



# EVERFOCUS

## Indoor Pendent Dome Camera Operation Instructions

Model No. **EPD200**

Please read this manual first for correct installation and operation. This manual should be retained for future reference. The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

### **PRECAUTIONS**

**1. Do not install the camera near electric or magnetic fields.**

Install the camera away from TV, radio transmitter, magnet, electric motor, transformer, audio speakers since the magnetic fields generate from above devices will distort the video images.

**2. Never disassemble the camera nor put impurities in it.**

Disassembly or impurities may result in trouble or fire.

**3. Never face the camera toward the sun.**

Direct sunlight or severe ray may cause fatal damage to sensor and internal circuit.

**4. Keep the power cord away from water and liquid.**

Touching the wet power cord may result in electric shock.

**5. Never install the camera in areas exposed to water, oil or gas.**

Water, oil or gas may result in failure, electric shock or fire.

## 6. Cleaning

Do not touch the surface of sensor by hand directly. Use a soft cloth to remove the dirt from the camera body. Use lens tissue or a cotton swab and ethanol to clean the sensor and the camera lens.

## 7. Do not operate the camera beyond the specified temperature, humidity or power source ratings.

Use the camera at temperatures within 0°C ~ 50°C/32°F ~ 122°F and humidity between 20% ~ 80%. The input power source is 12VDC/24VAC.

## PREFACE

EPD200 is compact, full functioned CCD Color Cameras for indoor pendent mount. The dome camera is designed with advanced digital processing circuitry for high resolution 1/3" CCD sensor, it has DIP switch for FL ON/OFF, BLC ON/OFF, AGC ON/OFF. The dome camera uses a vari-focal auto iris lens for discreet surveillance or close-up viewing and it features with iris level volume control for the best viewing quality.

## FEATURES

- 1/3" SONY CCD pick up device for more than 380 TV lines of horizontal resolution
- The high sensitivity of 1.0 Lux/F=1.2 is achieved by using 1/3" SONY CCD
- The Electronic Shutter and AGC functions allow the camera to be used in environment with varying light levels
- Built-in Vari-Focal lens(optional)
- With manual PAN mechanism up to 90 degree
- FL, BLC, AGC On/Off switchable
- Compact size
- System available for NTSC or PAL

## CONTENT LIST

1. Camera Unit
2. Operation Instructions (this document)
3. Hex Wrench
4. Power Extension Cable
5. Video Cable for testing Video Connector



## OPTIONAL ACCESSORY

- EN220 5.6-inch LCD Test Monitor



## SPECIFICATION

<b>Pickup Device</b>	1/3" SONY Super HAD CCD
<b>Video Format</b>	NTSC or PAL
<b>Scanning System</b>	NTSC: 525 TV lines, 60 fields/sec. PAL: 625 TV lines, 50 fields/sec.
<b>Picture Elements</b>	510 x 492 (NTSC); 500 x 582 (PAL)
<b>Horizontal Resolution</b>	380 TVL
<b>Sensitivity</b>	0.3 Lux /F=1.2
<b>S/N Ratio</b>	Over 48dB(AGC Off)
<b>Electronic Shutter</b>	1/50(1/60)~1/100,000
<b>Lens</b>	Vari-Focal or Fixed Lens
<b>Video Output</b>	BNC 1.0Vp-p 75ohm
<b>Back Light Comp..</b>	On/Off switch
<b>Auto Gain Control</b>	On/Off switch
<b>Flickerless</b>	On/Off switch
<b>Auto White Balance</b>	Auto
<b>Auto IRIS</b>	DC-Drive
<b>Gamma Correction</b>	0.45
<b>Sync. Mode</b>	Internal Sync.
<b>Power Source</b>	Two types: 12VDC/24VAC 12VDC only
<b>Power Consumption</b>	12VDC:3W max. 24VAC: 1.5W max
<b>Video Output Connector</b>	BNC output x 1 2.5mm Lock x 1
<b>AC 24V Power Connector + Video</b>	2.5mm x 2-pin(for DC jack) 2.0mm x 2-pin(for BNC)
<b>DC 12V Power Connector + Video</b>	1.25mm x 4-pin, (1BNC, DC jack)
<b>Weight</b>	0.3 kg ; 0.66 lbs
<b>Dimension</b>	110mm(W)x 125(H)/ 4.33"(W) x4.92"(H) Pendent Tube Diameter: 26mm/1.06"
<b>Operating Temperature</b>	0~50 ; 32°F~122°F (20%~80% Humidity)
<b>Certifications</b>	CE, FCC

