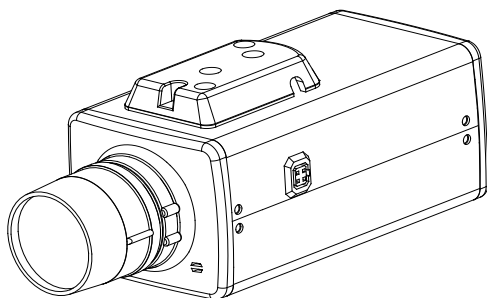**SENTRY US**

TV8T-700

<u>Operational Manual</u>

HD TVI 1080P ICR OSD
Box Camera

FEATURES

- Full HD TVI – 1920 x 1080P @ 25/30fps
- 1/2.8" Sony Progressive Exmor CMOS Sensor, 2.4 Megapixel
- Color: 0.05 Lux @ F1.2, B/W: 0.02 Lux @ F1.2, Sens-up: 0.001 Lux @ F1.2
- HD TVI / Composite BNC
- OSD Control / CoC (Via the coax)
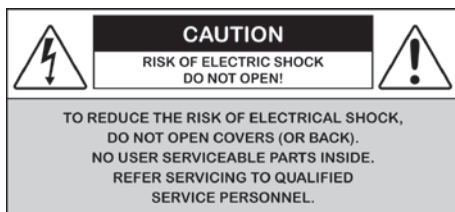- Mechanical IR Cut Filter (ICR)
- 12V DC; 4.2W

*Lens Not Included

⚠ *Please read <u>Manual</u> before attempting to use this product.*
Specifications and appearance are subject to change without notice.

RoHS FC CE

TVI-24

```
                    ⚡         CAUTION          ⚠
                         RISK OF ELECTRIC SHOCK
                              DO NOT OPEN!

                    TO REDUCE THE RISK OF ELECTRICAL SHOCK,
                         DO NOT OPEN COVERS (OR BACK).
                       NO USER SERVICEABLE PARTS INSIDE.
                          REFER SERVICING TO QUALIFIED
                              SERVICE PERSONNEL.
```

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems.)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CAUTION

1. Never point the camera toward the sun
Do not expose the lens directly to the sun or to strong light as this may damage the pick-up device.

2. Handle this camera with care
Avoid any shock or bumping of the camera. Improper handling could damage the camera.

3. Requires a proper operating environment
This camera is designed for indoor use. The allowable temperature range for operation of this camera is between 14°F ~ 122°F / -10°C ~ 50°C.

4. Clean the front face or lens
It is recommended that the surface be cleaned every 3~6 months. Cleaning should be done by using a chamois, a very fine soft cloth, lens tissue, or cotton tipped applicator and ethanol to carefully remove any fingerprint or dust.

5. Check the power source voltage
The power source voltage should be within the specified range. (Camera must meet the specifications). Camera must be connected to a surge protector at all times.

6. Objects and liquid entry
Never push objects of any kind into this camera as this may touch dangerous voltage points of short out parts that could result in a fire or electric shock. Never spill any kind of liquid on the video product.

7. Servicing
Do not attempt to service this video product by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all service to qualified servicing personnel.

8. Damage requiring service
Unplug this video product from the wall outlet and refer service to qualified servicing personnel under the following conditions:
     a. When the power supply cord or plug is damaged.
     b. If liquid has been spilled, or objects have fallen into the video product.
     c. If the video product has been exposed to rain or water.
     d. If the video product has been dropped or the cabinet has been damaged.
     e. When the video product exhibits a distinct change in performance.

LIMITED WARRANTY

SENTRY US products are covered under warranty for one (1) year from the date of purchase. The warranty will automatically be voided if any of the following occurs:

1. Camera sticker is removed
If the camera sticker is removed, we will not be able to confirm any information regarding when and where the product was purchased. We have no other way to verify the purchase record without the serial number on the camera sticker; therefore, it should not be removed.

