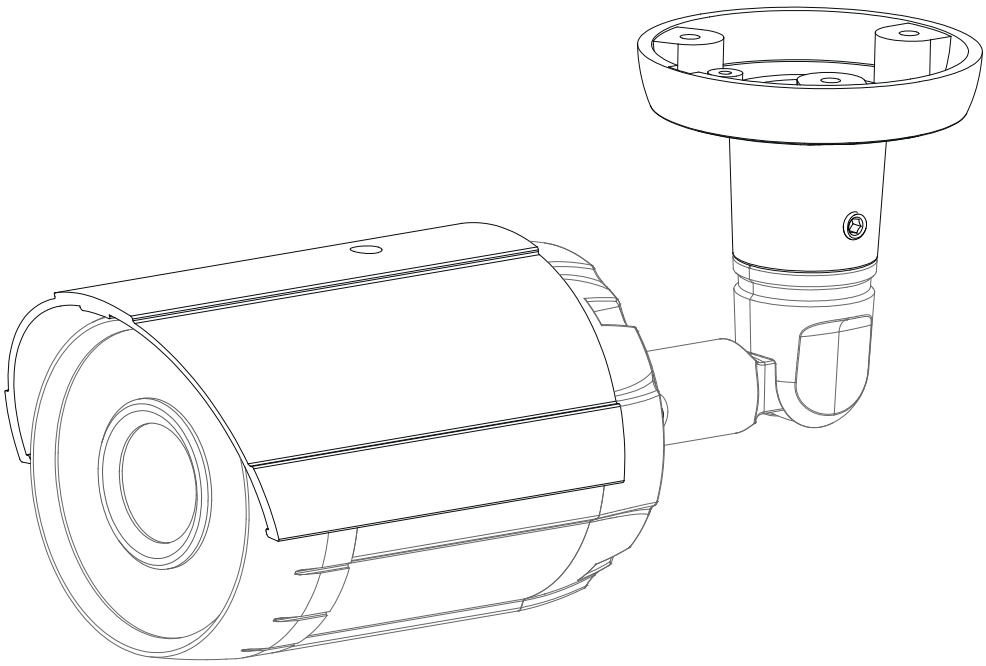
Thank you for choosing this high quality camera, before attempting to connect or operate this product, please read these instructions completely

DIGITAL NOISE REDUCTION

EXTREME LOW LUX 10~40M IR IP66 CAMERA

540 TVL
AC24V/12VDC Model

OPERATING MANUAL



Warning: To prevent fire or electric shock hazard, do not expose the appliance to rain or moisture

General

The extending ni-vision Digital Noise Reduction IR camera offers a complete IR distance range from 10M~40M. The camera comes in 540TVL, DNR function and built in IR LEDs with ICR D/N vari-focal lens. Its sophisticated mechanical design enhanced the accessibility and conveniency in terms of installation. Sturdy and IP66 enclosure ensures the camera to stay in best condition even under most critical environment

The outstanding housing created for external vari-focal zoom focus adjustment is convenient for adjusting focus from rear side. Plus the high torque bracket for easy 3 axis direction for installation.

This color CCD video camera employs a 1/3 inch charge coupled device solid-state imaging device with 470/410 k picture elements, The unit is equipped with a newly developed DNR DSP (Digital Signal Processor) for processing the video signal.

