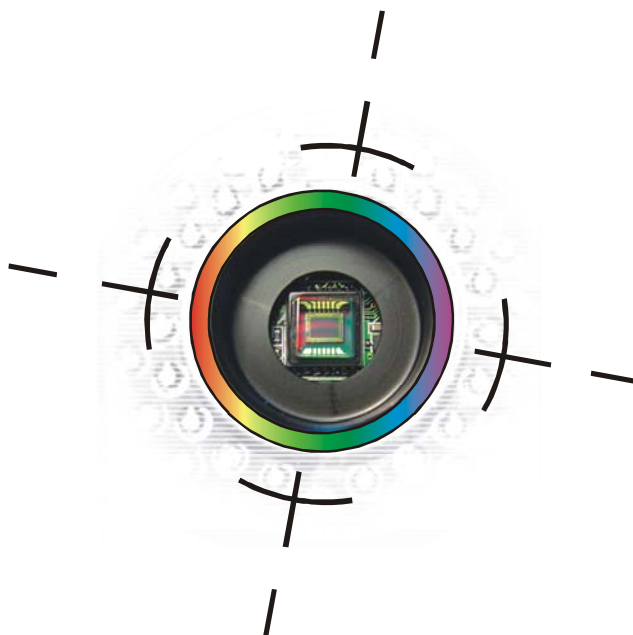


*Operating Instructions*

### **User's Manual**

Please read this instruction thoroughly before operation and retain it for future reference.

REGULAR\_V1.4



*Operating Instructions*

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REGULAR\_V1.4

## **Thank-You Note Before You Get Start**

First of all, we would like to express our gratitude to you for purchasing CPcam products. Once again, this product is designed uniquely to meet all your personal needs with our great industry-designing ability and our everlasting perseverance to the quality of all our products.

This manual will introduce you how to install this camera. Please keep it well for your future reference.

Now, we would like to invite you to personally experience this user-friendly manual and all of the powerful functions this CPcam product offers.

<http://www.cpcamcctv.com>

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## CAUTION

### RISK OF ELECTRIC SHOCK



**CAUTION:**

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture.

Only operate this apparatus from the type of power source indicated on the label.

Our company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



CE Mark

This apparatus is manufactured to comply with the radio interference.

Our company does not warrant that this manual will be uninterrupted or error-free. We reserve the right to revise or remove any content in this manual at any time.



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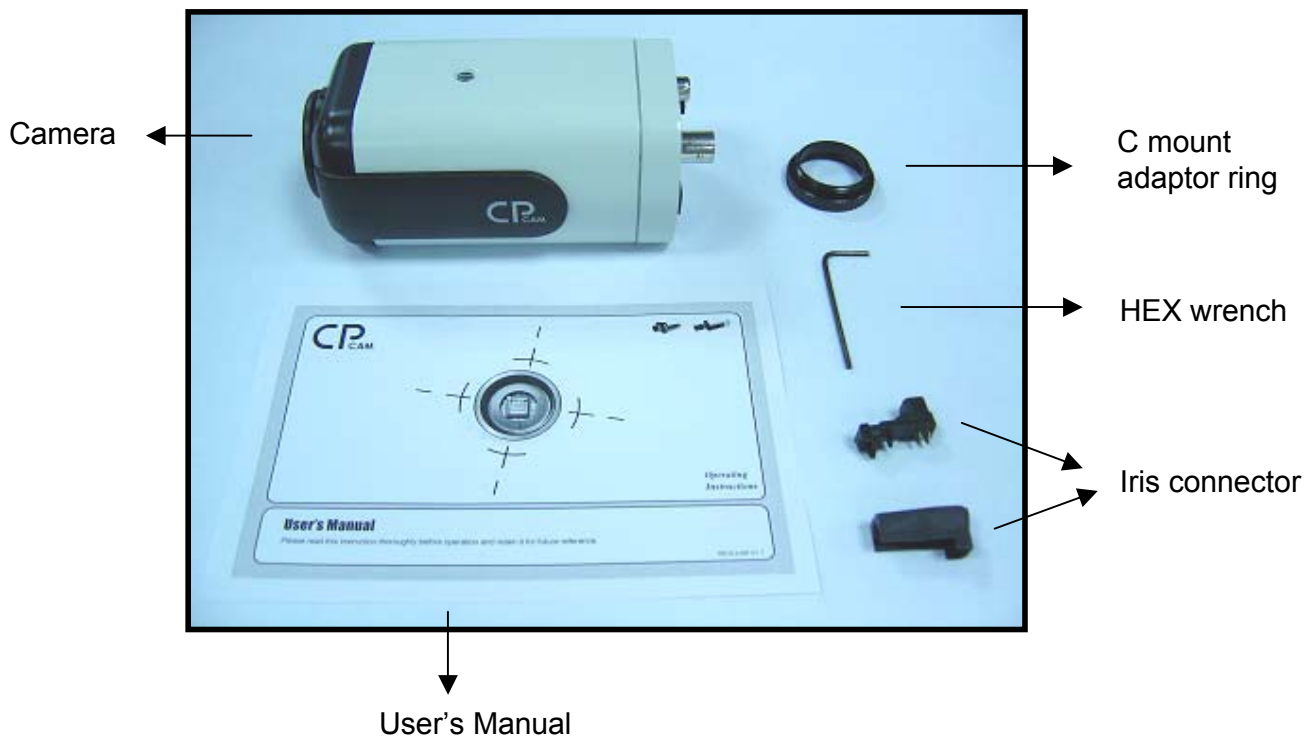


