High Contrast License Plate Capture Camera

OPERATION MANUAL

HTC-LPB35DID

Thank you for choosing our high quality camera.

Before attempting to connect operate this unit, please read and follow these instructions.

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1. Cautions

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions;

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note -

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense."

WARNING -

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Caution -

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

⚠ CAUTION

1. A regulated DC12V 1A power supply is recommended for use with this camera for the best picture and the most stable operation.
   An unregulated power supply can cause damage to the camera.
   When unregulated power supply is applied, product warranty will be out of subject.
2. It is recommended that the camera is used with a monitor that has a CCTV quality 75 video impedance level.
   If your monitor is switched to high impedance then please adjust accordingly.
3. Do not attempt to disassemble the camera to gain access to the internal componets. Refer servicing to your dealer.
4. Never face the camera towards the sun or any bright or reflective light, which may cause smear on the picture and possible damage to the CCD.
5. **Do not remove the serial sticker for the warranty service.**

1. Cautions

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicate that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

This product should not be mixed with other commercial wastes purchased this product, or their local government office, for details of where and how they can take item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.
Household users should contact either the retailer where they for disposal.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER.SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

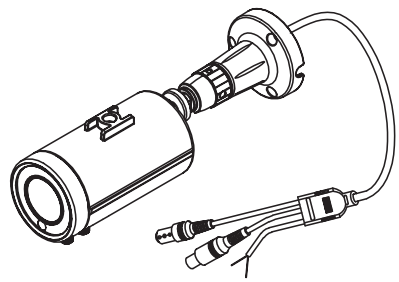
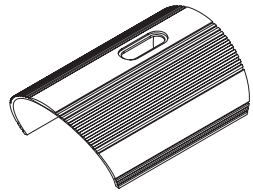
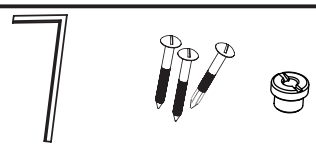
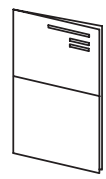
This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance