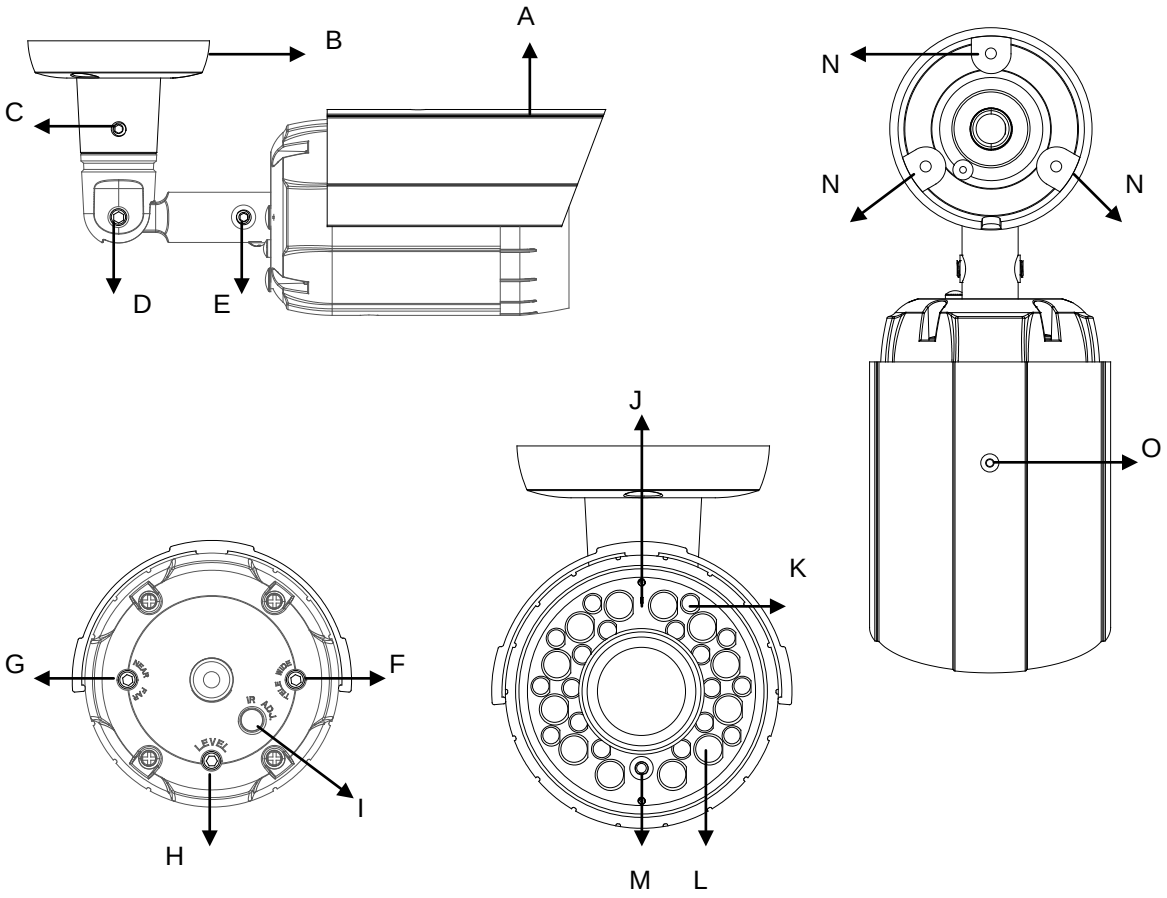
The DNR function is a newly developed technology which suppressed all significant noise while AGC is activated. So the camera is able to deliver smooth and more even noise picture that enhanced readability and saved video signal transmission traffic

Features

* 540TV Lines resolution, providing fine, crisp and vivid high-resolution image
* Advanced digital noise reduction deliver low noise image under low lux environment
* Revolutionary external adjustable and selectable IR projecting distance design
* External A.I. VR adjustment
* External lens focus adjustment
* Smart Optical Low Pass Filter (OLPF) switching mechanism allows changing between color and monochrome
* D/N OLPF mode to work correctly with daytime (visible light) and nighttime (invisible light)
* IR accuracy: vivid color performance in the daytime and sharp B/W image with no focus shift in the nighttime
* Infrared light sensing responses wavelength from 700 to 1100nm

* Outstanding signal to noise ratio better than 50dB
* Advanced wide range Auto Tracing White Balance (ATW), automatically adjusts the white balance according to the color temperature in the environment
* Smart digital control Auto Back Light Compensation (BLC)
* Simple & quick combination providing user-friendly installation & maintenance
* Heavy-duty, weather & vandal proof housing, IP66
* Excellent waterproof housing design even with external adjustments

Name of Parts and Functions

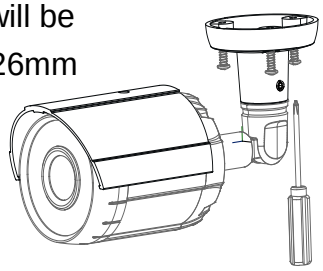


A. Sunshield
B. Bracket
C. X-Axis screw
D. Y-Axis screw
E. R-Axis screw
F. Zoom adjusting ring
G. Focus adjusting ring
H. A.I auto iris level
I. IR distance adjustment
J. 5 ¢ LED
K. 8 ¢ LED
L. Light sensor
M. Mounting screw
N. Sunshield screw