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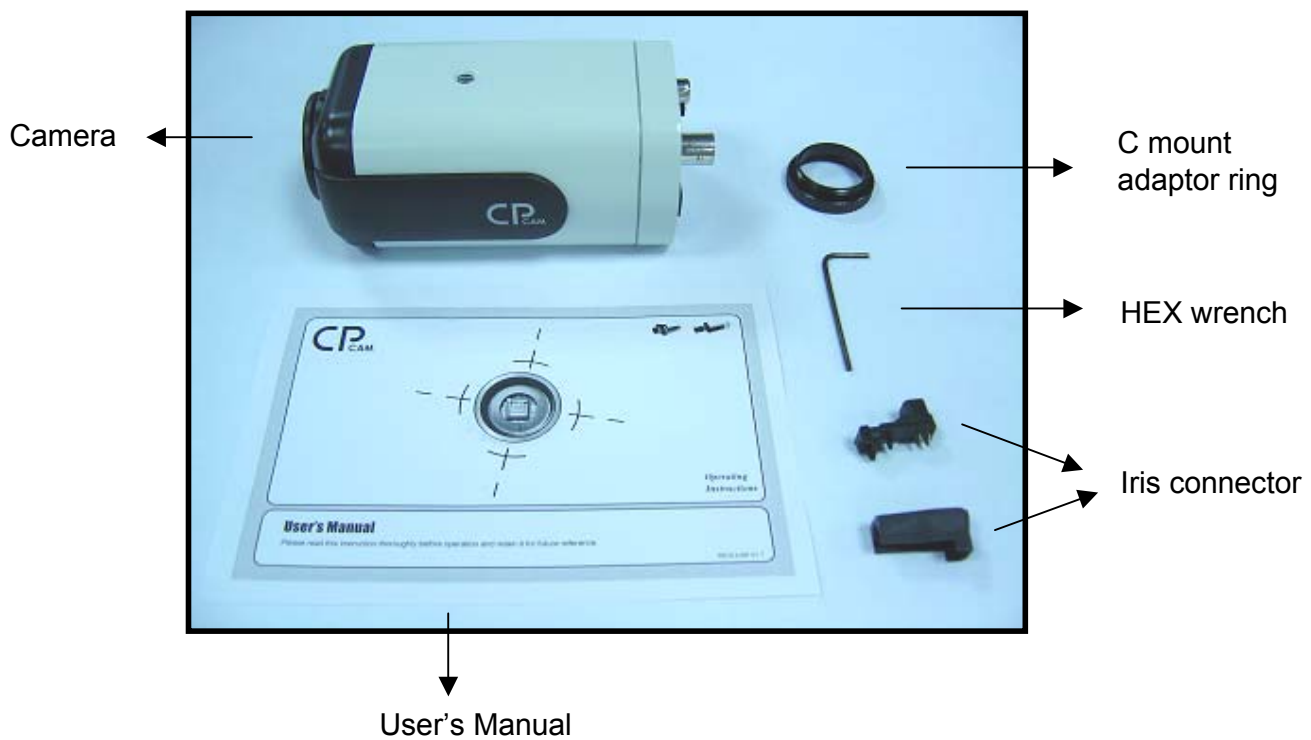
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## PACKAGE CONTENT



1

## PACKAGE CONTENT



1

## CONNECTION

**STEP 1.** Mount the lens onto the camera.

**STEP 2.** Set the lens selection switch (AES/AI).

**STEP 3.** Connect the camera video output and the monitor video input with a 75Ω coaxial cable.

**STEP 4.** Connect the camera audio output and the monitor audio input with a coaxial cable.

**STEP 5.** Connect the power terminal of the camera to a right power supply.

**STEP 6.** Adjust the focus or flange-back. (refer to page 3)



**ATTENTION:** When using DC 12V camera, it must connect with regulated power adaptor **ONLY**.

2

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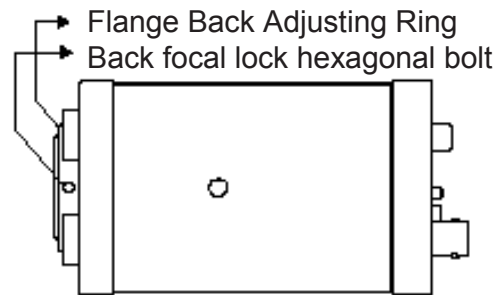


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2

## FOCUS OR FLANGE-BACK ADJUSTMENT

The following adjustment should be made by qualified service personnel or system installers.

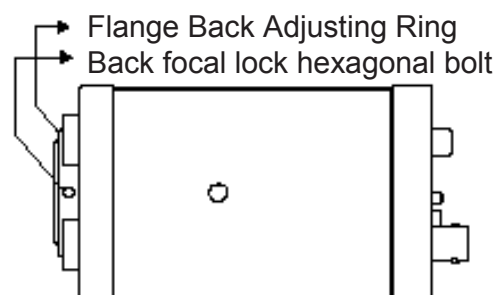


1. Mount the lens by turning it clockwise on the lens mount of the camera.
2. Loosen the screws on the flange-back adjusting ring.
3. Turn the flange-back adjusting ring to the desired position.
4. Tighten the hexagonal bolt on the flange-back adjusting ring with the HEX wrench.

3

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3

## AUTO IRIS LENS CONNECTOR INSTALLATION

### Installation of Auto Iris Lens Connector

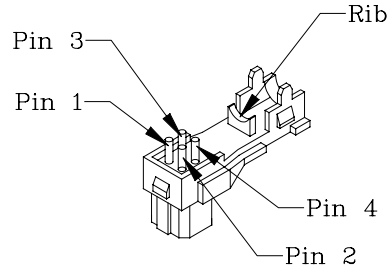
Install the lens connector when using auto Iris Lens.

The installation should be accomplished by qualified technician or system installers.

Cut the iris control cable at the edge of the lens connector to remove the existing lens connector and then remove the outer cable cover of the supplied connector as shown in the diagram.

**The pin assignment of the auto iris lens connector is as follows:**

	Video Drive Lens	Direct Drive Lens
Pin 1:	Power source	Damp-
Pin 2:	Video signal	Damp+
Pin 3:	Not used	Driver+
Pin 4:	Ground, Shield	Driver-



Solder the lens cable to the pins of the supplied connector.