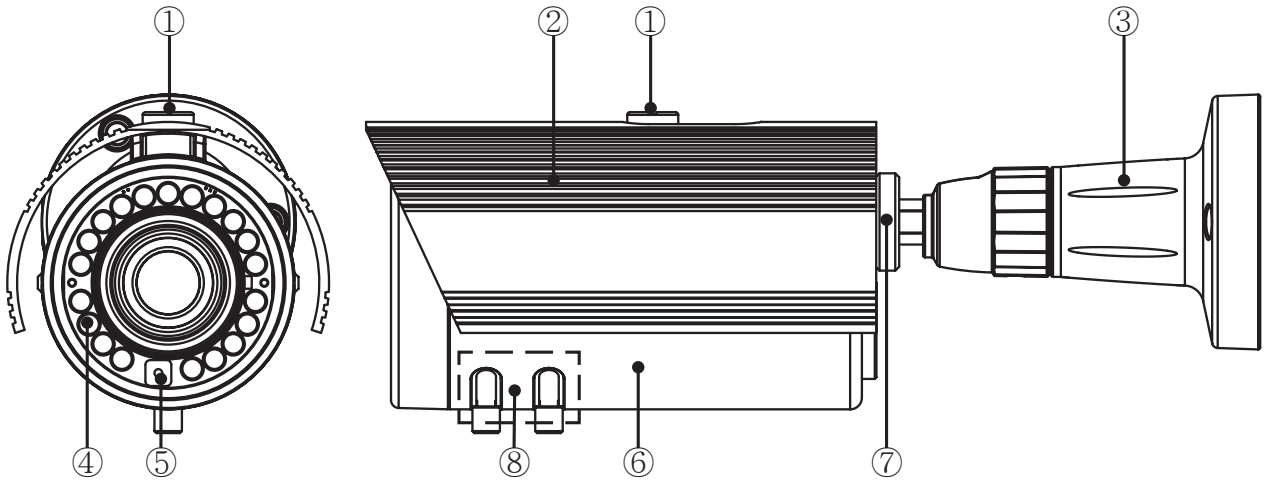
2. Features

- 1/3" Sony Super-HAD CCD Ⅱ
- High Resolution 600TV Lines
- Special filter and IR LED provides maximum readability despite headlight glare
- Plate capture up to 35mph (56Km/H)
- 9.0 ~ 22.0mm Varifocal lvens captures license plate from 8ft ~ 60ft (2.5M ~ 18.5M)
- IP66 rated weather proof
- Cable through concealed bracket
- DC12V / AC24V Dual power with auto-polarity