Installation Procedure

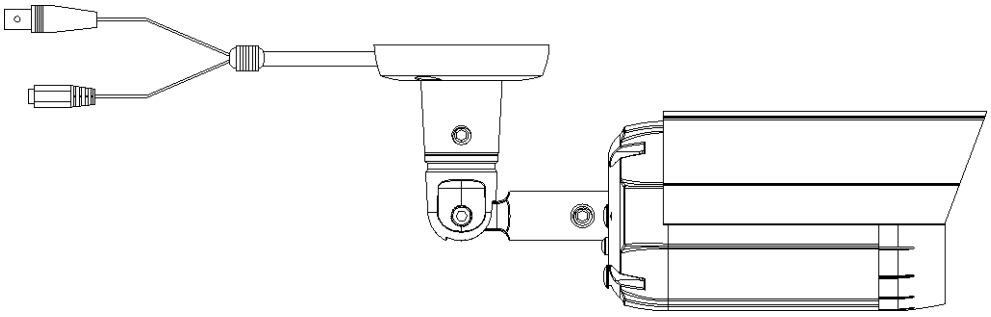
Step 1: Securing camera

Place mounting plate at position which the camera will be installed. Then fix the screw holder and then 4 ¢4*26mm screws

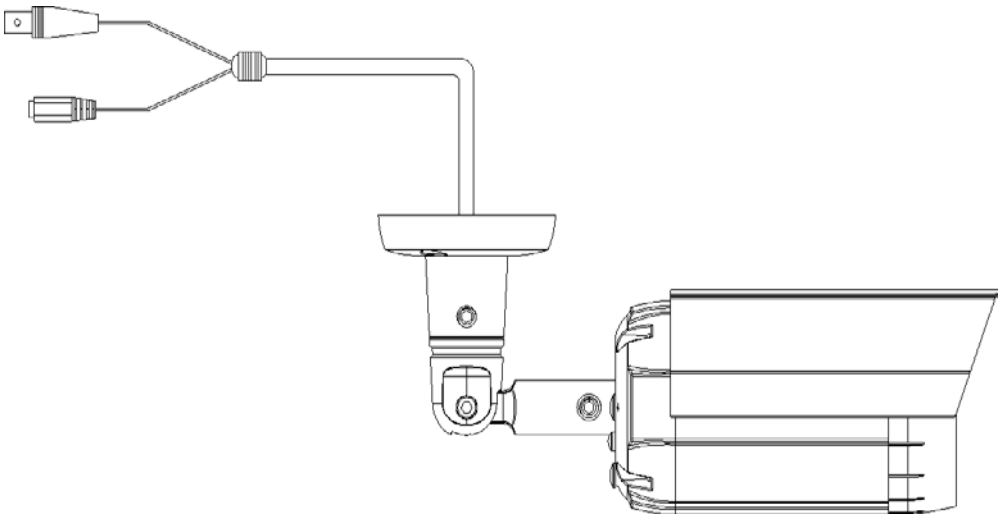


Step 2: Cable arrangement

The whole installation and connection process should only be made by qualified service person or system installers



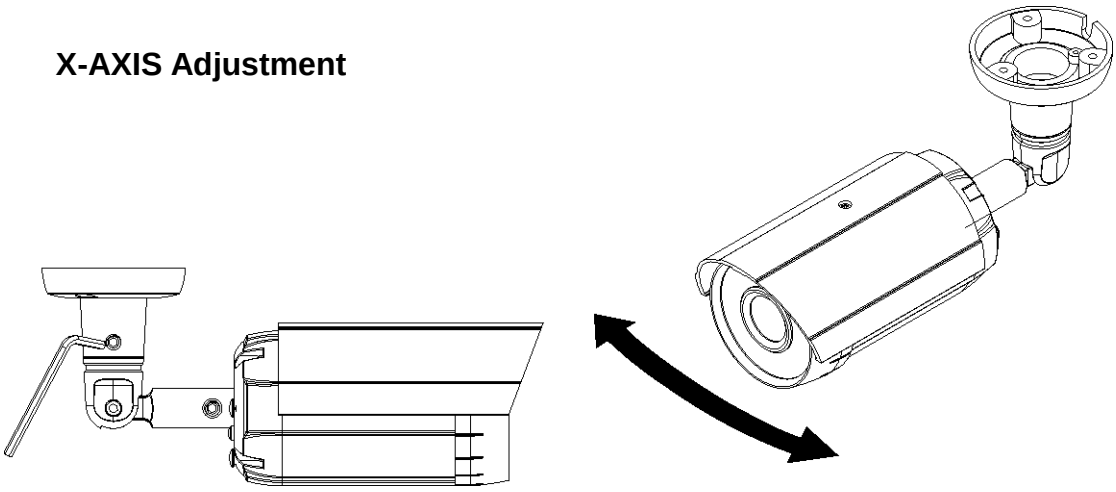
It is necessary to make sure that the cable hole has been protected with waterproof installation process when the cable is connected from the side