4

## AUTO IRIS LENS CONNECTOR INSTALLATION

### Installation of Auto Iris Lens Connector

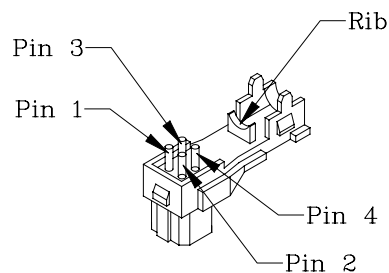
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4

## FEATURES

CPC	111	211	212	213	311	312	313	315	316	319
Sony CCD sensor		•	•	•	•	•	•	•	•	•
High Resolution				•			•		•	•
Min.Illumination 0.06Lux / F1.2	•									
Min.Illumination 0.1Lux / F1.2		•	•		•	•		•		
Min.Illumination 0.25Lux / F1.2				•			•		•	•
AES / D.D / V.D selectable	•	•	•	•	•	•	•	•	•	•
Signal-to-Noise ratio is more than 48dB (AGC off)	•	•	•	•	•	•	•	•	•	•
Backlight compensation ON/OFF selectable		•	•	•	•	•	•	•	•	•
White balance mode ATW/HOLD selectable		•	•	•			•		•	•
Support audio function	•	•	•	•	•	•	•	•	•	•
DAY & NIGHT function, compatible with IR lens			•			•				
Flick less ON (NTSC:1/100) (PAL:1/120) / OFF selectable					•	•	•	•	•	•
Color rolling Less ON/OFF selectable							•		•	•

5

## FEATURES

CPC	111	211	212	213	311	312	313	315	316	319
Sony CCD sensor		•	•	•	•	•	•	•	•	•
High Resolution				•			•		•	•
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Min.Illumination 0.25Lux / F1.2				•			•		•	•
AES / D.D / V.D selectable	•	•	•	•	•	•	•	•	•	•
Signal-to-Noise ratio is more than 48dB (AGC off)	•	•	•	•	•	•	•	•	•	•
Backlight compensation ON/OFF selectable		•	•	•	•	•	•	•	•	•
White balance mode ATW/HOLD selectable		•	•	•			•		•	•
Support audio function	•	•	•	•	•	•	•	•	•	•
DAY & NIGHT function, compatible with IR lens			•			•				
Flick less ON (NTSC:1/100) (PAL:1/120) / OFF selectable					•	•	•	•	•	•
Color rolling Less ON/OFF selectable							•		•	•

5



## SPECIFICATION

Model	CPC111	CPC211	CPC212
Pick up Element	1/3" B / W CCD sensor		1/3" Sony Color CCD sensor
Number of Pixels	510 (H) x 492 (V) <EIA> / 500 (H) x 582 (V) <CCIR>		510 (H) x 492 (V) <NTSC> / 500 (H) x 582 (V) <PAL>
Resolution	Standard		
Min. Illumination	0.06 Lux / F1.2		0.1 Lux / F1.2
S / N Ration	More than 48dB (AGC off)		
Electronic Shutter	1/60(1/50) to 1/100,000 sec.		
Lens Mount	C / CS mount changeable		
Iris Mode	AES / D.D / V.D selectable		
BLC	-		ON / OFF
AGC	Auto		
Sharpness	-		Soft / Sharp
White Balance	-		ATW / HOLD
Video Output	1.0 Vp-p composite, 75Ω		
Microphone	Yes		
Power Source	DC12V ± 10% regulated		
Current Consumption	120 mA		110 mA
Operating Temperature	0°C ~40 °C (32°F ~104°F)		
Dimension (mm)	65.5 (W) x 50 (H) x 107.3 (L)		
Gross Weight	356g		

6

## SPECIFICATION

Model	CPC111	CPC211	CPC212
Pick up Element	1/3" B / W CCD sensor		1/3" Sony Color CCD sensor
Number of Pixels	510 (H) x 492 (V) <EIA> / 500 (H) x 582 (V) <CCIR>		510 (H) x 492 (V) <NTSC> / 500 (H) x 582 (V) <PAL>
Resolution	Standard		
Min. Illumination	0.06 Lux / F1.2		0.1 Lux / F1.2
S / N Ration	More than 48dB (AGC off)		
Electronic Shutter	1/60(1/50) to 1/100,000 sec.		
Lens Mount	C / CS mount changeable		
Iris Mode	V.D / D.D / AES selectable		
BLC	-		ON / OFF
AGC	Auto		
Sharpness	-		Soft / Sharp
White Balance	-		ATW / HOLD
Video Output	1.0 Vp-p composite, 75Ω		
Microphone	Yes		
Power Source	DC12V ± 10% regulated		
Current Consumption	120 mA		110 mA
Operating Temperature	0°C ~40 °C (32°F ~104°F)		
Dimension (mm)	65.5 (W) x 50 (H) x 107.3 (L)		
Gross Weight	356g		

6

Model	CPC213	CPC311	CPC312
Pick up Element	1/3" Sony Color CCD sensor	1/3" Sony Color CCD sensor (With Sony DSP)	
Number of Pixels	768 (H) x 494 (V) <NTSC> / 752 (H) x 582 (V) <PAL>	510 (H) x 492 (V) <NTSC> / 500 (H) x 582 (V) <PAL>	
Resolution	H.R.	Standard	
Min. Illumination	0.25 Lux / F1.2	0.1 Lux / F1.2	
S / N Ration	More than 52dB (AGC off)	More than 48dB (AGC off)	
Electronic Shutter	1/60(1/50) to 1/100,000 sec.		
Lens Mount	C / CS mount changeable		
Iris Mode	AES / D.D / V.D selectable		
BLC	ON / OFF		
AGC	Auto	Normal / Max selectable	
Sharpness	Soft / Sharp	-	
Flick less	-	On (FL1/100(120)) / Off selectable	
White Balance	ATW / HOLD	ATW	
Video Output	1.0 Vp-p composite, 75Ω		
Microphone	Yes		
Power Source	DC12V ± 10% regulated		
Current Consumption	110 mA	120 mA	
Operating Temperature	0°C ~40 °C (32°F ~104°F)		
Dimension (mm)	65.5 (W) x 50 (H) x 107.3 (L)		
Gross Weight	356g		