2. Camera is modified in any way
If the camera is scratched, damaged, or modified in a manner not described in this manual, the warranty will be voided immediately. It is the customer's responsibility to keep the camera in good condition.
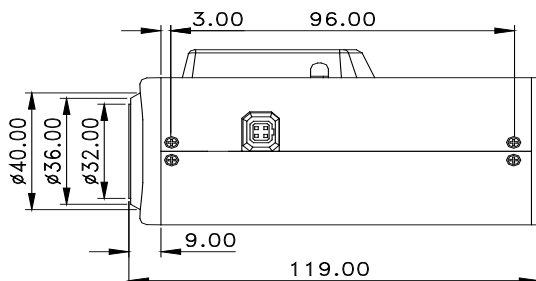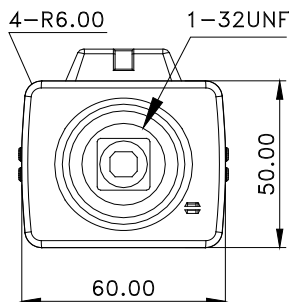
PACKAGE CONTENTS

A.   One (1) HD TVI Box Camera
B.   One (1) User Manual
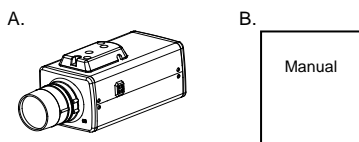
* For any returns, please include all components listed above with original packaging in **Resalable Condition**. **Absolutely No Returns** will be accepted if any component is missing/damaged.

A.

B.

Manual

DIMENSIONS (Unit: mm)

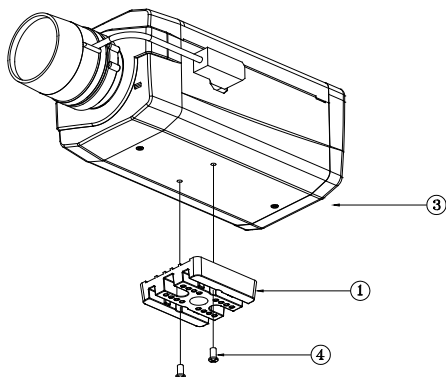4−R6.00   1−32UNF

50.00

60.00

3.00   96.00

ø40.00
ø36.00
ø32.00

9.00

119.00

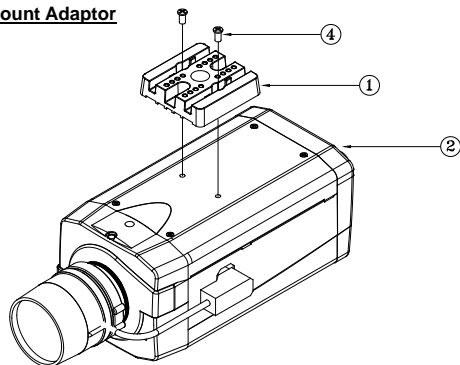# PARTS & FUNCTIONS

Side view (Auto IRIS)
Auto IRIS Pin
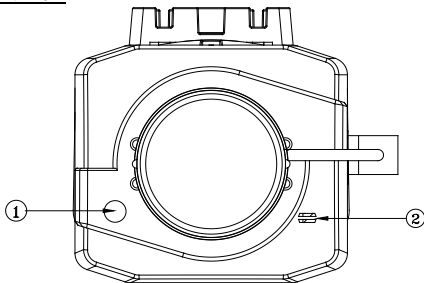(1) CON-
(2) CON+
(3) DR+
(4) DR-

1 3
2 4

Mount Adaptor

①   Mount Adaptor

②   Mount adaptor can be attached to the top of the camera (for hanging)

③   Mount adaptor can be attached to the bottom of the camera (for bracket)

④   Mount adaptor screw size: M2.6x0.45P

Front View

① Light Sensor: Keep clear the front of the sensor. If the sensor is covered, the camera will switch to B/W mode automatically.

② Microphone

Back Panel
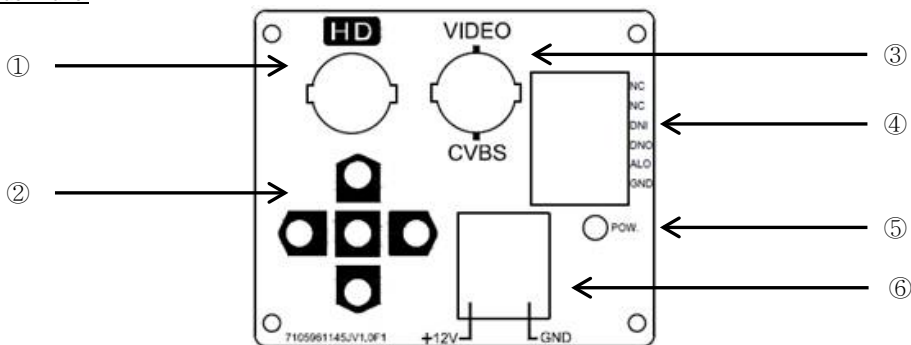
① **HD Out (Gold-plated BNC Connector)**
For HD signal output; CoC (Control over Coax) technology supported.