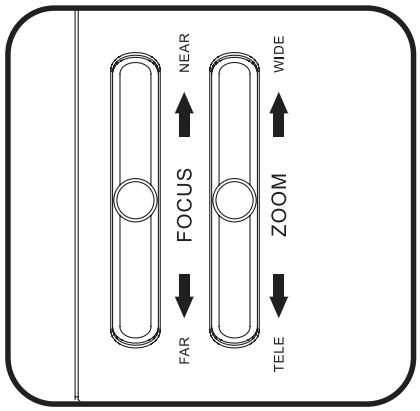
3. Components

CAMERA	
SUNSHIELD	
VIDEO OUTPUT TEST CABLE	
L-WRENCH / SCREW - 3ea / SUNSHIELD FIXING BOLT	
OPERATION MANUAL	

4. Name and Function

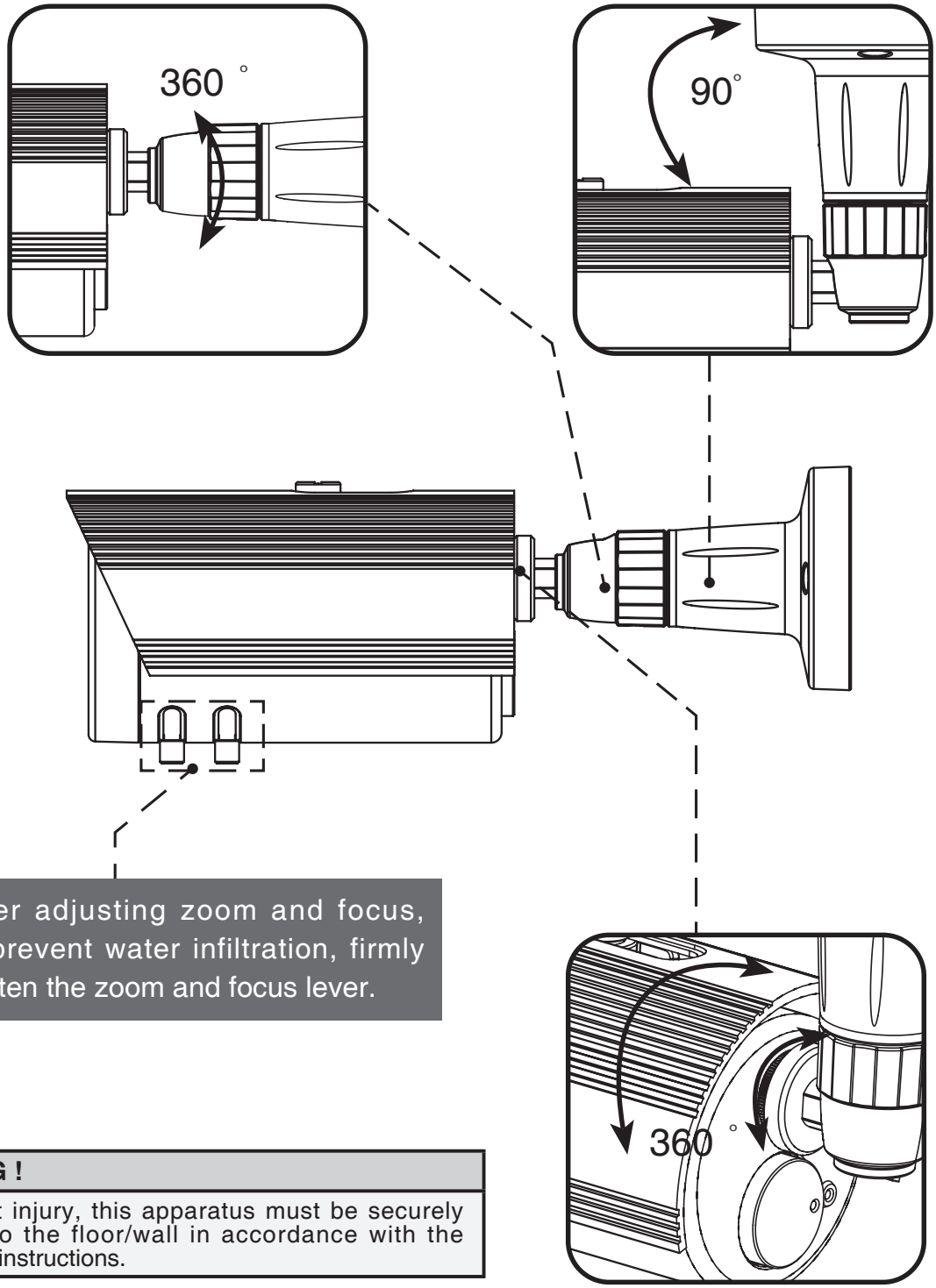


① **Sunshield Fixing Bolt**
② **Sunshield**
③ **Mounting Bracket**
④ **LED : 20ea**
⑤ **Photo cell**
⑥ **Body**
⑦ **Body Fixing Ring**
⑧ **External Zoom and Focus adjustment**



5. Installation

• MOUNTING POSITION



After adjusting zoom and focus, to prevent water infiltration, firmly tighten the zoom and focus lever.

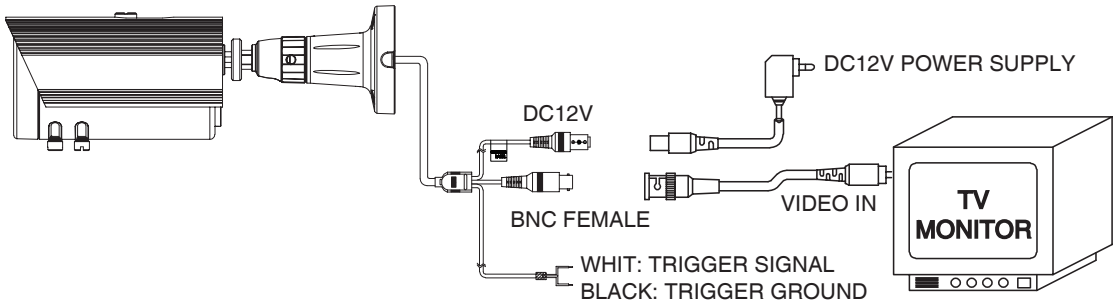
WARNING !

To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

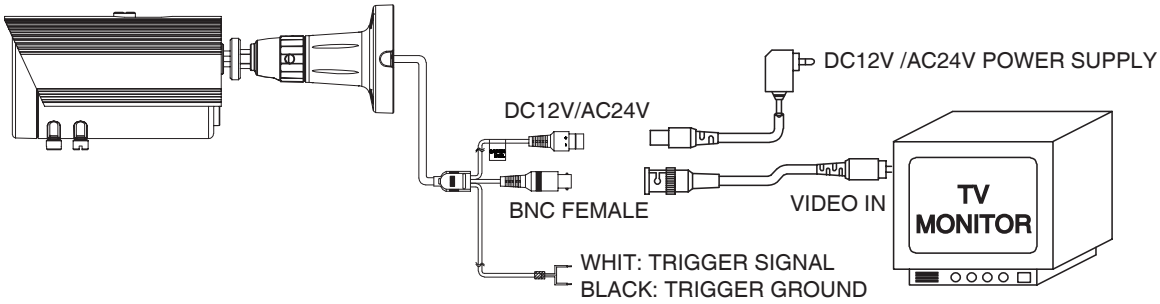
5. Installation

• MONITOR CONNECTION

(1) DC12V



(2) DUAL(DC12V/AC24V)



When you install the camera, please glue up the end of cable to keep it stable in order to protect the camera from the humidity problems.