7

Model	CPC213	CPC311	CPC312
Pick up Element	1/3" Sony Color CCD sensor	1/3" Sony Color CCD sensor (With Sony DSP)	
Number of Pixels	768 (H) x 494 (V) <NTSC> / 752 (H) x 582 (V) <PAL>	510 (H) x 492 (V) <NTSC> / 500 (H) x 582 (V) <PAL>	
Resolution	H.R.	Standard	
Min. Illumination	0.25 Lux / F1.2	0.1 Lux / F1.2	
S / N Ration	More than 52dB (AGC off)	More than 48dB (AGC off)	
Electronic Shutter	1/60(1/50) to 1/100,000 sec.		
Lens Mount	C / CS mount changeable		
Iris Mode	AES / D.D / V.D selectable		
BLC	ON / OFF		
AGC	Auto	Normal / Max selectable	
Sharpness	Soft / Sharp	-	
Flick less	-	On (FL1/100(120)) / Off selectable	
White Balance	ATW / HOLD	ATW	
Video Output	1.0 Vp-p composite, 75Ω		
Microphone	Yes		
Power Source	DC12V ± 10% regulated		
Current Consumption	110 mA	120 mA	
Operating Temperature	0°C ~40 °C (32°F ~104°F)		
Dimension (mm)	65.5 (W) x 50 (H) x 107.3 (L)		
Gross Weight	356g		

7

Model	CPC313	CPC315	CPC316
Pick up Element	1/3" Sony Color CCD sensor (With Sony DSP)		
Number of Pixels	768 (H) x 494 (V) <NTSC> 752 (H) x 582 (V) <PAL>	510 (H) x 492 (V) <NTSC> 500 (H) x 582 (V) <PAL>	768 (H) x 494 (V) <NTSC> 752 (H) x 582 (V) <PAL>
Resolution	H.R.	Standard	H.R.
Min. Illumination	0.25 Lux / F1.2	0.1 Lux / F1.2	0.25 Lux / F1.2
S / N Ration	More than 52dB (AGC off)	More than 48dB (AGC off)	More than 52dB (AGC off)
Electronic Shutter	1/60(1/50) to 1/100,000 sec.		
Lens Mount	C / CS mount changeable		
Iris Mode	AES / D.D / V.D selectable		
BLC	ON / OFF		
AGC	Normal / Max selectable		
Flick less	On (FL1/100(120)) / Off selectable		
White Balance	ATW / HOLD	ATW	ATW / HOLD
CRLESS	ON / OFF	—	ON / OFF
Video Output	1.0 Vp-p composite, 75Ω		
Microphone	Yes		
Power Source	DC12V ± 10% regulated	AC24V / DC12V ± 10% ; AC100V / AC230V ± 10%	
Power Consumption	160 mA	3 W	
Operating Temperature	0°C ~40 °C (32°F ~104°F)		
Dimension (mm)	65.5 (W) × 50 (H) × 107.3 (L)		
Gross Weight	356g	616g	

8

Model	CPC313	CPC315	CPC316
Pick up Element	1/3" Sony Color CCD sensor (With Sony DSP)		
Number of Pixels	768 (H) x 494 (V) <NTSC> 752 (H) x 582 (V) <PAL>	510 (H) x 492 (V) <NTSC> 500 (H) x 582 (V) <PAL>	768 (H) x 494 (V) <NTSC> 752 (H) x 582 (V) <PAL>
Resolution	H.R.	Standard	H.R.
Min. Illumination	0.25 Lux / F1.2	0.1 Lux / F1.2	0.25 Lux / F1.2
S / N Ration	More than 52dB (AGC off)	More than 48dB (AGC off)	More than 52dB (AGC off)
Electronic Shutter	1/60(1/50) to 1/100,000 sec.		
Lens Mount	C / CS mount changeable		
Iris Mode	AES / D.D / V.D selectable		
BLC	ON / OFF		
AGC	Normal / Max selectable		
Flick less	On (FL1/100(120)) / Off selectable		
White Balance	ATW / HOLD	ATW	ATW / HOLD
CRLESS	ON / OFF	—	ON / OFF
Video Output	1.0 Vp-p composite, 75Ω		
Microphone	Yes		
Power Source	DC12V ± 10% regulated	AC24V / DC12V ± 10% ; AC100V / AC230V ± 10%	
Power Consumption	160 mA	3 W	
Operating Temperature	0°C ~40 °C (32°F ~104°F)		
Dimension (mm)	65.5 (W) × 50 (H) × 107.3 (L)		
Gross Weight	356g	616g	

