

# ASI

## LC-150 B&W Camera & Controller



### Overview

The LC-150 is a low cost B&W video camera with an external controller. The unit utilizes the ICX088DLA CCD sensor from Sony, which is a 1/2" interline CCD. The LC-150 offers high sensitivity, high S/N ratio and over 600 TVL of resolution. The camera unit is quite compact, 1.75 x 3.5 ", and the external controller is housed in a small, 6 x 4" case. The controller offers both manual and AGC, and enhanced Black Level and Contrast controls.



### Installation

1. Connect the camera to the controller with the bi-directional 8-pin cable.
2. Plug the DC power supply into the controller and plug the power supply into the appropriate AC source.
3. Use the supplied 75 Ohm video cable to connect the VIDEO OUT of the controller to the video in of your monitor or frame grabber board.

The VIDEO IN provides a connection for a standard video signal if the 8-pin CAMERA connector is not used (e.g.. other video cameras without internal AGC control).

### **Operation of Video Level Control**

The power switch on the back of the unit turns on the camera and controller. The red LED will indicate the power ON condition.

**AGC / OFF** selects either Automatic Gain Control (AGC) or Manual Gain. In the OFF position, the knob sets the camera gain.

**ENHANCE / OFF** in the ENHANCE position allows the Black Level and Contrast to be controlled. In the OFF position the enhancing circuit is by-passed.

**BLACK LEVEL** – Use the Black Level knob to darken gray levels. Counterclockwise is no adjustment; full clockwise sets quite bright regions to black.

**CONTRAST** – Use the Contrast knob to increase the number of gray levels in the region of interest in your image. Counterclockwise there is no contrast enhancement. Full clockwise increases the camera gain by about 24dB.

> **WHITE LED** indicates when portions of the output video signal are reaching the video saturation level (white). Contrast information in the bright portions of the image will be lost once this LED is illuminated.

In practice, to obtain maximum video contrast of the region of interest in your image, use the Black Level control to “bring down” the background level. Then, increase the Contrast to accentuate the brighter regions.

For very dim images, (e.g. fluorescent cells) increase the contrast to near the maximum to get the most gain possible out of the camera. At maximum contrast, the noise inherent in the camera sensor will become apparent, but real-time video of the quite dim cells is at least possible!

### **Parts Supplied**

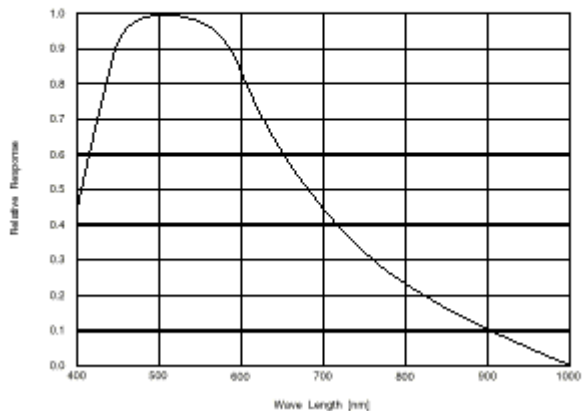
1. LC-100 Camera
2. LC-100 Controller
3. Camera to controller cable
4. DC Power supply

SPECIFICATIONS		
<b>Norm</b>	<b>EIA</b>	<b>CCIR</b>
<b>Image Device</b>	½" interline transfer CCD Sony ICX038BLA	
<b>Image Area</b>	7.95mm x 6.45mm (equivalent to ½" camera tube)	
<b>Picture Elements</b>	811(H) x 508(V) Pixel size 8.4um H x 9.8 um V	795(H) x 596(V)
<b>Vertical Frequency</b>	60Hz	50Hz
<b>Horizontal Frequency</b>	15.734KHz	15.625KHz
<b>Scanning System</b>	525 lines, 60 fields/sec	625 lines, 50 field/sec
<b>Minimum Illumination</b>	0.02 LUX -6dB output acceptable illumination 0.01 LUX (0.002FC)	
<b>S/N Ratio</b>	Better than 53 dB	
<b>Resolution</b>	600 TV lines horizontal	
<b>Video Output</b>	Composite 1.0Vp-p at 75 ohm	
<b>Electronic Shutter</b>	1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec optional	
<b>Supply Voltage</b>	12V DC +/-10%	
<b>Power Consumption</b>	2/4W	
<b>Lens Mount</b>	Standard "C" & "CS" mount	
<b>Connectors</b>	BNC (video), DC power jack (power supply), 4-pole plug (auto iris)	
<b>Dimensions</b>	42(W) x 48(H) x 95(D)mm (excluding connectors)	
<b>Weight</b>	300g without lens	
<b>Operating Temperature</b>	-20 C~+55 C	
<b>Operational Humidity</b>	Within 85% RH	
<b>Geometric Linearity</b>	No camera distortion (picture linearity limited by lens and monitor)	
<b>Gamma Correction</b>	r=0.25 (back light compensation mode), 0.45, 1 optional	
<b>Gain Control</b>	AGC on/off Manual control available with external controller	
<b>External Sync</b>	Composite sync. signal 500mVpp.. TTL or a Standard composite video signal	

**SONY**

ICX038BLA

Spectral Sensitivity Characteristics  
(Includes lens characteristics, excludes light source characteristics)



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