6. Functions

OSD Menu Structure

- **MODE**
  - INSTALLATION
    Installation Mode provides bright video screen to adjust angle and focus.
  - LICENSE-PLATE
    License-plate Mode provides high contrast and clear license plate image for license plate capture.

- **FREEZE**

  The video screen will automatically go in to FREEZE mode when Camera is triggered by sensors.
  User can set the freeze time to 3, 5, or 10 sec.

- **NEGATIVE**

  User can select positive or negative image.

Negative OFF	Negative ON

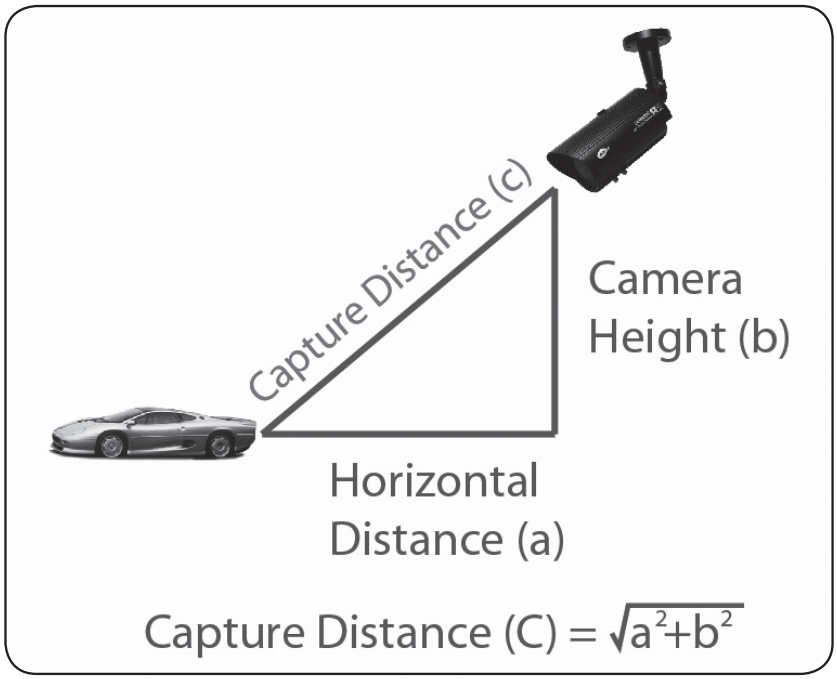
7. Target Markets

- **Government**
- **Military**
- **Hotels and Casinos**
- **Parking Lots**
- **Border Patrol**
- **Gated Communities**
- **Traffic monitoring**
- **Embassies**
- **Ports**
- **College Campus**
- **Airports**
- **Law Enforcement**
- **Toll Booths**
- **Security**

8. Installation Guideline

Camera Height

- Must consider height in distance calculation.
- Sharper angle will alter appearance of plate.