8

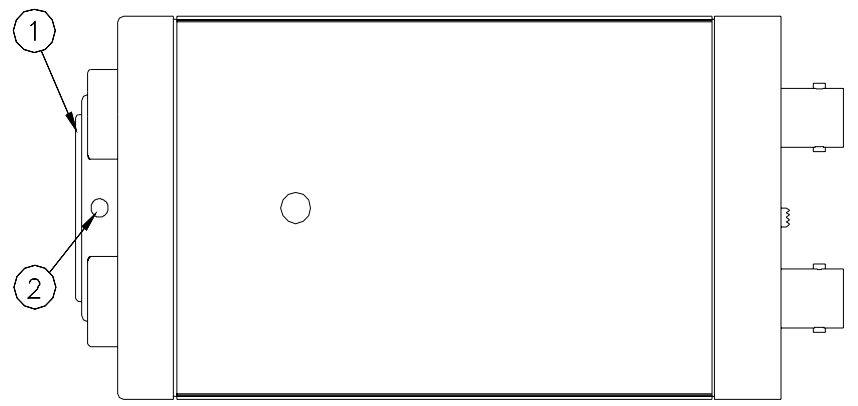
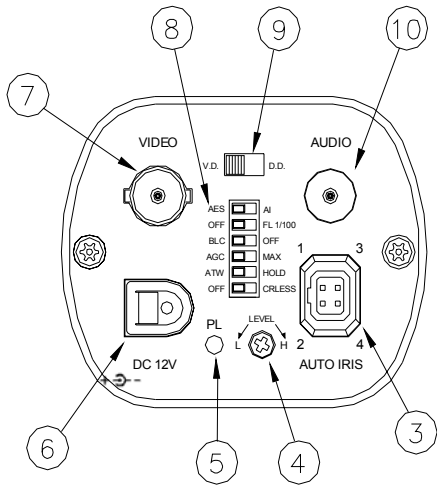
<b>Model</b>	CPC319
<b>Pick up Element</b>	1/3" SONY Color Super HAD CCD image sensor
<b>Number of Pixels</b>	768 (H) x 494 (V) <NTSC> / 752 (H) x 582 (V) <PAL>
<b>Resolution</b>	H.R.
<b>Min. Illumination</b>	0.25 Lux / F1.2
<b>S / N Ration</b>	More than 48dB (AGC off)
<b>Electronic Shutter</b>	1/60(1/50) to 1/100,000 sec.
<b>Lens Mount</b>	C / CS mount changeable
<b>Iris Mode</b>	AES / D.D / V.D selectable
<b>BLC</b>	ON / OFF
<b>AGC</b>	Normal / Max selectable
<b>Flick less</b>	On (FL1/100(120)) / Off selectable
<b>White Balance</b>	ATW / HOLD
<b>CRLESS</b>	ON / OFF
<b>Video Output</b>	1.0 Vp-p composite, 75Ω
<b>Microphone</b>	Yes
<b>Power Source</b>	AC24V / AC100V ~ 240V ± 10% / DC12V ± 10%
<b>Power Consumption</b>	3 W Max. (AC24V) / 2.4 W Max. (AC100V ~ 240V ± 10%) / 95mA ± 10% (DC12V)
<b>Operating Temperature</b>	0°C ~40 °C (32°F ~104°F)
<b>Dimension (mm)</b>	107.3(L) * 65.5(W) * 50(H)
<b>Gross Weight</b>	N / A

9

<b>Model</b>	CPC319
<b>Pick up Element</b>	1/3" SONY Color Super HAD CCD image sensor
<b>Number of Pixels</b>	768 (H) x 494 (V) <NTSC> / 752 (H) x 582 (V) <PAL>
<b>Resolution</b>	H.R.
<b>Min. Illumination</b>	0.25 Lux / F1.2
<b>S / N Ration</b>	More than 48dB (AGC off)
<b>Electronic Shutter</b>	1/60(1/50) to 1/100,000 sec.
<b>Lens Mount</b>	C / CS mount changeable
<b>Iris Mode</b>	AES / D.D / V.D selectable
<b>BLC</b>	ON / OFF
<b>AGC</b>	Normal / Max selectable
<b>Flick less</b>	On (FL1/100(120)) / Off selectable
<b>White Balance</b>	ATW / HOLD
<b>CRLESS</b>	ON / OFF
<b>Video Output</b>	1.0 Vp-p composite, 75Ω
<b>Microphone</b>	Yes
<b>Power Source</b>	AC24V / AC100V ~ 240V ± 10% / DC12V ± 10%
<b>Power Consumption</b>	3 W Max. (AC24V) / 2.4 W Max. (AC100V ~ 240V ± 10%) / 95mA ± 10% (DC12V)
<b>Operating Temperature</b>	0°C ~40 °C (32°F ~104°F)
<b>Dimension (mm)</b>	107.3(L) * 65.5(W) * 50(H)
<b>Gross Weight</b>	N / A

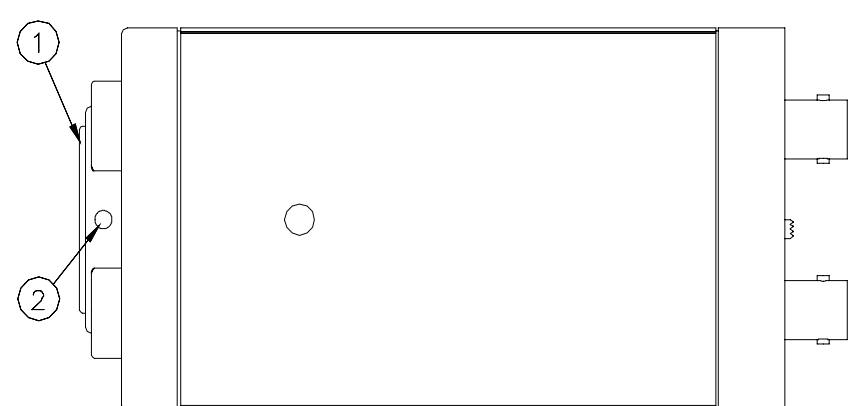
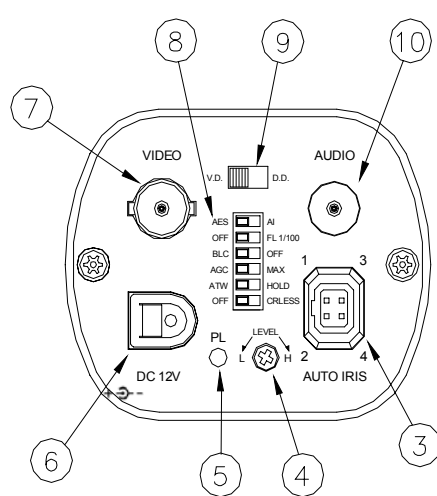
9

