



**Model 68A02-1**  
**OPERATING MANUAL**

**Day/Night Color Bullet Camera  
w/ 36 IR LEDs**

Before installing and using the camera, please read the instructions thoroughly and retain them for reference.

# Table of Contents

---

<b>Features</b> .....	●	3
<b>Dimensions</b> .....	●	3
<b>Parts Name &amp; Descriptions</b> .....	●	4
<b>Connections</b> .....	●	5
<b>Vari-focal, DC Auto Iris Lens Adjustments</b> .....	●	6
<b>OSD Menu Instructions</b> .....	●	7
Menu & Setting Details .....	●	7
OSD Menu Control .....	●	9
OSD Menu ENTER / EXIT .....	●	9
Main Menu .....	●	10
<b>Specifications</b> .....	●	14

Document Number 68I02-1 Rev. A  
January 2008

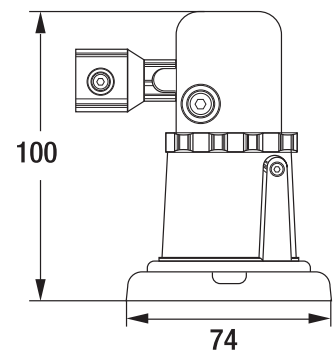
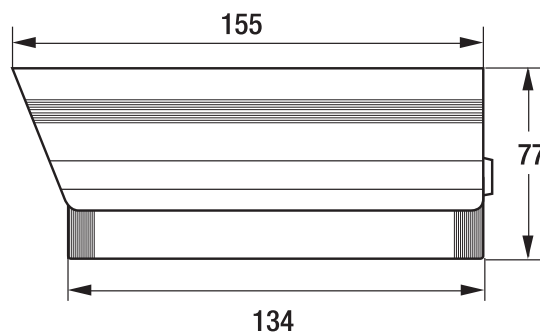
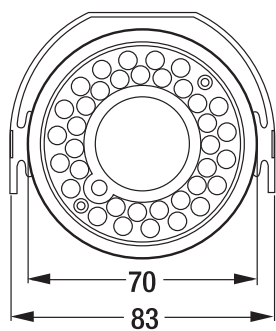
# Features

---

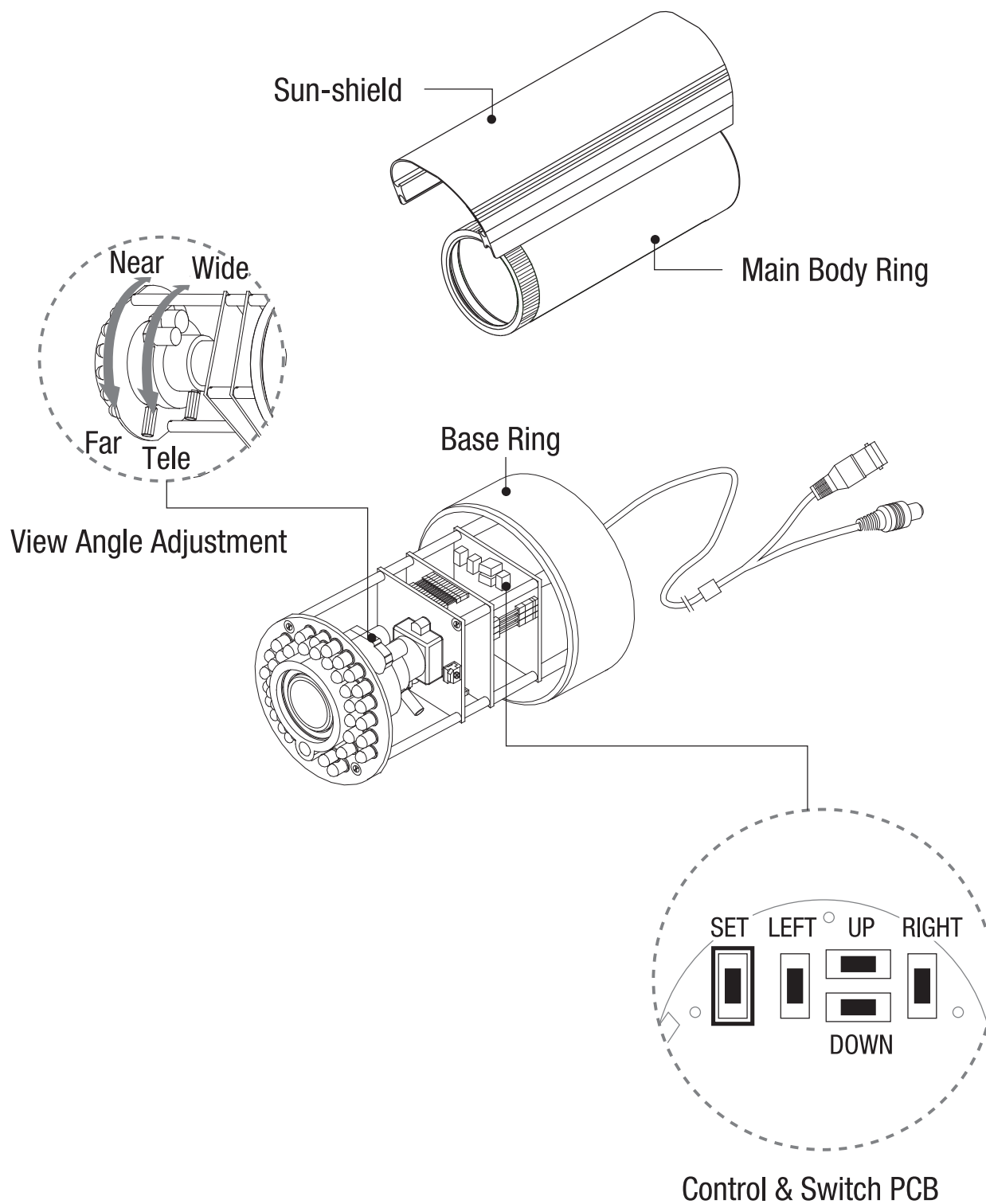
- 1/3" CCD Sensor
- High Resolution – 550 TV Lines(Color), 600TV Lines(B/W)
- 3.8~9.5mm Vari-focal Lens, DC Auto Iris
- Day/Night Function with ICR
- 36 IR LEDs
- Auto Switching CDS Sensor
- IR Visual Distance: Up to 100 ft
- 0.1 Lux(Color), 0.00 Lux(B/W, IR LED On)
- Weatherproof (IP65)
- Sun-shield w/ Feed-Through Bracket
- Power: 12VDC/24VAC Dual Voltage
- Compact Size