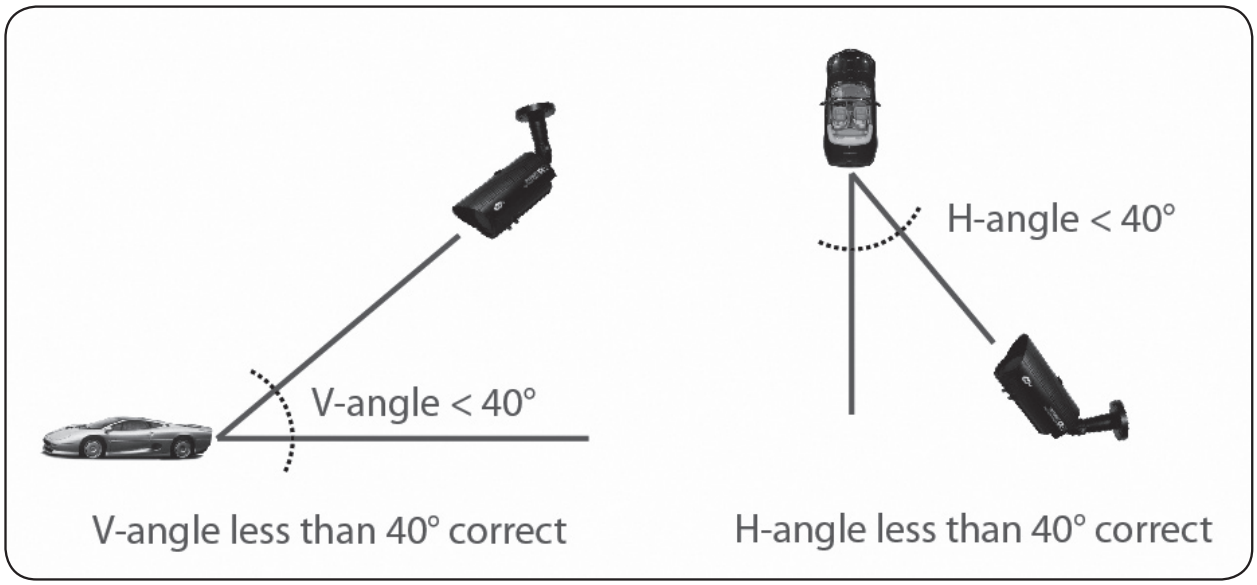


Camera Height (Ft)	Horizontal Distance (Ft)	Capture Distance(Ft)
10	10	14.14
11	20	22.83
12	30	32.31
13	40	42.06
14	50	51.92

8. Installation Guideline

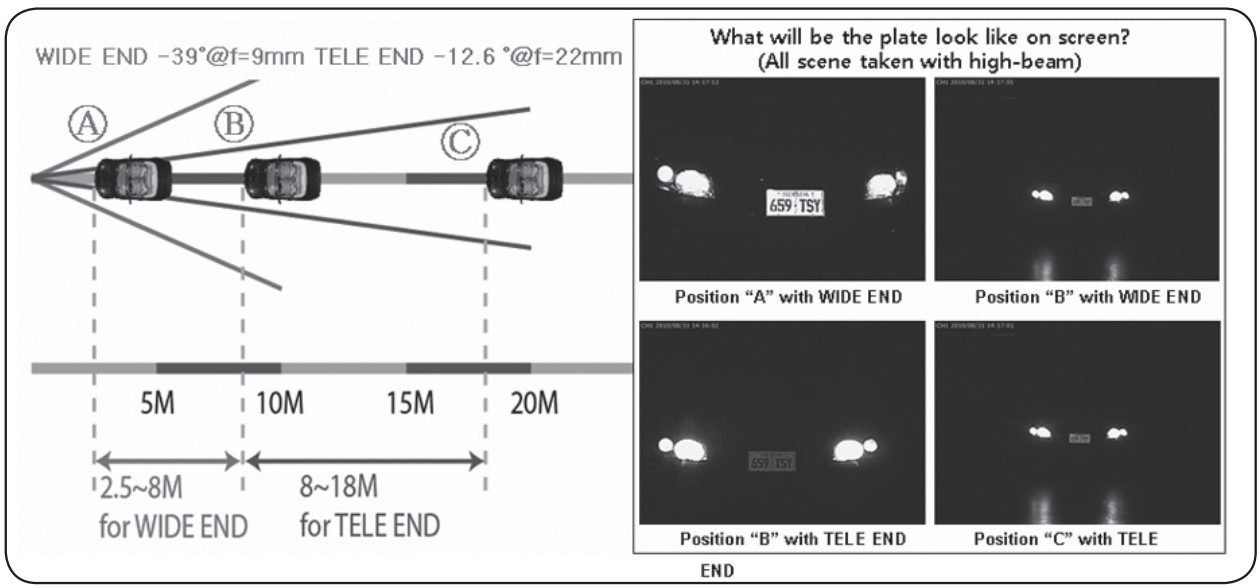
Camera Angles

- Vertical and horizontal angle must not exceed 40 degrees to get optimal view of the license plate.