## DIMENSION DIAGRAM

### a. Conduit Size



26mm/1.06"

### b.



80mm/3.15"

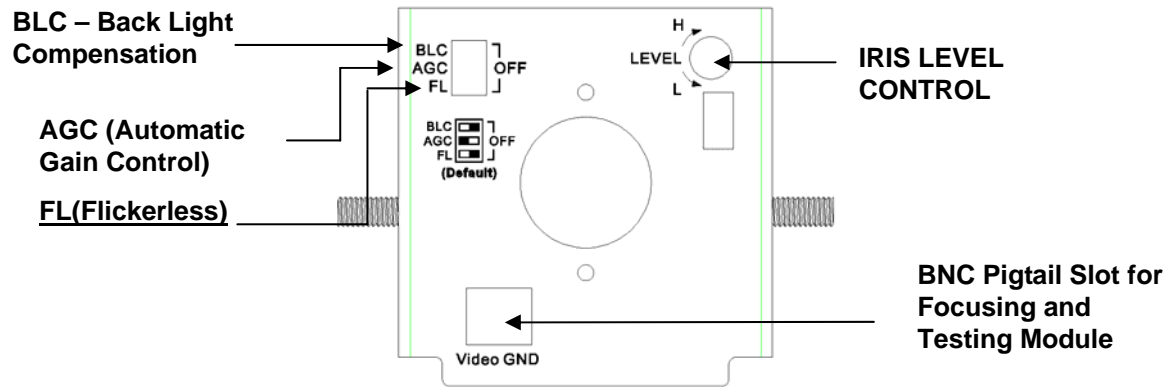
125mm/4.92"

90mm/3.54"

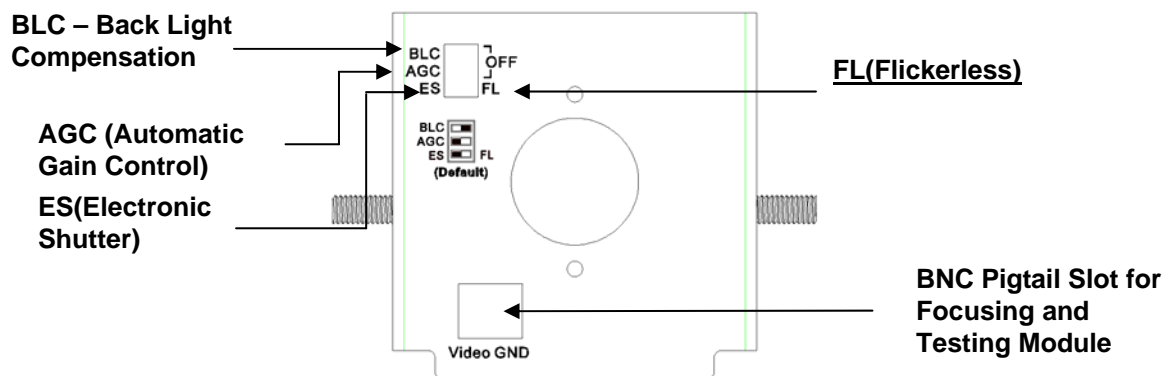
110mm/4.33"