② **OSD Control Buttons**
ENTER button
UP & DOWN buttons
LEFT & RIGHT buttons

③ **Video Out (BNC Connector)**
For analog composite video TV signal output.

④ **Communication Port**
1. NC: Not Connected (No effect)
2. NC: Not Connected (No effect)
3. Day & Night External Input (controlled by external infrared illuminator)
4. Day & Night Output
5. ALO: Alarm Output
6. GND: Ground

⑤ **Power LED (Power Input Indicator)**
When the camera is connected to a power supply, the indicator light will be on.

⑥ **Power Input Terminal**
Connect to the power supply of 12Vdc.

OSD

A. CAMERA OSD
To operate the camera OSD setting, use the control key pad to control it. For some models, you might need to open the control panel case to access the control key panel. Press the **Enter** button which in the center of the control panel to bring up the "**MENU**" on the TV/Monitor screen as below. Please check the OSD content tables to find out the function you need.

*Note: Function Names and Default Values may vary depending on models.
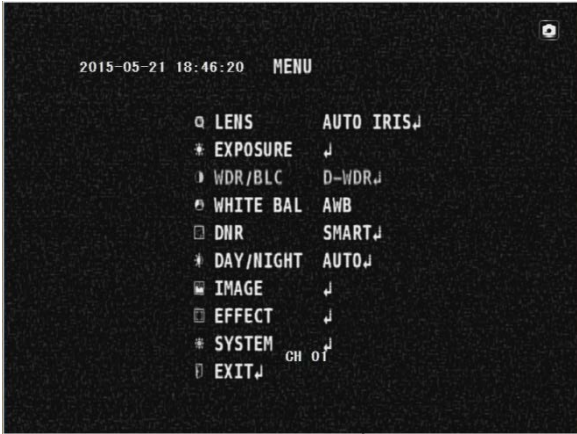
■ Menu

MENU	Default Value	Alternative Options
LENS	AUTO IRIS⏎	MANUAL⏎
EXPOSURE	⏎	See **Exposure** Table
WDR/BLC	D-WDR⏎	OFF, WDR, HLC⏎ , BLC⏎
WHITE BAL	AWB	PUSHLOCK⏎ , MANUAL⏎ , ATW
DNR	SMART⏎	ON, OFF
DAY/NIGHT	AUTO⏎	B/W⏎ , COLOR, EXTERNAL⏎
IMAGE	⏎	See **Image** Table
EFFECT	⏎	See **Effect** Table
SYSTEM	⏎	See **System** Table
EXIT	⏎	