# Dimensions (UNIT: mm)

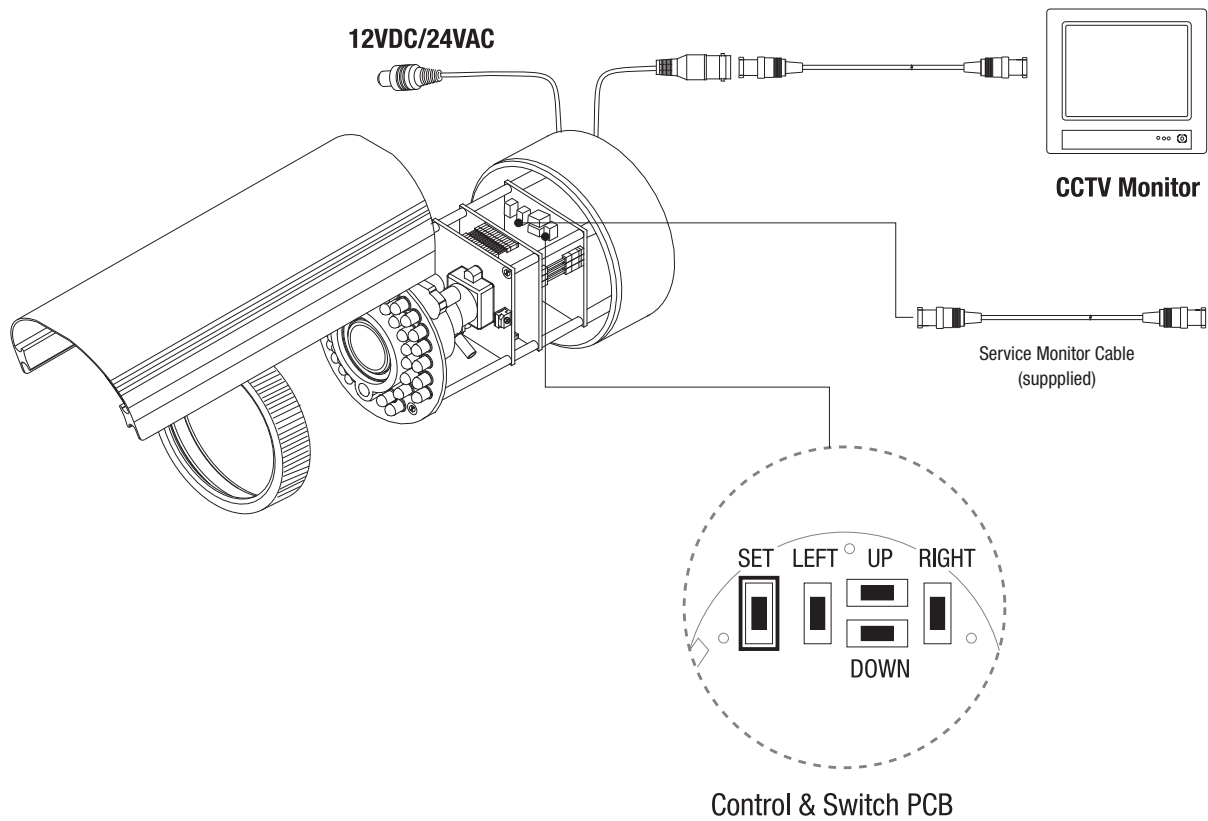
---



# Parts Name & Descriptions



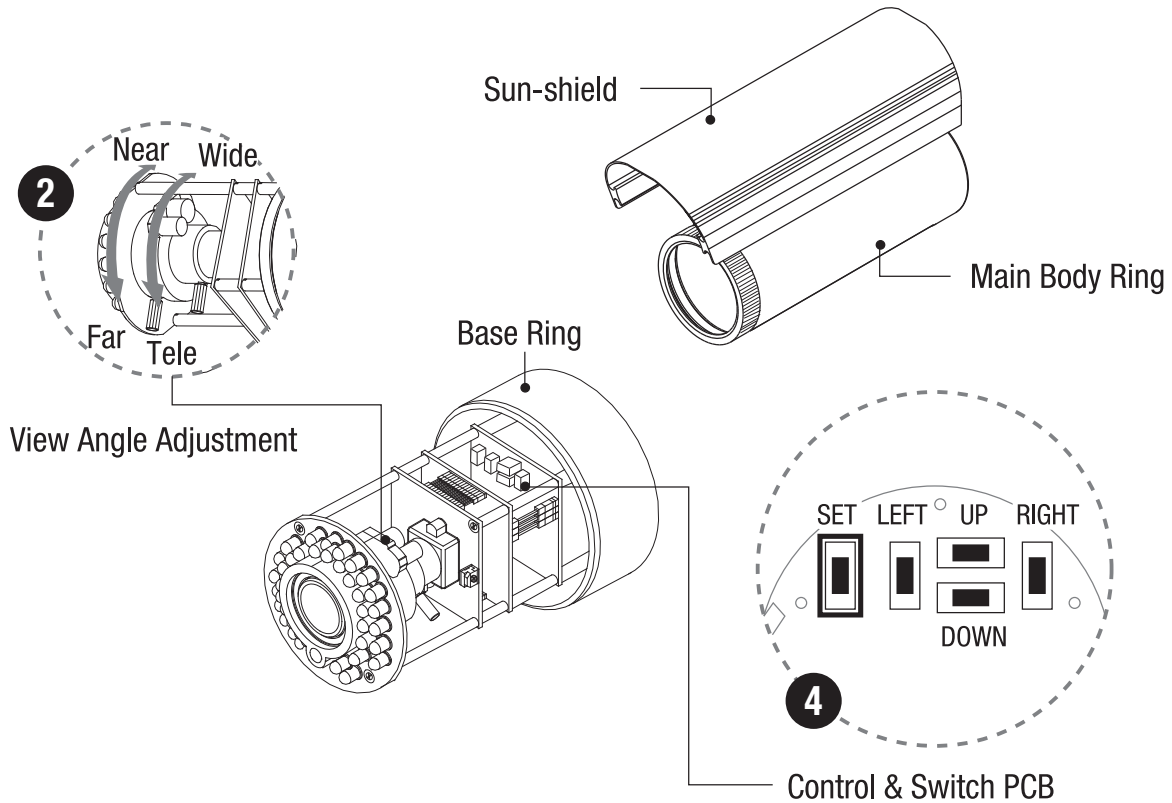
# Connections



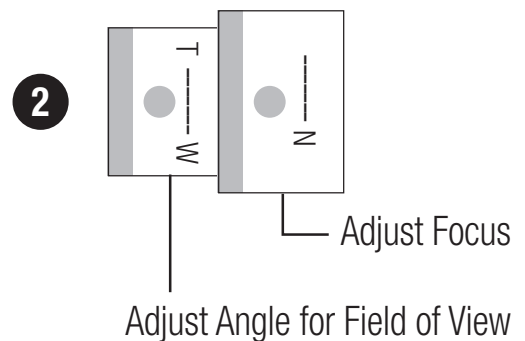
- Power connection - Requires 12VDC or 24VAC (Auto-Polarity Detection and Protection).
- This camera is supplied with a second video output on the camera module. To use this feature along with a service monitor, a second monitor and cable is required.

