



# EVERFOCUS

## 1/3" 560 TVL Bullet Style Weatherproof Color Camera Operation Instructions

Model No. **EZ350**

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  $-40^{\circ}\text{C} \sim 50^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $122^{\circ}\text{F}$ ) and humidity between 20%~ 80%. The input power source is 12VDC/24VAC.

## **PREFACE**

This 1/3" image format color CCD camera offers brilliant performance, as it is ideal for outdoor applications such as parking lots, gas stations or shopping malls. The sophisticated circuit design provides a heater that turns on at  $10^{\circ}\text{C}$  for cold weather. The camera will provide protection against the elements and provide an excellent quality picture.

## **FEATURES**

- 1/3" SONY Super HAD CCD with low light sensitivity of 0.5 lux/F=1.2
- Industry leading super high-res. with 560 TVL
- Revolutionary integrated 10-bit Digital Signal Processor (DSP) delivers excellent picture quality and sharp color images
- Intelligent backlight compensation with On/Off switch
- Camera can be operated in extreme low temperature  $-40^{\circ}\text{C}$  /  $-40^{\circ}\text{F}$
- Removable sun shield
- IP66 Weatherproof rated

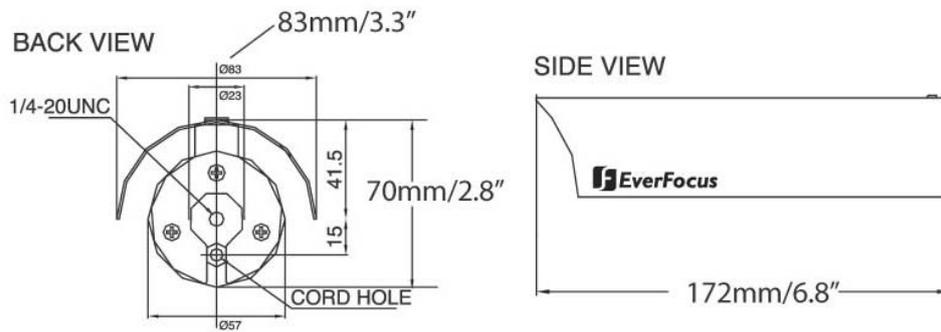
## **PACKAGE CONTENTS**

- Camera Unit x 1
- Desiccant Pack x 1
- Mounting Bracket x 1
- Sunshield x 1
- Power Adaptor Cable x 1
- Accessory pack includes:
  - Screws x 3
  - Expanding Screws x 3
- Manual x 1