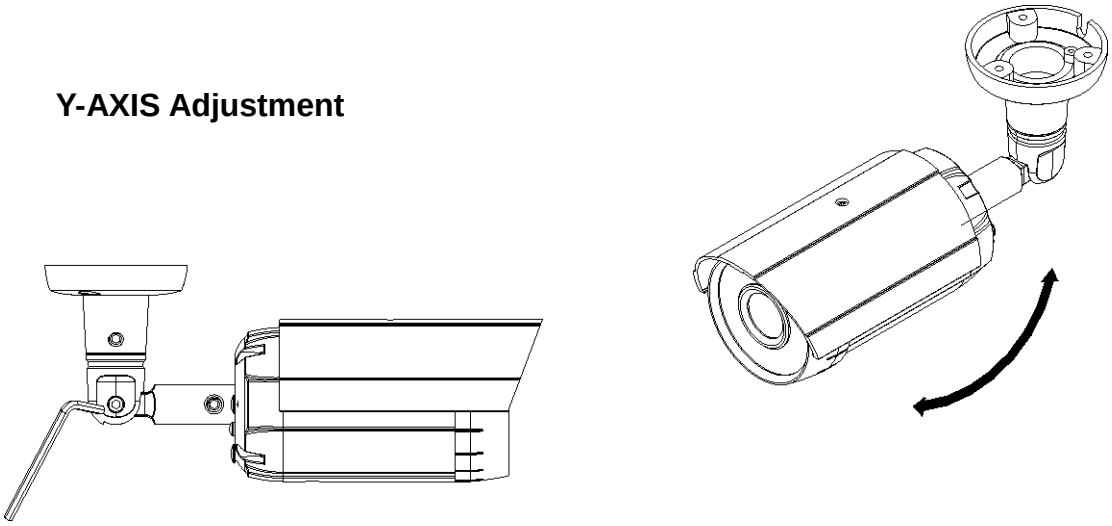
Step 2: Adjust 3 Axes bracket while checking view angle from monitor

Loosen the X-Y-R screws and then adjust the 3 Axis bracket (X-Y-R Axis) to get the viewing angle

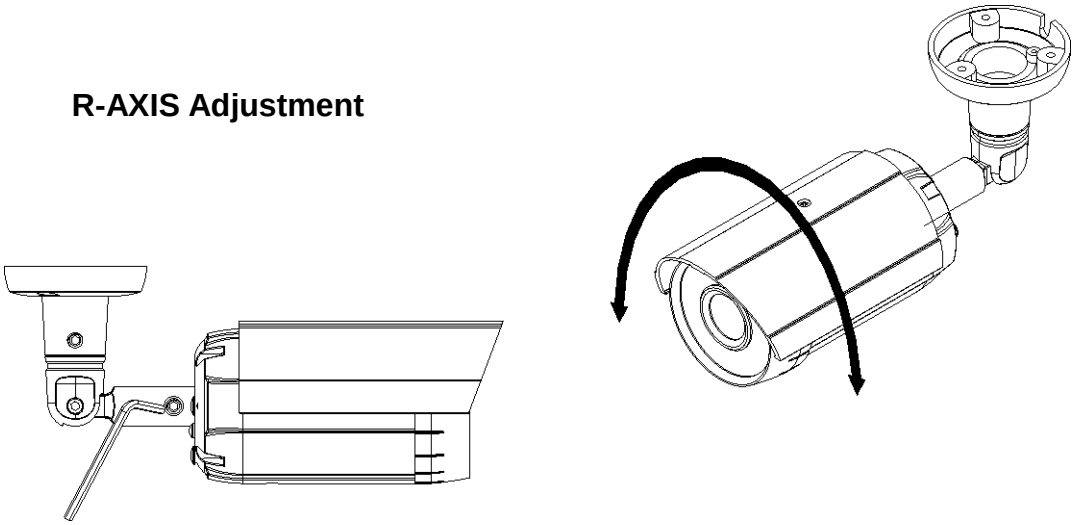
X-AXIS Adjustment



Y-AXIS Adjustment



R-AXIS Adjustment



Three axes mechanical design allows 90° side views for wall mount and furthest angle for ceiling mount when guarding a hall way.