Capture Zone

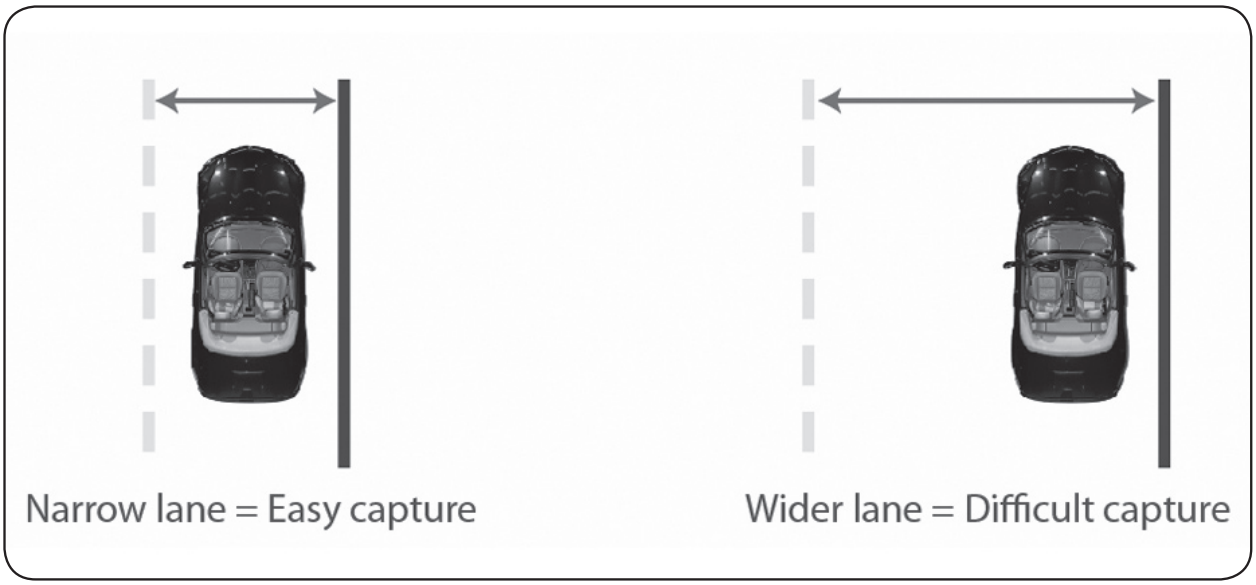
- Wider angle provide shorter capture distance.
- Tele angle provide longer capture distance.



