TF Card           Video Format         MP4           Stills Format         JPG           Playback Function         Video and Still Images           CHARACTERISTICS           Detector         Life Without Attenuation           Images Fusion         Images Fusion Algorithm           Colours         Multiple Colours Selectable           POWER SOURCE         Battery           Battery         Rechargeable Battery           Working Hours         ≥2 Hours           Adapter         DC14.8V (18.5W)           ENVIRONMENTAL         52°C ~ +55°C	IR - OPTICAL PROPERTIES AND DISPLAY		
Temp Accuracy         ±2 or ±2%           Display Modes         Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only           Display Type         5.7-inch Color Transflective Sunlight Readable LCD           Display Brightness         800 cd/m³           Field of View         12.4° x 9.9°           SAVE AND PLAYBACK         ***           Video         Provided           Still Images         Provided           Data Save         32G TF Card           Video Format         MP4           Stills Format         JPG           Playback Function         Video and Still Images           CHARACTERISTICS         ***           Detector         Life Without Attenuation           Images Fusion         Images Fusion Algorithm           Colours         Multiple Colours Selectable           POWER SOURCE         ***           Battery         Rechargeable Battery           Working Hours         ≥2 Hours           Adapter         DC14.8V (18.5W)           ENVIRONMENTAL           Storage and Operation Temp         -20°C ~ +55°C	Pixels	640 x 480	
Display Modes Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only Display Type 5.7-inch Color Transflective Sunlight Readable LCD Display Brightness 800 cd/m³ Field of View 12.4° x 9.9°  SAVE AND PLAYBACK Video Provided Still Images Provided Still Images Provided Still Format Video Format MP4 Stills Format JPG Playback Function Video and Still Images CHARACTERISTICS Detector Images Fusion Images Fusion Colours Multiple Colours Selectable POWER SOURCE  Battery Rechargeable Battery Working Hours Adapter DC14.8V (18.5W) ENVIRONMENTAL Storage and Operation Temp -20°C∼+55°C	Temp Range	-20°C ~ +600°C	
Display Type 5.7-inch Color Transflective Sunlight Readable LCD  Display Brightness 800 cd/m³ Field of View 12.4° x 9.9°  SAVE AND PLAYBACK  Video Provided  Still Images Provided  Still Images Provided  Still Format MP4  Stills Format JPG  Playback Function Video and Still Images  CHARACTERISTICS  Detector Life Without Attenuation  Images Fusion Algorithm  Colours Multiple Colours Selectable  POWER SOURCE  Battery Rechargeable Battery  Working Hours ≥2 Hours  Adapter DC14.8V (18.5W)  ENVIRONMENTAL  Storage and Operation Temp -20°C ~ +55°C	Temp Accuracy	±2 or ±2%	
Display Brightness 800 cd/m³ Field of View 12.4° x 9.9°  SAVE AND PLAYBACK  Video Provided  Still Images Provided  Data Save 32G TF Card  Video Format MP4  Stills Format JPG  Playback Function Video and Still Images  CHARACTERISTICS  Detector Life Without Attenuation  Images Fusion Algorithm  Colours Multiple Colours Selectable  POWER SOURCE  Battery Rechargeable Battery  Working Hours ≥2 Hours  Adapter DC14.8V (18.5W)  ENVIRONMENTAL  Storage and Operation Temp -20°C ~ +55°C	Display Modes	Combine (UV+Vis, IR+Vis, UV+IR), UV only, IR only, Vis only	
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Stills Format JPG   Playback Function Video and Still Images   CHARACTERISTICS   Detector Life Without Attenuation   Images Fusion Images Fusion Algorithm   Colours Multiple Colours Selectable   POWER SOURCE   Battery Rechargeable Battery   Working Hours ≥2 Hours   Adapter DC14.8V (18.5W)   ENVIRONMENTAL Storage and Operation Temp -20°C ~ +55°C	Data Save	32G TF Card	
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CHARACTERISTICS   Detector Life Without Attenuation   Images Fusion Images Fusion Algorithm   Colours Multiple Colours Selectable   POWER SOURCE   Battery Rechargeable Battery   Working Hours ≥2 Hours   Adapter DC14.8V (18.5W)   ENVIRONMENTAL Storage and Operation Temp	Stills Format	JPG	
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Colours     Multiple Colours Selectable       POWER SOURCE       Battery     Rechargeable Battery       Working Hours     ≥2 Hours       Adapter     DC14.8V (18.5W)       ENVIRONMENTAL       Storage and Operation Temp     -20°C ~ +55°C	Detector	Life Without Attenuation	
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Storage and Operation Temp -20°C ~ +55°C	Adapter	DC14.8V (18.5W)	
	ENVIRONMENTAL		
	Storage and Operation Temp	-20°C ~ +55°C	
PHYICAL PARAMETERS	PHYICAL PARAMETERS		
Dimensions L x W x H 229mm x 131mm x 105mm		229mm x 131mm x 105mm	
Weight 2.8kg		2.8kg	

# 3. ACCESSORIES





Charger









d Strap Ca

Card with Adapter AC/DC Adapter

Carrying case

## Mellon (Singapore) Pte. Ltd.