■ Exposure

EXPOSURE	Default Value
BRIGHTNESS	6
SHUTTER	MANUAL⏎
AGC GAIN	18
SENSE UP	OFF
RETURN	⏎

■ Image

IMAGE	Default Value
SHARPNESS	6
SATURATION	10
GAMMA	0.55
MIRROR	ON
FLIP	ON
BLACK LEVEL	10
RETURN	⏎

■ Effect

EFFECT	Default Value
MOTION	ON
PRIVACY	OFF
D-ZOOM	1.0X
DEFOG	OFF-
RETURN	⏎

■ System

SYSTEM	Default Value
DIGITAL OUT	1080P
FRAME RATE	30 FPS

ANALOG OUT	NTSC
DVR	1
CABLE LENGTH	0-200M
COLORBAR	OFF
LANGUAGE	ENGLISH
FW V1.0	15042306 NBX NH
RESTORE	NO
RETURN	↵

B. MENU
In the "**MENU**" of camera OSD, there are several sub-menus and items can be selected to modify the settings.


```
2015-05-21 18:46:20   MENU

         Q LENS       AUTO IRIS↵
         ✳ EXPOSURE   ↵
         ◗ WDR/BLC    D-WDR↵
         ◖ WHITE BAL  AWB
         ▢ DNR        SMART↵
         ✳ DAY/NIGHT  AUTO↵
         ▣ IMAGE      ↵
         ▢ EFFECT     ↵
         ✳ SYSTEM   CH 01↵
         ▢ EXIT↵
```
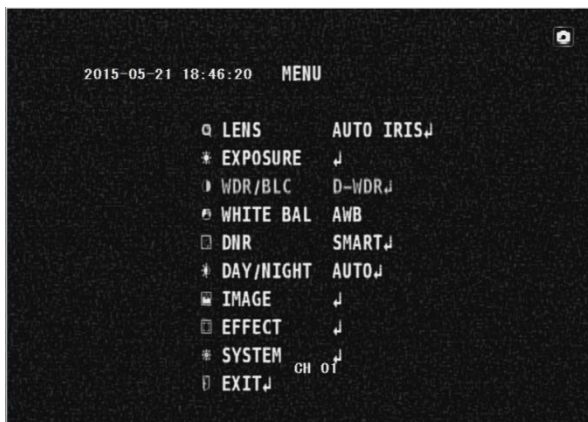
■ LENS:
To select the lens is on AUTO IRIS or on MANUAL.

■ EXPOSURE:
This is a sub-menu for exposure setting. Please check the details in its section.

■ WDR/BLC:
To select the mode of WDR/BLC.

■ WHITE BAL:
To select the mode of white balance.

■ DNR:
To adjust the mode of DNR.

■ DAY/NIGHT:
To select the mode of day/night.

■ IMAGE:
This is a sub-menu for image setting. Please check the details in its section.

■ EFFECT:
This is a sub-menu for effect setting. Please check the details in its section.

■ SYSTEM:
This is a sub-menu for system setting. Please check the details in its section.

■ EXIT:
After you finished all the settings, to exit the OSD is selecting the "**EXIT**" on the "**MENU**". Just push the "**Enter**" button, and then it will quit the setting menu.

C. EXPOSURE
In the "**EXPOSURE**" of camera OSD, there are some items can be selected to modify the settings. The main function of this page is about the optical settings.

■ **BRIGHTNESS:**
To modify the value of brightness.

■ **SHUTTER:**
To modify the value of shutter speed and time.

■ **SENSE UP:**
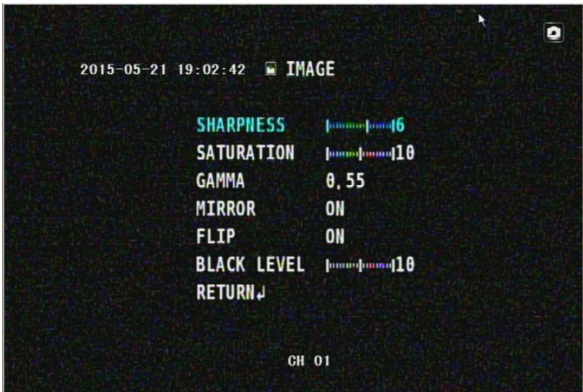To modify the "sense up" speed setting.

■ **AGC:**
To modify the value of AGC (Automatic Gain Control).

■ **RETURN:**
Return to upper level of OSD menu

D. IMAGE
In the "**IMAGE**" of camera OSD, there are some items can be selected to modify the settings. The main function of this page is about the image settings.

■ **SHARPNESS:**
To modify the value of sharpness.

■ **SATURATION:**
To modify the value of saturation.

■ **GAMMA:**
To modify the value of gamma.

■ **MIRROR:**
To select the mode of image mirror.

■ **FLIP:**
To select the mode of image flip.

■ **BLACK LEVEL:**
To adjust the value of black level.

■ **RETURN:**
Return to upper level of OSD menu

E. EFFECT
In the "**EFFECT**" of camera OSD, there are some items can be selected to modify the settings. The main function of this page is about the camera effects.

■ **MOTION:**
To enable the "motion" effect or not. Enable this will go its sub-menu for motion setting. Please check the details in its section.

■ **PRIVACY:**
To enable the "privacy" effect or not. Enable this will go its sub-menu for privacy setting. Please check the details in its section.

■ **D-ZOOM:**
To modify the value of Digital-zoom.

■ **DEFOG:**
To enable the "defog" effect or not. Enable this will go its sub-menu for defog setting. Please check the details in its section.