## SPECIFICATIONS

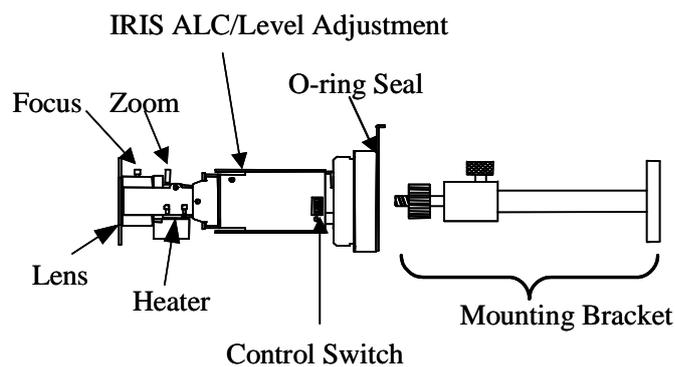
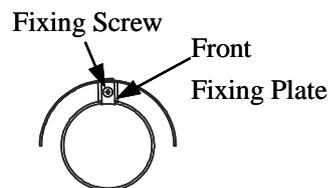
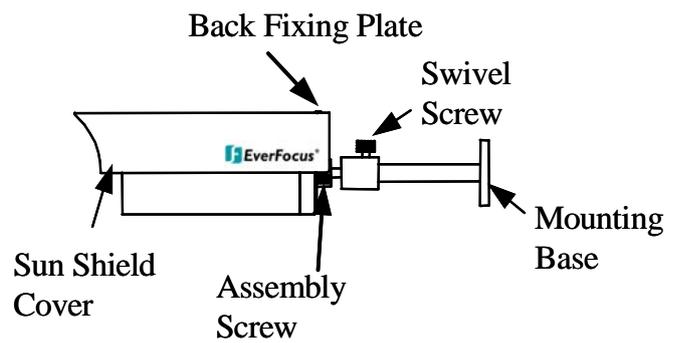
Pickup Device	1/3" SONY Super HAD CCD
Video Format	NTSC or PAL
Scanning System	NTSC: 525 TV lines, 60 fields/sec PAL: 625 TV lines, 50 fields/sec
Picture Elements	768 x 494(NTSC) ; 752 x 582(PAL)
Horizontal Resolution	560TVL
Sensitivity	0.5Lux/F=1.2
S/N Ratio	Over 48dB(AGC off)
Electronic Shutter	1/50(1/60)~1/100,000
Lens Type	Vari-focal lens, Auto Iris f=3.8~9.5mm/F=1.2 , f=9~22mm/F=1.6 *Lens models and availability vary in different regions
Back Light Comp.	ON/OFF Switch
Auto Gain Control	ON/OFF Switch
Flickerless	ON/OFF Switch
Auto White Balance	Yes
Gamma Correction	0.45
Video Output	BNC 1.0Vp-p , 75ohm
Sync. Mode	Line Lock/Internal Sync
Heater	Yes, built-in
Weatherproof	IP66
Power Source	12VDC/24VAC
Power Consumption	24VAC: 6VA max. (Heater OFF) 24VAC: 12.5VA max. (Heater ON) 12VDC: 4W max. (Heater OFF) 12VDC: 7.5W max. (Heater ON)
Dimensions	With sun shield : 90.7 mm(W) x 70mm(H) x 172mm(L); 3.57"(W) x 2.8"(H) x 6.8"(L) Without sun shield: 132mm(L) x 57mm(O.D); 5.2"(L) x 2.2"(O.D)
Weight	0.71 kg ; 1.6 lbs 0.91 kg ; 2 lbs (with bracket)
Operating Temperature	-40°C~50°C ; -40°F~122°F (20%~80% Humidity)
Heater Activation Temp:	Yes, 10°C On / 20°C Off
Certifications	FCC/CE

## DIMENSIONS



(Unit:mm/inch)

## MAJOR PARTS NAME & THEIR FUNCTIONS



## **INSTALLATION**

1. Using the supplied screws, mount the bracket base on the desired location.
2. Connect the BNC connector of the camera to a monitor or other video device through a 75 ohm type coaxial cable with BNC female connector at cable extension.
3. Connect the 24VAC or 12VDC regulated power source of the camera (power jack) to the power-in jack with 2mm plug. *For 12VDC power source, please make sure the power plug is center+ outer- for heater normal operation.*
4. If the factory settings are out of focus, or any other adjustment is required, follow the procedures below.
  - a. Remove the fixing screw in the front, which hold the sun shield cover. Remove the sun shield cover.
  - b. Twist open and carefully remove the housing cover.  
(Please pay attention to prevent damage to the “O”-Ring seal.)
  - c. Loosen the focal lens and focus locking screws.
  - d. Adjust the lens to bring the subject into focus.  
(Caution: Heater elements could be hot! When camera power is on, be cautious with camera adjustment.)
  - e. Retighten the screws.
  - f. Please refer to the Settings section for the details of the other adjustments. Adjust accordingly if necessary.
  - g. When all the adjustments and settings are completed, overlaying the cover gently. Be careful not to damage to the “O”-Ring and camera components.
  - h. To reassemble the sun shield, match the hole on the sun shield to the back fixing plate of

camera, fix the screw on the front fixing plate. Make sure the wider side of the fixing plate holds the edge of the camera well.

5. Attach the camera onto the mounting bracket.
6. Loosen the swivel screw and point the camera to the desired direction.
7. Tighten the swivel screw. To strengthen the fixing power of the swivel screw, tighten the set-screw with the set-screw wrench (supplied).