# MAJOR OPERATING CONTROL AND FUNCTIONS

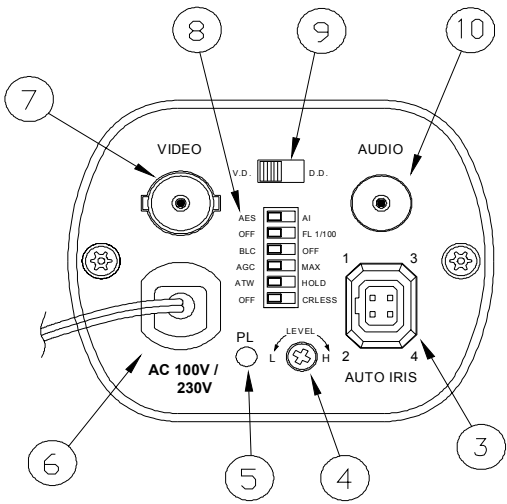


**(313, 319 DC 12V)**

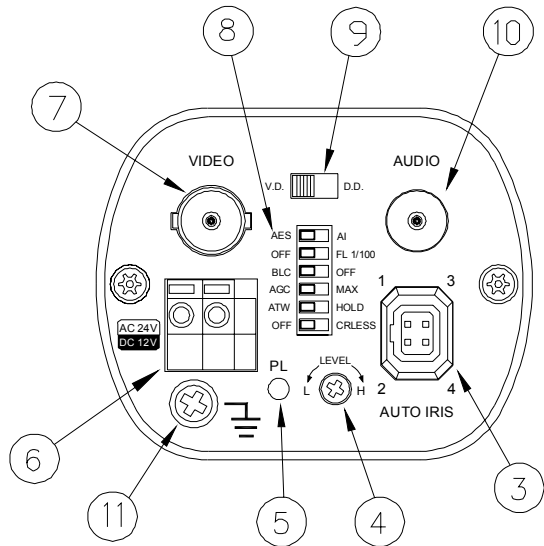
# MAJOR OPERATING CONTROL AND FUNCTIONS



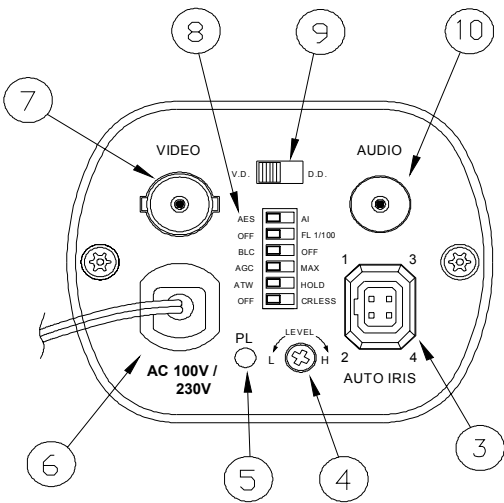
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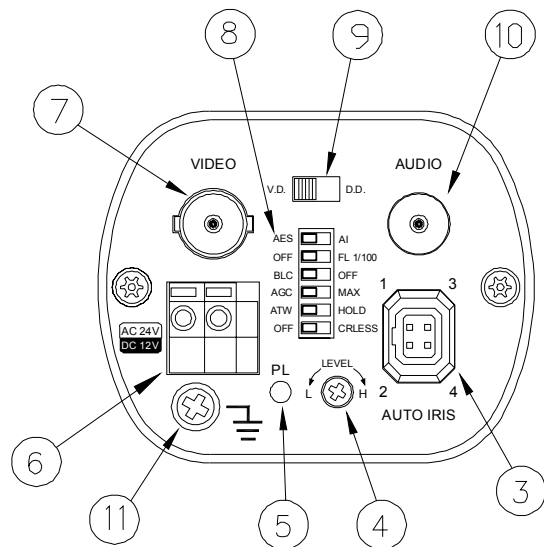
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(319 AC100V/230V)**



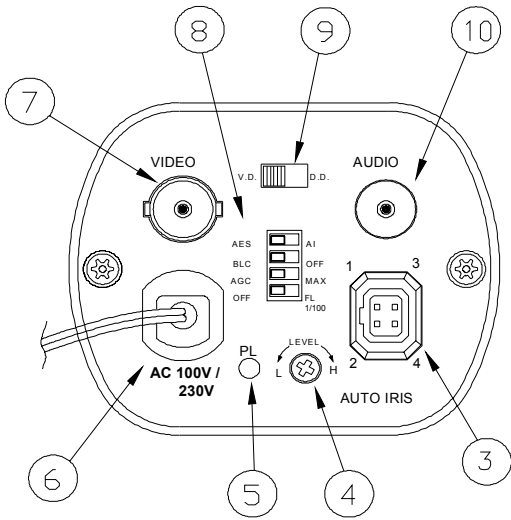
**(316 AC24V / DC12V)**



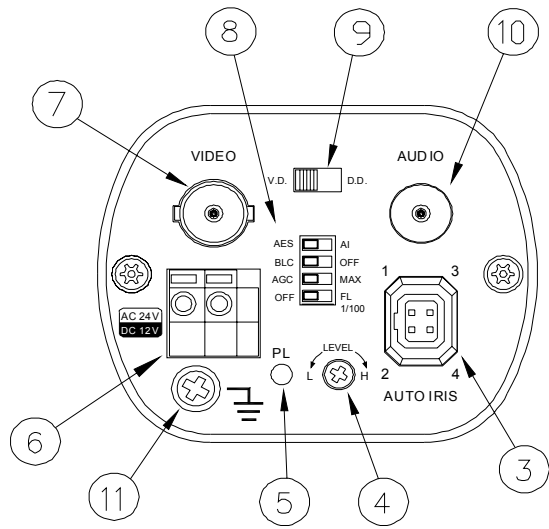
**(316 AC100V/230V)  
(319 AC100V/230V)**