Horizontal angle adjustment – by turning the platform to adjust the horizontal angle180 degrees:360 degrees

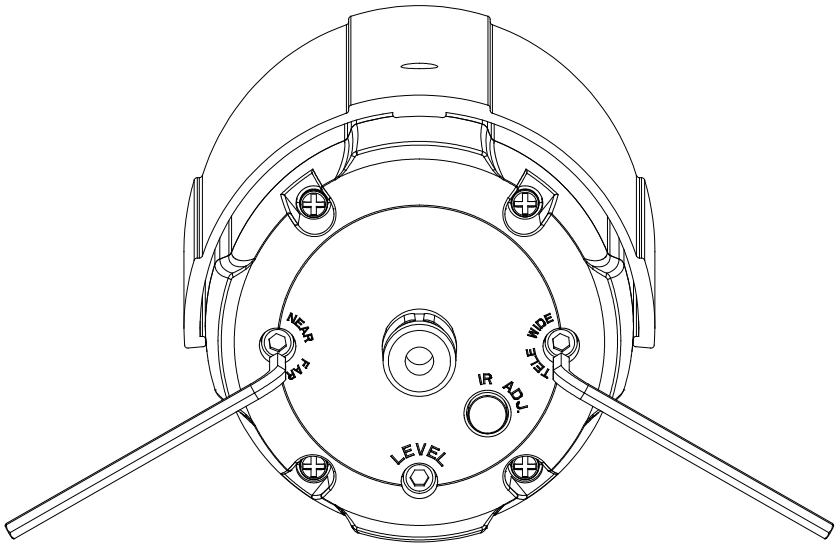
Vertical angle adjustment – by turning the platforms to adjust the vertical angle: 90 degrees

Step 3: Focus adjustment

Focus adjustment should be done with zoom focus at the same time

The default setting for zoom position is WIDE

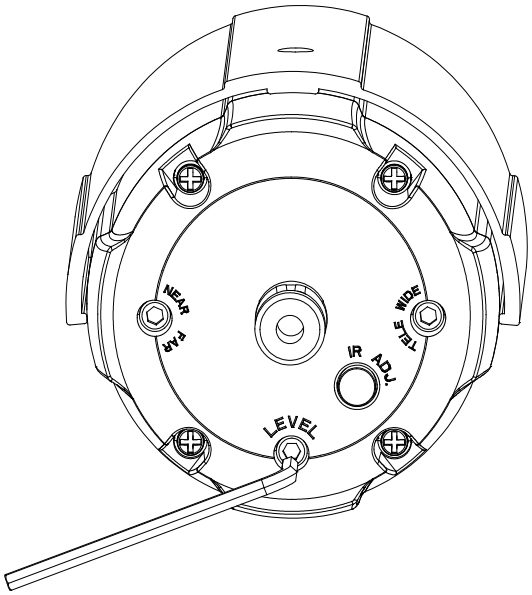
- Take the hexangular driver to adjust the zoom ratio (counterclockwise = from wide to tele)
- Turn the zoom ring to set to the desired zoom
- Take the hexangular driver to adjust the focus ratio (clockwise = from near to far)
- Turn the focus ring to set to the desired focus



Step 4: Auto iris level adjustment

With built in DC type auto-iris lens, installer needs to adjust the DC level especially for conditions described below.