# Vari-focal, DC Auto Iris Lens Adjustments

- 1 Untighten Main Body Ring cover from the Base Ring.



- 2 Loosen Zoom & Focus screws and make necessary adjustments as shown.  
**Field of View:** Telephoto( T ) to Wide( W )  
**Focus:** Near( N ) to Infinity( ∞ )



- 3 Tighten Main Body Ring back to the Base Ring.
- 4 Please refer to Page 10 of this manual for further instructions.

# OSD Menu Instructions

## Menu & Setting Details

	Main Menu		
<b>LENS</b>	• DC	BRIGHTNESS	1-70 (25)
<b>SHUTTER</b>	• NONE		
	• FLK		
	• ESC	BRIGHTNESS	1-70 (25)
<b>WHITE BALANCE</b>	• ATW	MODE	NORMAL
			SPECIAL
	• MANUAL	RED	0-256(32)
		BLUE	1-256(39)
	• AWC	N/A	
<b>BACKLIGHT</b>	• OFF		
	• LOW		
	• MIDDLE		
	• HIGH		
<b>AGC</b>	• OFF		
	• NORMAL	BRIGHTNESS	1-70 (25)
	• HIGH	BRIGHTNESS	1-70(25)
<b>DNR</b>	• OFF		
	• LOW		
	• MIDDLE		
	• HIGH		
<b>DSS</b>	• OFF		
	• AUTO	LIMIT	x2 - x128 (x8)

# OSD Menu Instructions

## Menu & Setting Details

	Main Menu		
SPECIAL	• CAMERA ID	OFF	
		ON	
	• COLOR	ON	
		AUTO	
		BW	
	• DZOOM	OFF	
		ON	x1- x8 (x1)
	• SYNC	INT	
	• MOTION DET	OFF	
		ON	AREA SEL <b>AREA</b> 1, 2, 3, or 4
			AREA STATE ON/OFF
			TOP
			DOWN
			LEFT
			RIGHT
	• PRIVACY	OFF	
		ON	AREA SEL <b>AREA</b> 1, 2, 3, or 4
			AREA STATE ON/OFF
			TOP
			DOWN
			LEFT
			RIGHT
	• MIRROR	OFF	
		ON	
	• SHARPNESS	ON	LEVEL 0~31 (8)
		OFF	
	• RESET		
	• RETURN		

# OSD Menu Instructions

---

## OSD Menu Control

MENU KEY - Used to access menu mode, Also used to confirm the setting

UP / DOWN KEY - Used to choose the desired menu selection.

LEFT / RIGHT KEY - Used to choose the desired menu feature adjustment.

## OSD Menu ENTER / EXIT

### A. OSD MENU ENTER

- Push Menu Key

### B. OSD MENU EXIT

- Press EXIT Menu from Main Menu

# OSD Menu Instructions

---

## Main Menu

### A. LENS

This function is used to adjust the brightness of the screen.

- DC: The brightness can be adjusted in DC mode. The brightness can be adjusted within the range of 1 to 70.

### B. SHUTTER

This function is used to control the condition and speed.

- NONE: Shutter is off.
- FLK: Select 'FLK' mode when flickering occurs on the screen due to imbalance between illumination and frequency.
- ESC: Select 'ESC' mode for automatic control of shutter speed. The speed is controlled automatically according to the brightness of the screen.

### C. WHITE BALANCE

This function is used to balance the screen color.

- ATW (Auto Tracking White Balance):

Select 'ATW' when using within the color temperature range of 1,800°K to 10,500°K (Ex. Fluorescent light, outdoor, sodium vapor lamp or inside tunnels)

- AWC (Auto White Balance Control):

Select SETUP button while the camera is directed at a piece of white paper to obtain the optimum state under current illumination. If the environment including the light source is changed, you have to adjust the white balance again.

- MANUAL (Auto White Balance Control):

Select ATW or AWC first before selecting Manual mode. Once Manual mode is selected, select SETUP. Set the appropriate color temperature, and increase or decrease the red and blue color values while monitoring the color changes on the object. The Manual mode enables finer adjustment.