**(316 AC24V/DC12V)**

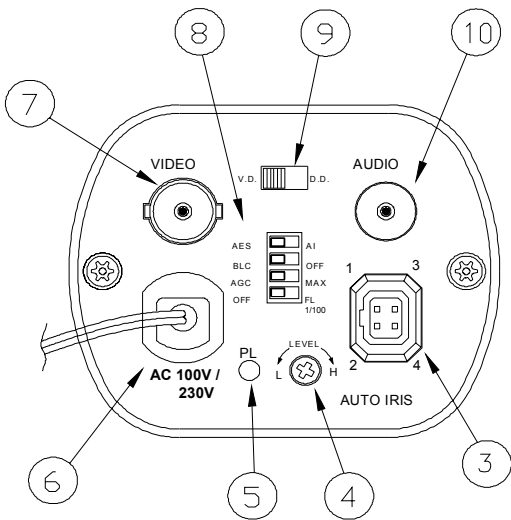


**(315 AV100V/AC230V)**

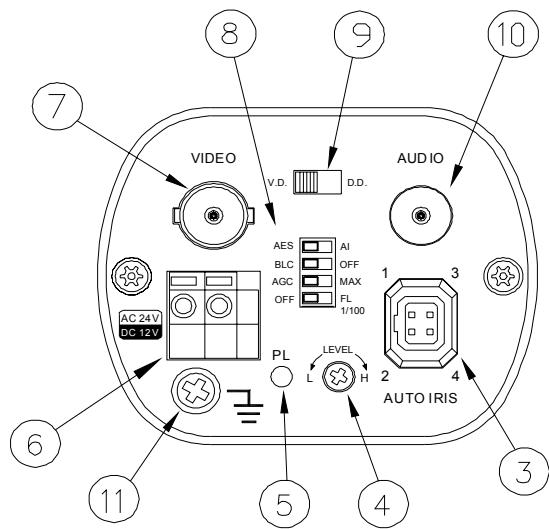


**(315 AC24V/DC12V)  
(Optional)**

12

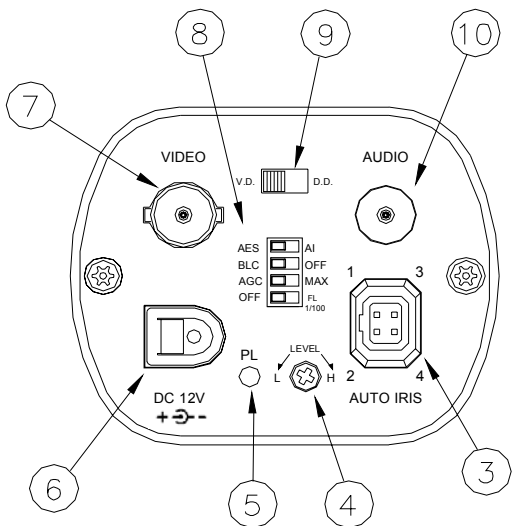


**(315 AV100V/AC230V)**

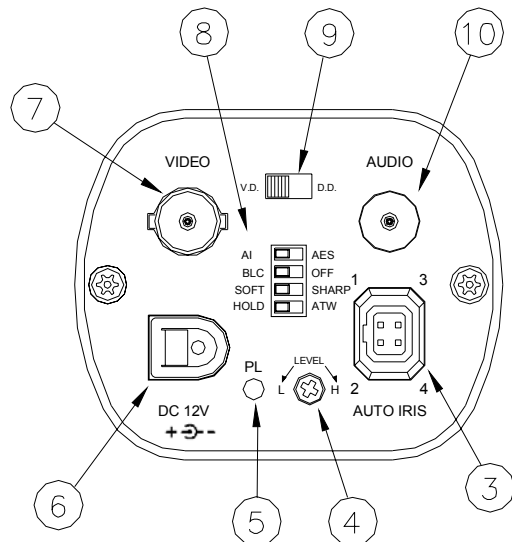


**(315 AC24V/DC12V)  
(Optional)**

12

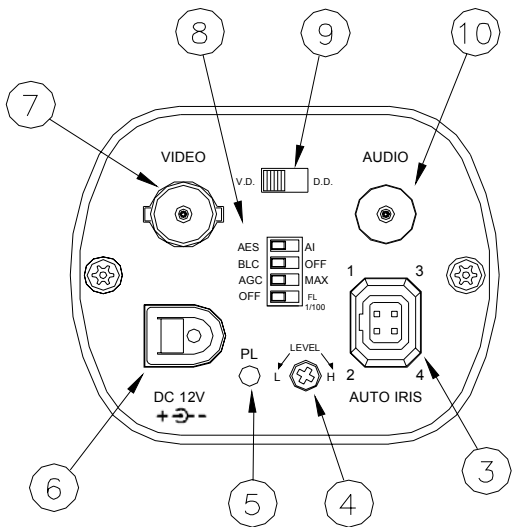


**(311 / 312 DC 12V)**

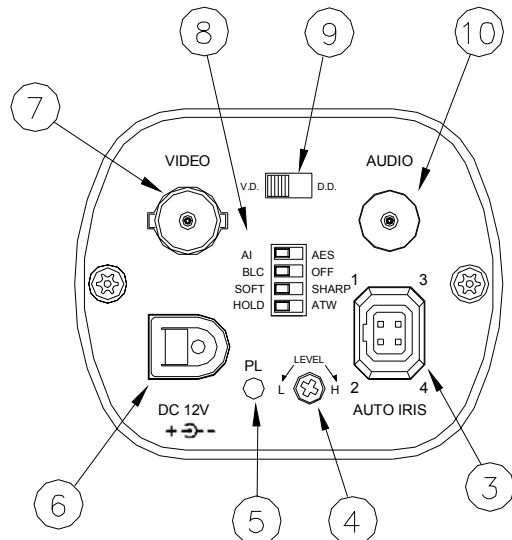


**(211 / 212 / 213 DC12V)**

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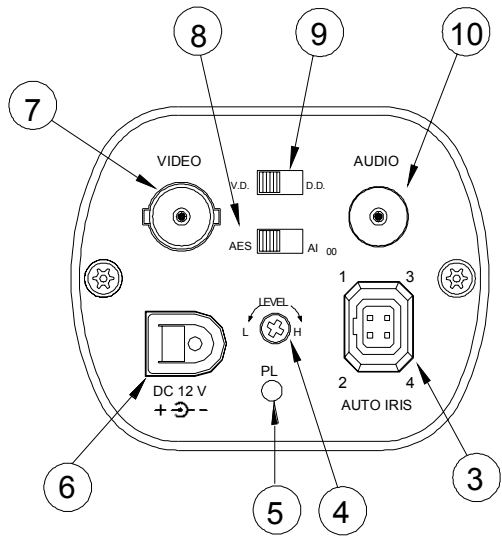
**(311 / 312 DC 12V)**