## HARDWARE OVERVIEW

### a. Front panel design (For Vari-Focal Lens Model)



### b. Front panel design (For Fixed Lens Model)



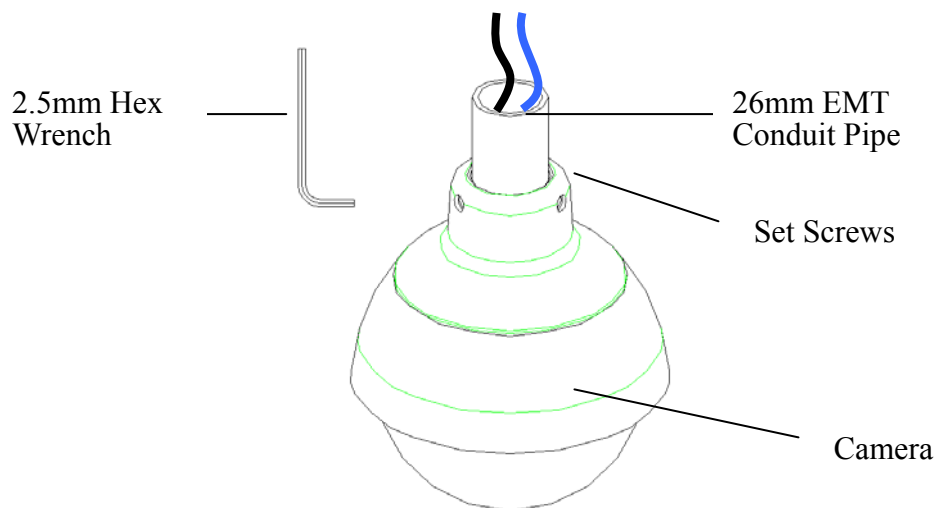
## INSTALLATION

This section covers simple steps and detail installation. Please follow instruction for preventing any unnecessary damage.

### Simple Steps:

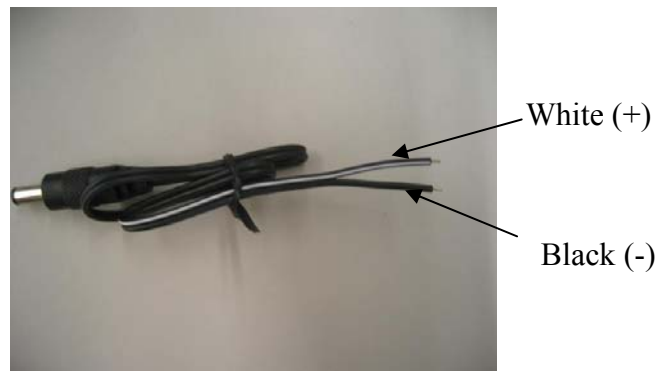
1. Connect to 26mm/1.06" EMT Conduit Pipe and lock it with Hex Wrench
2. Open camera bubble cover
3. Connect to testing monitor(optional accessories)
4. Adjust lens, camera position
5. Optional adjust camera setting on Dip Switch

### 1. Mount Camera



- a. Pre-install 26mm/1.06" EMT conduit pipe and wire video and power cables through conduit pipe. Connect power and video to the camera.
- b. Locking pipe with camera by tightening set screws with supplied Hex wrench.

**Note!!** When connect to 12VDC with Power Extension cable . Please make sure you connect power +,- correctly. Wrong connection may damage the camera.



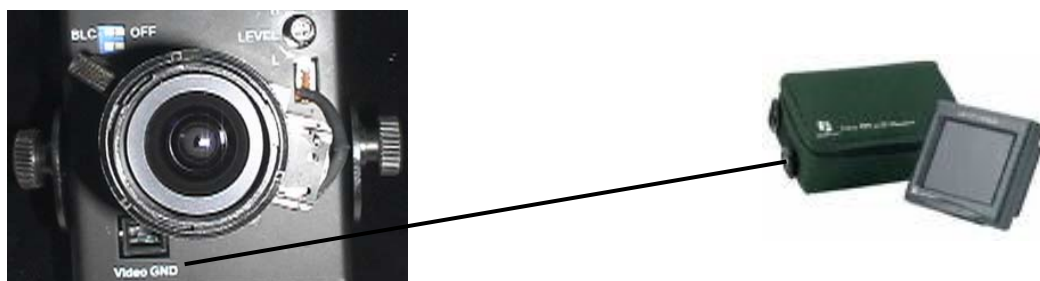
## 2. Open Camera Bubble Cover

Turn the camera bubble until you see the arrow face to here.