8. Installation Guideline

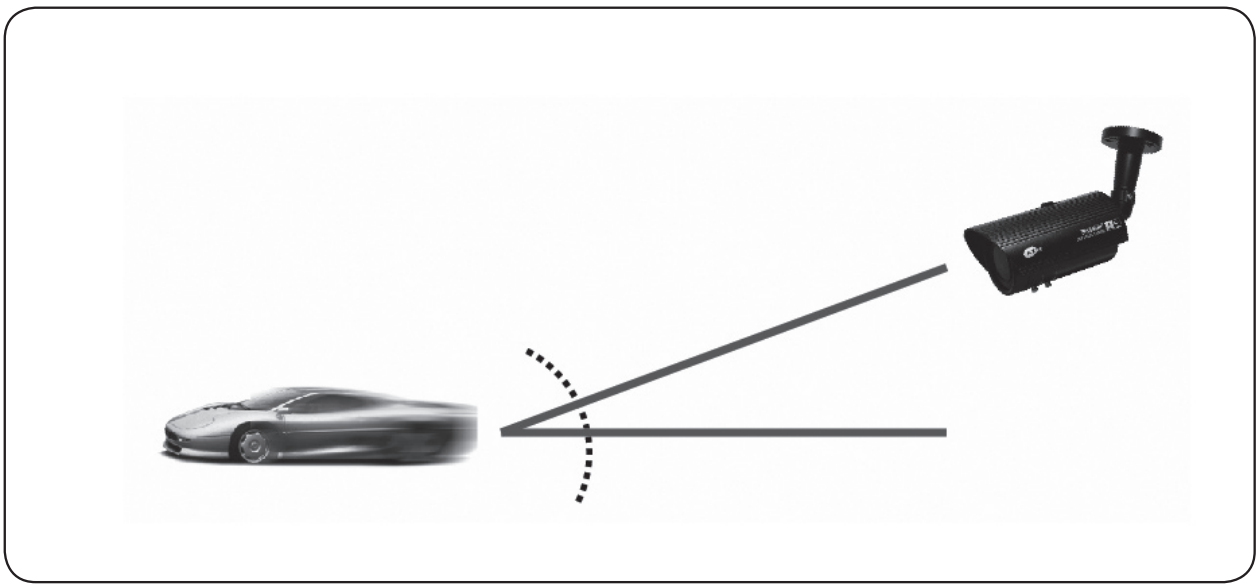
Lane Width

- Narrow lanes = less variation in plate location.
- Wider lanes = more variation in plate location.
- Lens should cover entire width of the lane.
- Ensure horizontal field of view is wide enough.



Speed

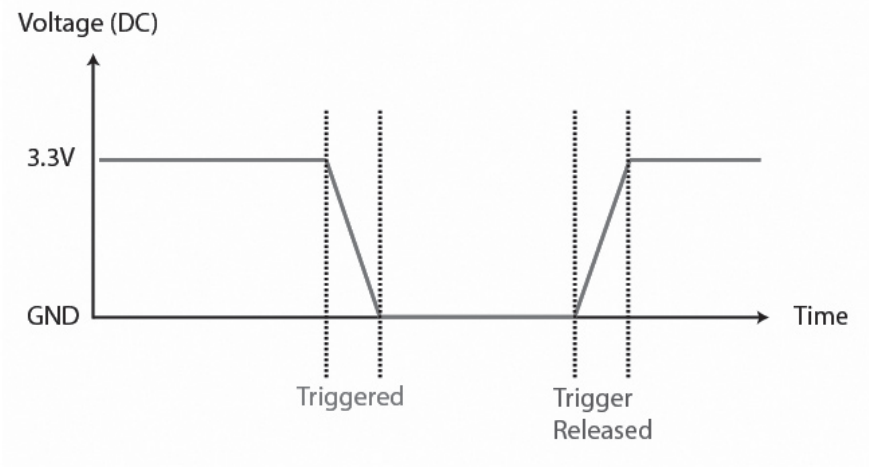
- Camera can capture moving vehicles up to 35mph.
- Keep camera as low as possible.
- Minimize horizontal angle.
- Zoom in the lens as close as possible.



8. Installation Guideline

Trigger

- Camera support trigger input for freezing video screen.
- Connect external sensor e.g. Parking Gate Sensor.
- Trigger input should be pulled-up 3.3V DC in normal condition.
- Input line will be triggered when pull-up 3.3V DC drop to GND.