# OSD Menu Instructions

---

## **D. BACKLIGHT**

This function is used when there is strong light in the background.

- OFF: Backlight Compensation is off.
- LOW: Select if there is little light in the background.
- MIDDLE: Select if there is moderate light in the background.
- HIGH: Select if there is a great amount of light in the background.

## **E. AGC**

This function is used to adjust the level of gain. As the level of gain increases, the screen gets brighter and the level of noise also increases.

- OFF: The gain is fixed at 6dB.
- NORMAL: The gain increases or decreases within the range of 6dB to 30dB.
- HIGH: The gain increases or decreases within the range of 6dB to 34dB.

## **F. DNR**

This function is used to reduce the signal noise on the screen.

- OFF
- LOW
- MIDDLE
- HIGH

## **G. DSS**

This function is used to help maintain a bright, clear screen image by automatically detecting changes in the level of light in low light conditions.

- OFF: DSS function off.
- AUTO: Low light level auto mode.

\* DSS does not operate if SHUTTER is set to MANUAL

\* DSS does not operate if AGC is turned OFF.

# OSD Menu Instructions

---

## H. SPECIAL

### CAMERA ID

- ON: CAMERA ID is displayed on the monitor.

If the CAMERA ID has not been set, please follow these directions:

1. Press the LEFT or RIGHT button to turn the Camera ID mode to “on”.
2. Press SETUP for the camera ID screen.
3. By pressing the RIGHT, LEFT, UP and DOWN keys, select up to 15 letters for your camera ID.
4. Press SETUP again to lock those letters.
5. Continue to select letters for the next space.
6. Repeat these steps to input the complete ID.
7. Move the cursor to ‘POS’ and press SETUP again.
8. The name will appear on the top left hand corner.
9. Use the LEFT, RIGHT, UP, and DOWN keys to select the position of the Camera ID.
10. Press ‘END’ and then press the SETUP button to complete ID input.

- OFF: Camera ID is not displayed on the monitor.

### COLOR

The functions in COLOR mode are used to change the appropriate mode for daytime or night-time.

- ON: The COLOR mode is selected electronically.
- AUTO: The COLOR mode is operated for daytime, and it automatically converts to BW mode for night-time.
- BW: The COLOR mode is operated for night time.

### DZOOM

This function is used when Digital Zoom is preferred.

- On
- Off

# OSD Menu Instructions

---

## **SYNC**

This function is used when synchronization with the legacy system is needed.

- INT: Internal Synchronization.
- LL: External Synchronization.(Optional)

## **MIRROR**

- OFF: Cancels the inversion.
- ON: Sets a horizontal image inversion.

## **SHARPNESS**

- OFF: Sharpness mode is off.
- ON: Enables to adjust the sharpness of the video image.  
To adjust, follow these instructions:

Press the SETUP button.

Press the LEFT and RIGHT button to adjust the sharpness.

## **RESET**

This function resets all of the settings in the menu to the level set by the manufacturer for shipment.

## **RETURN**

This function returns to the SETUP menu.

## **I. EXIT**

Saves all the setting menus and then exits.

# Specifications

Description	Day/Night Color Bullet Camera	
Video Format	NTSC	PAL
Image Sensor	1/3" CCD	
Sync System	Internal / Line Lock(Optional)	
Scanning system	525 Lines, 2:1 Interlaced	
Electronic Shutter	1/60 ~ 1/100,000 sec.	1/50 ~ 1/100,000 sec.
Main Video Output	1.0 Vp-p Composite, 75 ohm	
Service Monitor Output	1.0 Vp-p Composite, 75 ohm	
Horizontal Resolution	550 TV Lines(Color), 600 TV Lines(B/W)	
Min. Illumination	0.1 Lux(Color), 0.00 Lux(B/W, IR LED On)	
S/N Ratio	More than 50dB(AGC Off)	
Day/Night Function	ICR	
36 IR LEDs	LED Distance: upto 100 ft.	
Lens Options (DC Auto Iris)	3.8~9.5mm	
Camera Control & Setup	OSD Menu	
Operating Temperature	-15°C ~ +50°C	
Operating Humidity	Within 90% RH	
Weatherproof	IP65	
Power Consumption	1Amp(w/ LED On)	
Power Requirement	12VDC/24VAC Dual Voltage	

\* Must use specified and regulated 12VDC/24VAC power supply.