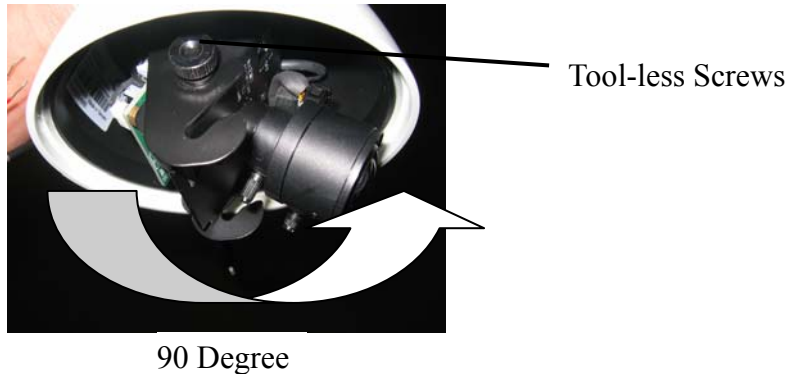
## 3. Connecting to testing monitor EN220

Connect the BNC Pigtail accessory to the front of the module for help with focusing or video testing.



## 4. Adjust Camera Position and Lens

- a. **Adjust camera position (Tilt angle up to 90 degree):** Adjust camera to the position you like. The turning angel is up to 90 degree. Use 'tool-less' screws on the side of the module to secure position.



### b. Zoom and focus adjustments (For Vari-focal Lens Model)

After the camera was installed, the zoom and focus of the lens must be adjusted.

- (1) Loosen the zoom ring knob, and then turn the ring towards <W> or <T> as necessary to obtain the desired view range.

W side (Zoom out)

The viewing range will be wider and the subject is smaller.

T side (Zoom in)

The viewing range will be smaller and the subject is larger.

- (2) Loosen the focus ring knob, then turn the ring towards < $\infty$ > or <N> as necessary to obtain the clear video image.

- (3) Repeat steps 1 and 2 until the best image is obtained.

Once the lens setting finished, tighten the zoom ring and the focus ring knobs.

## CAMERA SETTING

### ➤ BLC (Back Light Compensation)

When BLC is turned on, the AGC, FL and IRIS operating point is determined by averaging over the center area instead of entire field-of-view, so that a dimly-lit foreground object at center area can be clearly distinguished from brightly-lit backgrounds. BLC should not be used unless it is needed to compensate for back-light.

**The default setting is OFF.** For Auto-Iris lens model, the brightness can also be adjusted via the Iris level control VR.

### ➤ AGC (Automatic Gain Control)

AGC ON: The sensitivity increases automatically when light is low.

AGC OFF: A-low-noise picture is obtained under a low light condition.



**The default setting is ON.**

➤ **FL (Flickerless)**

When picture flicker fiercely, turn FL on, then the camera will stabilize the speed of electronic shutter at 1/100(S)(NTSC) or 1/120(S)(PAL) automatically, and reduce the flicker immediately.

**The default setting is OFF.**

➤ **IRIS Level Control (For Vari-Focal Lens Model)**

Brightness Level can be adjusted from the IRIS level VR while using the direct drive lens.

- Turn counterclockwise to L to get darker picture.

- Turn clockwise to H to get brighter picture. ➤ **Electronic Shutter (For Fixed Lens Model)**

ES ON: The camera continuously adjusts the shutter speed from 1/60 (NTSC), 1/50 (PAL) second to 1/100,000 second according to the luminance conditions of the scene.

ES OFF: The shutter speed is fixed at 1/60 (NTSC), 1/50 (PAL) second.

Set ES OFF, when auto iris lens is used or flicker is observed under a very bright fluorescent lamp. Otherwise, turn ES on for optimum performance.

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