

## THERMOELECTRICALLY COOLED CCD CAMERA

The CT-160 is a highly sensitive, 2/3-inch, integrating camera that utilizes Peltier thermoelectric cooling to eliminate "Dark Current" and extend the integration period up to 10 minutes.

The CT-160 is most suitable for any low light level still frame imaging application, such as Fluorescence Microscopy, Chemiluminescence and Astronomy.



### FEATURES

#### High Resolution – 768H X 493V

The interline frame transfer CCD that the CT-160 utilizes provides full Vertical resolution that frame transfer CCD cameras cannot achieve.

#### Integration System

The camera can be operated in real-time mode (field or frame accumulation) or in the long term integration mode (field or frame accumulation). The long term integration feature is initiated by an externally applied negative TTL pulse, having a pulse duration equal to the integration time.

#### Sensitivity – 36 lx @ f1.2 (AGC Off)

At full gain, the sensitivity is increased to 4.0 lx. In the long term integration, field accumulation mode, the sensitivity of the CT-160 is increased by a factor of 3,600 per minute. The CCD's microlens system enhances the fill factor for maximum sensitivity.

#### Mode Settings

The CT-160 has external switches for setting field/frame accumulation, AGC (on/off), Gain up (6 dB), and shutter speeds. Shutter speeds can be set from 1/125 to 1/10,000 seconds.

#### Gain and Pedestal

External Gain and Pedestal adjustments. Gain can be increased manually by a factor of 20 dB and Pedestal can be offset by 0.2V. At increased gain/sensitivity, the signal-to-noise ratio is reduced from 56 dB to 38 dB, insuring a crisp picture of high resolution at high sensitivity.

#### Control Unit

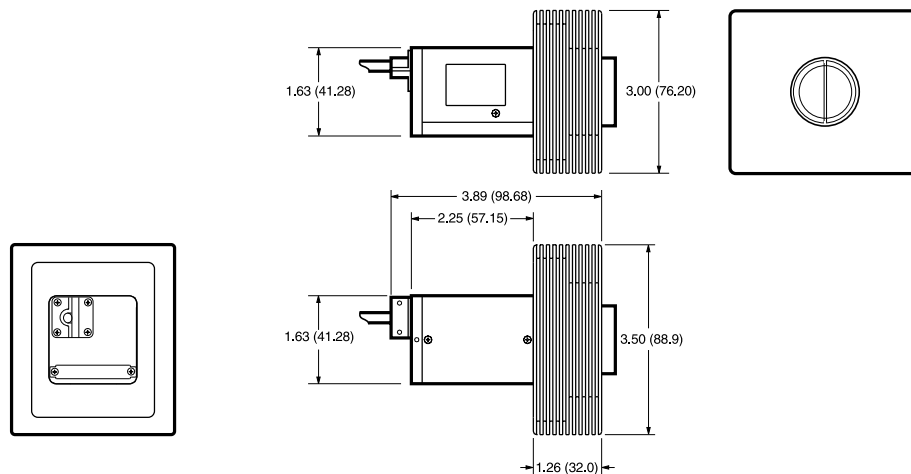
The control unit houses a post processor that sets the Gain and Pedestal adjustments via two dial indicator, 10 turn, pots. The control unit also supplies camera and thermoelectric cooler power. The control unit is interfaced to the camera via a 2 meter flexible cable.

# MODEL CT-160 THERMOELECTRICALLY COOLED CCD CAMERA

## SPECIFICATIONS

<b>Imaging Device</b>	Solid state interline transfer CCD 768 (H) x 493 (V) pixels	<b>Integration Time</b>	10 minutes (Typical)
<b>Scanning Area</b>	8.8mm x 6.6mm (2/3-inch)	<b>Cooling</b>	Two stage Peltier, -35 °C @ 25 °C ambient and 7.5V DC
<b>Pixel Size</b>	11.0 (H) x 13.0 (V) μm	<b>Lens Mount</b>	C-Mount
<b>Scanning System</b>	2:1 interlace, frame and field accumulation	<b>Ambient Temperature</b>	-10 to +35 °C
<b>Output Signals</b>	Composite video, 1.0V <sub>p-p</sub> , Sync negative	<b>Power</b>	110/220V DC,
<b>Resolution</b>	570 x 485 (HxV) TV lines	<b>Weight</b>	Camera: 1.29 lbs Controller: 3.44 lbs
<b>S/N</b>	56 dB (AGC Off, γ = Off)		
<b>Sensitivity</b>	Standard: 361x (f1.2, 2850K) Minimum: 0.51x (f1.2, 2850K, AGC On, γ = 0.45)		

## DIMENSIONS



**Model CT-160**



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