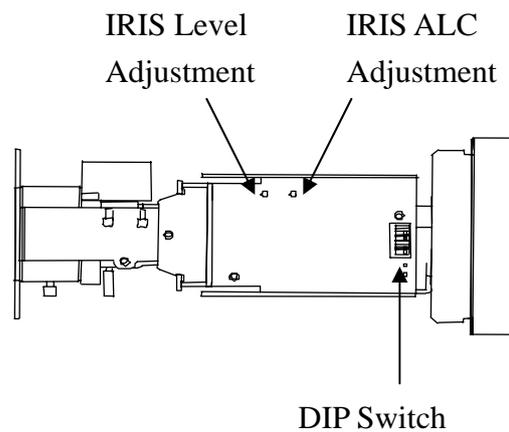
**Notes:**

- (A) Make wiring connections only when it is determined that power is in a disconnected status.
- (B) There is a desiccant pack attached to the housing base under the camera which is designed to absorb any moisture trapped inside the housing during adjustment. To avoid excessive moisture build up, it is recommended to avoid rainy or excessively damp conditions during installation of camera. It is also advisable to limit the frequency of removing the housing cover. The desiccant pack can be replaced if condensation develops inside the housing.

## **SETTINGS**

The camera is set up at factory and normally requires no adjustments. However, adjustments may be necessary in some cases. Please refer to the following description for the function details.

- The IRIS ALC and IRIS Level adjustments are located on the side circuit board, use a screwdriver to adjust if it is necessary.



### **IRIS Level Adjustment**

To adjust iris level –

Turn the IRIS Level Adjustment VR counterclockwise to get darker picture.

Turn the IRIS level adjustment VR clockwise to get brighter picture.

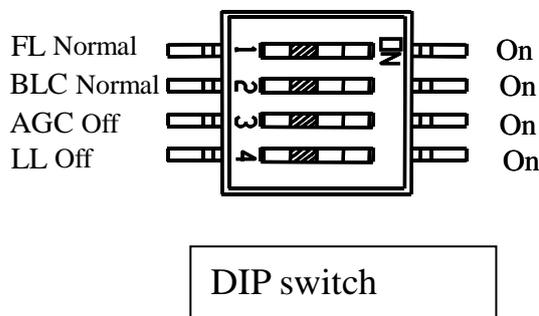
### **IRIS ALC Adjustment**

To select light metering method –

Turn the IRIS ALC Adjustment VR counterclockwise for Average Metering.

Turn the IRIS ALC Adjustment VR clockwise for Peak Metering.

- The 4 DIP switch also locate on the side circuit board, they are Flickerless, Back Light Comp, Auto Gain Control and Line Lock accordingly.



### **FL(Flickerless) ON/OFF**

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

### **BLC (Back Light Compensation) ON/OFF**

When BLC is turned on, the AGC, ES and IRIS operating points are determined by averaging over the center area instead of entire field-of-view, so that foreground object at center area can be clearly distinguished from brightly backgrounds.

BLC should not be used unless it is needed to compensate for strong backlight. The default setting is Off.

### **AGC (Automatic Gain Control) Off/On**

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.

### **LL (Line-Lock) Off/On**

To select the sync mode between Internal Sync.(LL off) and Line-Lock (LL on).

Set the line-lock off, the camera will synchronize to the internal time base. Set the line-lock on, the camera's vertical synchronization can be driven by the AC signal in the power lines.

The default setting is Off.

Note: Line-Lock sync mode operation is working only when used with an AC power source; it is not working with a DC power source.

## **SIMPLE INSTRUCTIONS FOR THE DESICCANT PACK**

Due to the camera lens blurred from the humidity inside the camera. The desiccant pack is therefore attached to absorb the humidity. Easy instruction is as follow:

Adjust all settings first and place the desiccant pack into the gap of the machine and fix it. Install the cover and overlaying gently.

Installation steps:

Step 1.



**Desiccant pack**

Step 2.



**Install the cover and  
overlaying gently**

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