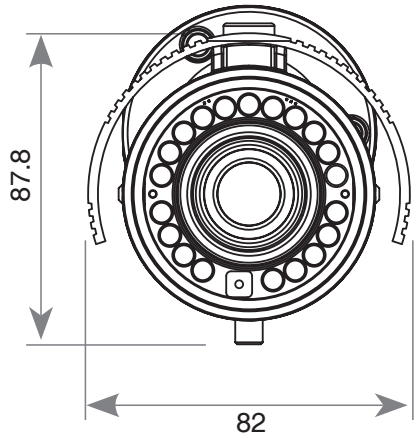
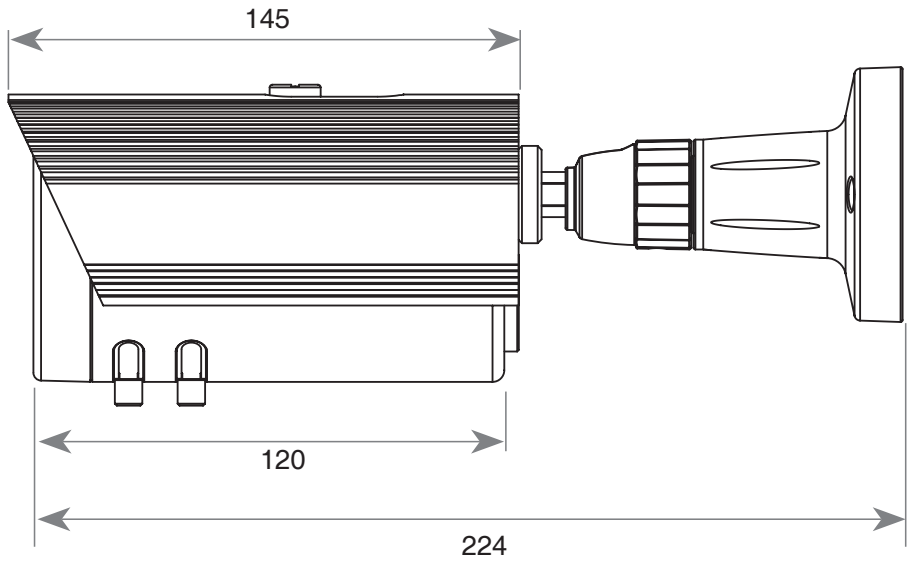
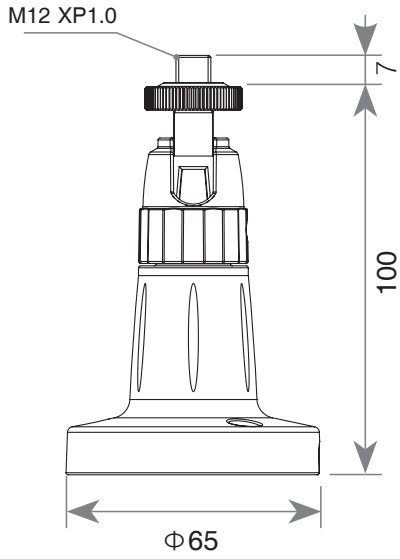


DVR

- Camera is fully compatible with industry standard DVRs.
- Check compression settings.
- Non-conditional refresh compression. (i.e. MJPEG or JPEG)
- D1 (720x480) resolution.
- 30fps (each channel) for best results.

9. Specification

Signal Format		NTSC	PAL
Image Device		1/3" Sony Super HAD CCD II	
Total Pixels		811(H) x 508(V)	795(H) x 596(V)
Effective Pixels		768(H) x 494(V)	752(H) x 582(V)
Inter. H/V		15.734KHz(H), 59.94Hz(V)	15.625KHz(H), 50Hz(V)
H.Resolution		600TV Lines	
Minimum illumination		0 Lux (IR LED ON)	
S/N Ratio		More than 50dB (AGC Off)	
Sync System		Internal	
Video Output		1.0 Vp-p Composite(75Ω)	
Lens		Varifocal	
IR LED		850nm, 20ea	
IP Rating		IP66	
Operating Temperature		14˚F~122˚F(-10˚C ~ +50˚C)	
Storage Temperature		-4˚F~140˚F(-20˚C ~ +60˚C)	
Power Consumption	DC12V	DC12V ±10% Max 450mA	
	DUAL	DC12V ±10% Max 570mA AC24V ±10% Max 6.7W	
Weight		Approx. 1000g	
Dinmension(mm)		82 x 79.3 x 130	
Option		DUAL(AC24V/DC12V)	

Specifications and designs are subject to change for improving the functionality of this product without notice.

10. Dimensions