Note: To activate fog reduction function, please turn off WDR function first.

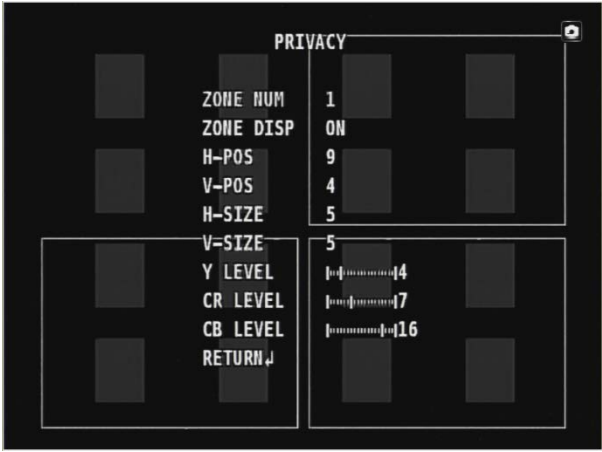■ **RETURN:**
Return to upper level of OSD menu.

F. MOTION
In the "**MOTION**" of camera OSD, there are some items can be selected to modify the settings. The main function of this page is about the motion detection.

```
                    MOTION                    ▣

          DET DISP    OFF
          SENSITIVITY |⊢⊢⊢⊢⊢⊢|10
          ALARM       ON
          ALARM TIME  |⊢⊢⊢⊢⊢⊢|2
          RETURN↵



       ▸
```

■ DET DISP:
To enable or disable the detection display function.

■ SENSITIVITY:
To adjust the sensitivity value for detection from 0 to 20.

■ ALARM:
To enable or disable the alarm function.

■ ALARM TIME:
To adjust the alarm time value from 0 to 20.

■ RETURN:
Return to upper level of OSD menu

G. PRIVACY
In the "**PRIVACY**" of camera OSD, there are some items can be selected to modify the settings. The main function of this page is about the privacy mask size and position.

```
                    PRIVACY                   ▣

          ZONE NUM    1
          ZONE DISP   ON
          H-POS       9
          V-POS       4
          H-SIZE      5
          V-SIZE      5
          Y LEVEL     |⊢⊢⊢⊢⊢⊢|4
          CR LEVEL    |⊢⊢⊢⊢⊢⊢|7
          CB LEVEL    |⊢⊢⊢⊢⊢⊢|16
          RETURN↵
```

■ ZONE NUM:
To select number of zone for privacy mask from 1 to 16.

■ ZONE DISP:

To enable or disable the zone display.
■ **H-POS:**
To adjust the horizontal position value for privacy mask from 0 to 60.

■ **V-POS:**
To adjust the vertical position value for privacy mask from 0 to 40.

■ **H-SIZE:**
To adjust the horizontal size value for privacy mask from 0 to 40.

■ **V-SIZE:**
To adjust the vertical size value for privacy mask from 0 to 40.

■ **Y-LEVEL:**
To adjust the luminance level for privacy mask from 0 to 20.

■ **CR LEVEL:**
To adjust the color red level for privacy mask from 0 to 20.
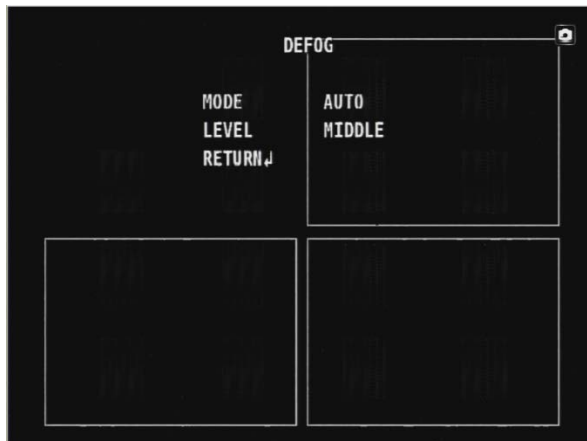
■ **CB LEVEL:**
To adjust the color blue level for privacy mask from 0 to 20.

■ **RETURN:**
Return to upper level of OSD menu.

H. DEFOG
In the "**DEFOG**" of camera OSD, there are some items can be selected to modify the settings. The main function of this page is about the fog reduction effects.

