

## 6. Overview

This unit is one of the most advanced license plate cameras available. Installed in parking lots, gated access or toll roads, this specialized camera combines several key technologies to allow positive numeric ID from vehicles day or night.

The use of IR illumination and special optical filters eliminate headlight glare, allowing License Plate numbers to reflect IR light for optimum recognition. The high shutter speed, high sensitivity CCD minimizes motion blur, providing positive numeric ID from vehicles moving up to 31mph.

**Note:** This LP camera is highly optimized for license plate recognition under the most adverse conditions. As such, it has some idiosyncrasies you might not expect. To minimize headlight glare at night, it has an optical filter designed to suppress visible light, but pass IR illumination. It also has a fixed high shutter speed of 1/1000 second. By combining these technologies with IR LED's, it will effectively suppress objects lit by visible light, and mostly resolve reflective license plates illuminated by the IR LED's. As a consequence of this optimization, you will get a low-contrast view of the vehicle, day or night. However, you will get a clear image of any reflective license plate, even while the vehicle is moving.

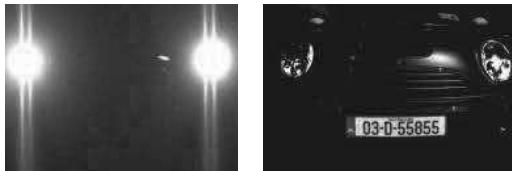
## 7. Main Features



- 1/3" SONY B/W Ex-View CCD
- High resolution of 600TVL
- 16mm or 35mm fixed omni-focus lens with multi-focusing technology
- Capture plates from vehicles moving up to 31mph (50km/hour)
- Intelligent IR Protection Technology extends the usable lifetime of IR LEDs
- IR LED brightness adjustable, up to 33' (10m) distance w/ 16mm lens (60' w/ 35mm lens)
- DC24V or AC24V Non-polarity power input
- 3-Axis camera bracket conceals cabling for clean and simple installation
- IP67 Weatherproof

## 7. Main Features

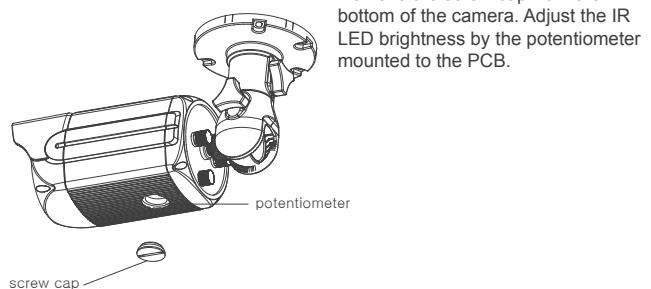
### A. License Plate Capture



Conventional

LP Camera

### B. Adjustment of IR LED brightness



Remove the screw cap from the bottom of the camera. Adjust the IR LED brightness by the potentiometer mounted to the PCB.

## 8. Troubleshooting

Before sending the camera out for repair, check the items below. If the problem persists after checking these items, contact your service center.

Problems	Trouble shooting
Nothing appears on the screen.	<ul style="list-style-type: none"><li>Please check the power connection.</li><li>Please check the video signal line connection.</li></ul>
The video image is not clear.	<ul style="list-style-type: none"><li>Please check if the lens or the outer glass is clean. - Dirt or fingerprints on the lens can affect the image blooming or reflection. Gently wipe any dirt or fingerprints off the lens or the glass with a soft cloth.</li><li>Please check and adjust contrast feature of the monitor</li><li>Please check if the camera is exposed directly toward a bright light, sunlight, or sun light reflecting area. Please move the camera's position in this case.</li></ul>
The screen is dark.	<ul style="list-style-type: none"><li>This is normal, because of the optical filter that rejects visible light and the high-shutter speed. Mainly highly reflective objects within 31' range of the IR LED's will be visible. For most applications, this would be the license plate from most modern vehicles. See Notes in Overview section on page 10.</li></ul>
The camera's surface is too hot and black stripes appear on the screen.	<ul style="list-style-type: none"><li>Please check if the power supply is regulated and is within the standard requirement of the product.</li></ul>
The screen is flickering.	<ul style="list-style-type: none"><li>Please check if the camera is facing directly toward sunlight or fluorescent light.</li></ul>
IR beam is weak	<ul style="list-style-type: none"><li>Adjust the potentiometer to increase IR LED brightness. See page 11. Verify cable conductor gauge is adequate for the cable run. Using too thin gauge of Power wire can cause serious voltage drop, especially over long distance. If using DC power supply, resistive losses are worse. Try measuring voltage while PSU is connected to camera; if the voltage under load is less than 21 Volts, this is likely a problem.</li></ul>

## 9. Specifications

Specification	License Plate Capture Camera
Image sensor	1/3" Sony B/W Ex-View CCD
Effective Pixels	EIA : 768(H) x 494(V) CCIR : 752(H) x 582(V)
H.Resolution	EIA : 600 TV Lines CCIR : 580 TV Lines
Synchronizing system	Internal
Scanning system	EIA 525 Lines CCIR 625 Lines 2:1 Interlaced
Video output	1.0Vp-p Composite. 75 Ohms
S/N ratio	More than 50 dB (AGC Off)
Min. Illumination	0Lux
Shutter speed	1/1,000sec
Gamma correction	Standard y=0.45
Gain Control	Standard : 0dB ~ 34dB Auto
Smear Effect	0.01%
Power source	DC24V or Dual (DC24V / AC24V)
Operating current	380mA (16mm lens version), 500mA (35mm lens version)
IR spectrum	850nm(H-Power LED) : Ø8-22ea
MTBF of IR	20,000 hours
Operating Temperature	14°F ~ 122°F (-10°C ~ +50°C)
Humidity	Within 90% RH
Measurement (mm)	97(W) x 91.5(V) x 304.7(L)
Weight (Approx.g)	1700

## 10. Dimension (mm)