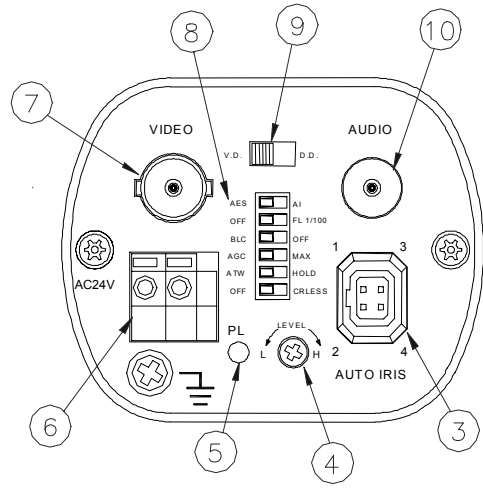
**(211 / 212 / 213 DC12V)**

13

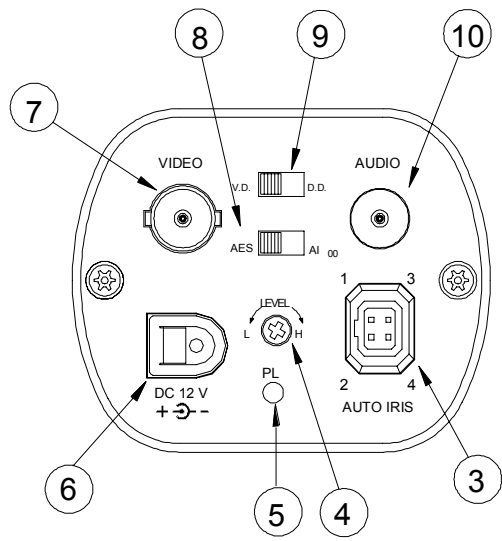




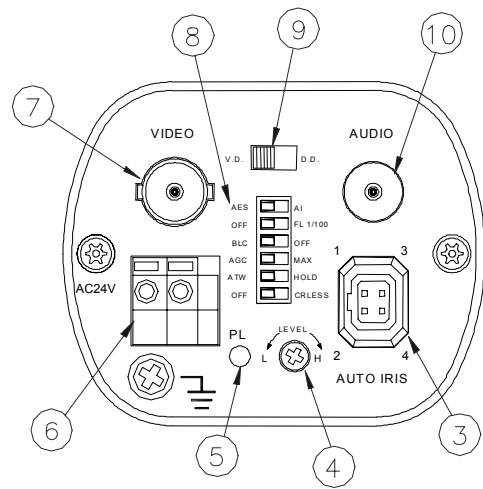
**(111 DC 12V)**



**(319 AC 24V)**



**(111 DC 12V)**



**(319 AC 24V)**

The pin assignment of the Auto Iris Lens connector is as follows:

1. **Flange Back Adjusting Ring**  
It is suitable for CS-mount lens. When using C-mount lens, please use the CS-C conversion Ring.
2. **Back focal lock hexagonal bolt**  
The camera is set at the standard back focal position. Fine-tuning is inevitable according to the lens types. Adjust the lens back-focus by turning the focusing knob.
3. **Auto Iris Lens Connector**  
Supplies power and controls signals to an Auto Iris Lens.
4. **DC Drive Level adjusting V.R**  
When using Direct Drive Lens, users could adjust the DC Drive Level for the bright of video output.
5. **Power LED Indicator**  
The Power LED Indicator indicates normal status during operation.
6. **Power Input Terminal**
  - \* For connecting the DC 12V regulated power supply.
  - \* For connecting the AC 24V / DC 12V regulated power supply.
  - \* For connecting to the regulated AC 100V / AC 230V power supply.
7. **Video Output Connector (VIDEO OUT)**  
For connecting coaxial cable to CCTV monitor video input.

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1. **Flange Back Adjusting Ring**  
It is suitable for CS-mount lens. When using C-mount lens, please use the CS-C conversion Ring.
2. **Back focal lock hexagonal bolt**  
The camera is set at the standard back focal position. Fine-tuning is inevitable according to the lens types. Adjust the lens back-focus by turning the focusing knob.
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Supplies power and controls signals to an Auto Iris Lens.
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7. **Video Output Connector (VIDEO OUT)**  
For connecting coaxial cable to CCTV monitor video input.

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## 8. Function Select

### 1) AES / AI:

AES(Automatic Electronic Shutter) – When using a manual iris lens or fixed iris lens, set this switch to AES.  
AI (Auto Iris Lens Connector) – This connector is used to connect with the auto iris by a 4 pin male connector.

### 2) OFF / FL 1/100 (NTSC):

FL 1/100 is Flick less 1/100 (means shutter fixed at 1/100 second)  
OFF/FL 1/120 (PAL) .FL 1/120 is Flick less 1/120 (means shutter fixed at 1/120 second)

### 3) BLC / OFF:

Backlight Compensation allows users to select the mode according to the position of the object and light conditions on the screen.

### 4) AGC / MAX:

Automatic Gain Control means automatically adjust the image to compensate for low levels of illumination. AGC Normal / AGC Max selectable.

### 5) ATW / HOLD:

Select White Balance mode between Auto Tracing White balance and HOLD white balance.

### 6) OFF / CRLESS:

Decrease color rolling (Color rolling means image running under illumination of fluorescent lamp. The image will shift from white color to bluish, pinkish and back to white over again.

This problem is caused by the AC power which is running On 50/60 Hz.

Note: When the function “CRLESS” is ON, the function “hold white balance” is invalid.

## 9. V.D. / D.D. selectable

When using Auto Iris Lens, users could select Video Drive or Direct Drive depend on the Lens.

## 10. Audio Output Connector (AUDIO OUT)

For connecting the AUDIO IN connector of the recording device.

## 11. Ground screw Terminal

For connecting with the ground (earth) of power supply cable.

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### 1) AES / AI:

AES(Automatic Electronic Shutter) – When using a manual iris lens or fixed iris lens, set this switch to AES.  
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