■ **MODE:**
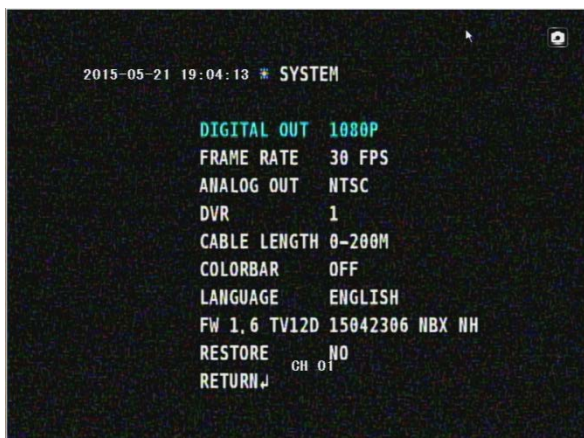To select the mode of fog reduction.

■ **LEVEL:**
To adjust the level of fog reduction.

■ **RETURN:**
Return to upper level of OSD menu.

I. SYSTEM

In the "**SYSTEM**" of camera OSD, there are several sub-menus and items can be selected to modify the settings. The main function of this page is about the video format information and OSD firmware version.

■ **DIGITAL OUT:**
To select the digital output setting between 1080P and 720P.

■ **FRAME RATE:**
To select the frame rate setting between 30FPS and 25FPS.

■ **ANALOG OUT:**
To select the analog output setting between NTSC and PAL.

■ **DVR:**
To select the number of the DVR supported by the camera.

■ **CABLE LENGTH:**
To select the cable length ranging from 0-200M to over 200M supported by the camera.

■ **COLORBAR:**
To enable or disable the mode of COLORBAR.

■ **LANGUAGE:**
To select the OSD language among ENGLISH, TRADITION CHINESE, SIMPILIFIED CHINESE, and JAPANESE.

■ **FW 1.6 TV12D:**
The firmware version number of this camera. (Version may vary depending on production)

■ **RESTORE:**
To restore all settings to the default value.

■ **RETURN:**
Return to upper level of OSD menu.

SPECIFICATIONS

Model	TV8T-700
Image Sensor	1/2.8"Sony Progressive Exmor™ CMOS Sensor : 2.4 Megapixel
Resolution	1920 x 1080p @ 25/30fps, 1280 x 720p @ 30fps
Minimum Illumination	Color: 0.05 Lux @ F1.2, B/W: 0.02 Lux @ F1.2, Sens-up :0.001 Lux @ F1.2
Wide Dynamic Range	90dB
Video Output	HD TVI / Composite BNC
Mechanical IR Cut Filter	Yes
OSD Menu	OSD / CoC (Via the coax)
Day & Night Mode	COLOR / B&W / AUTO / EXTERNAL
Manual Electronic Shutter	Auto Shutter: 1/25(30)~1/30,000 sec. Manual Shutter: 1/25(30), 1/50(60), 1/100(120), 1/240, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/8,000, 1/16,000 , 1/30,000 sec.
White Balance	ATW / AWB / PUSH / LOCK / MANUAL
WDR / BLC / HLC	WDR / D-WDR / BLC / HLC / OFF
Fog Reduction	AUTO / MANUAL
Dynamic Noise Reduction	SMART / ON / OFF
Sens-up	ON (x2~x32) / OFF
Image Effects	SHARPNESS / SATURATION / GAMMA / MIRROR / FLIP / BLACK LEVEL
Privacy Zone Masks	16 zones programmable
Motion Detection	ON: Sensitivity, Area Program / OFF
Lens Shading Compensation	ON / OFF
Automatic IRIS; Connector	DC ; D4 IRIS Jack
Lens Mount	CS / C mount
Power Supply	12V DC
Power Consumption	4.2W
Operation Temperature	14°F~122°F / -10°C~50°C
Storage Temperature	-4°F~140°F / -20°C~60°C
Operation Humidity	Max. RH80%
Storage Humidity	RH90%
Dimensions (W x H x L)	2.36 x 1.97 x 4.69 inches / 60 x 50 x 119 mm
Net Weight	0.77 lb / 0.35 kg

*Specifications are subject to change without notice.

PAL Version also available.

MADE IN TAIWAN

RoHS FC CE