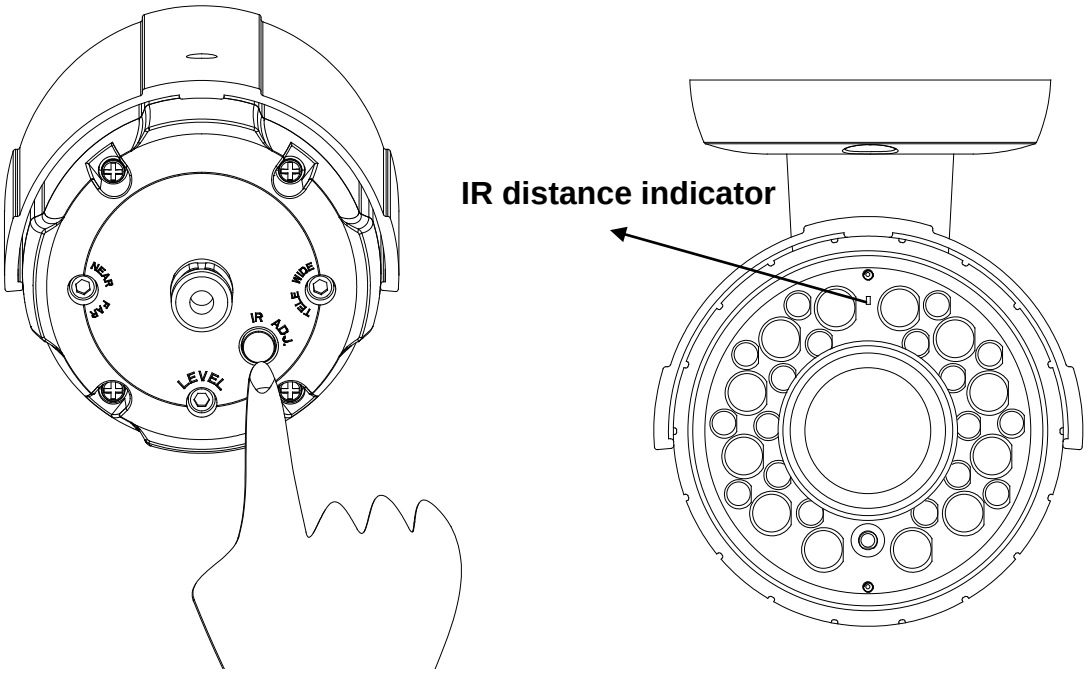
- If the camera is facing a window but is placed in a relatively dark room
- If the subject background is extremely bright or dark
- If the brightness of the picture on the monitor is not correct



L (counterclockwise): To decrease the contrast

H (clockwise): To increase the contrast

Step 5: IR distance adjustment



Installer may use IR adjustment function according to installation conditions. It is suggested that the view angle should be checked before setting up the IR distance. Below is the view angle and IR distance table suggested

Focal Length(mm)	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Horizontal Angle	78	63	52	44	38	34	30	27	26	25
Vertical Angle	63	49	40	32	29	26	23	21	20	18
Distance(meter)	10	10	20	20	20,30	30	30	30,40	40	40
LED indicator (Flashed Time)	4	4	3	3	3,1	1	1	1,2	2	2

***Above chart is a reference for general conditions. For best result, please make adjustments according to installation site condition.

How do I know how many times to push for the distance I need?

The blue IR LED indicator will be flashed once the IR adjustment button is pushed, the different flashing time stands for different distance selected

1 Time: IR distance 30 Meter

2 Time: IR distance 40 Meter

3 Time: IR distance 20 Meter

4 Time: IR distance 10 Meter

*****When power on for 15 mins without any further adjustment, the IR**

adjustment button will go into sleep mode. If a reactivate is needed, please push and hold the IR adjustment button for 20sec.

Auto Iris

This camera is built in with auto iris lens, the shutter speed is fixed to 1/60 sec. for NTSC and 1/50 sec. for PAL.

Super AGC

When install the camera for low lux environment, AGC will increase the camera sensitivity.

White Balance Adjusting

ATW mode—Advanced white balance
This mode limits color temperature from 2500°K-9500°K

Auto Back-light Compensation

This intelligent auto BLC is a newly developed digital light level control system. It is activated automatically by screen histogram (contrast) and 225 area window weighting integration to control iris gain and white balance simultaneous, so that the clear object with adequate light level can always be optimized.

Central window weighted average backlight compensation
This method is suited for cases where the main subject is fixed within the screen.

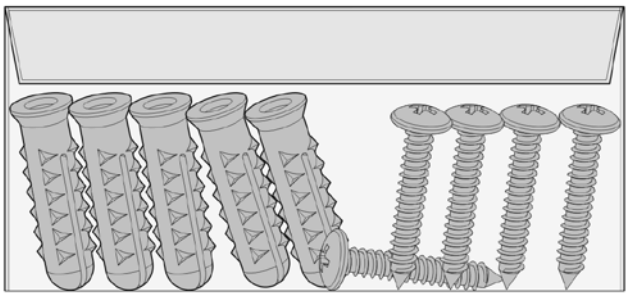
Histogram backlight compensation
This method is suited for cases where the main subject moves about within the screen.

The combination of two types backlight makes it easier to arrange backlight compensation operation to match the imaging conditions and installation location.

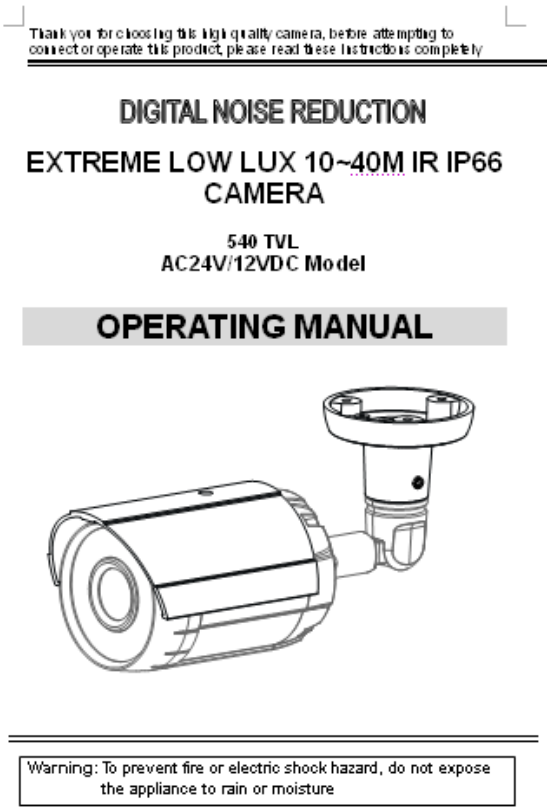
Specification

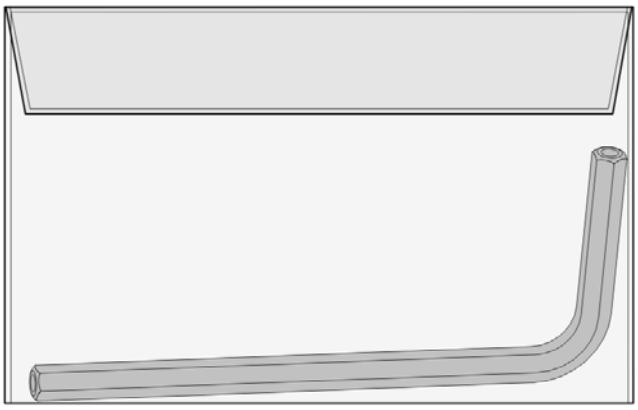
Model No.	LE307N	LE307P
Image device		
Signal system	NTSC	PAL
Picture Elements	768 (H) × 494 (V)	752 (H) × 582 (V)
Scanning system	525 lines. 2:1 interlace	625 lines, 2:1 Interlace
Sync system	Internal Lock/Line Lock	
Horizontal resolution	540 TV lines	
Minimum Illumination	0.1 lux at F1.2 (30 IRE, AGC on)	
	0.001lux at F1.2 (B/W mode, AGC on, sense up on)	
	0 lux under infrared illumination	
Infrared wavelength	from 780 to 1100nm	
D/N OLPF switch delay time	Sync	
Color / Mono switching	Chain reaction with D/N filter	
Frame integration	4x factory default (2x~32x customization)	
Infrared LED	¢ 5mm-18pcs / ¢ 8mm-12pcs	
IR distance range	35M (IR distance adjustable via rear push bottom)	
AGC	Auto Gain 36 dB	
S/N ratio	Better than 50dB	
White balance control	ATW (2500°K-9000°K)/AWB	
Digital Noise Reduction	Automatic	
Gamma	0. 45	
Function	Tact switch board at the rear of camera	
ATW/AWB	ATW(2500°K-9000°K)/AWB	
BLC	ON/OFF	
FL	ON/OFF	
IP ratio	IP66	
A.I. VR adjustment	External	
TELE/WIDE , FAR/NEAR	External	
adjustment		
Video output signal	Composite: 1.0 V p-p at 75Ω load	
Lens selection	3.0-12mm F1.4 A.I lens(default)	
Operating temperature	-10°C to 50°C	
Power source	DC 12V / AC 24V	
Power consumption	max. average 700mA	
Dimension	¢ 88x288(L)mm (with bracket)	

Standard Accessories



Camera mounting screw*4





Hexangular driver *1

User Manual