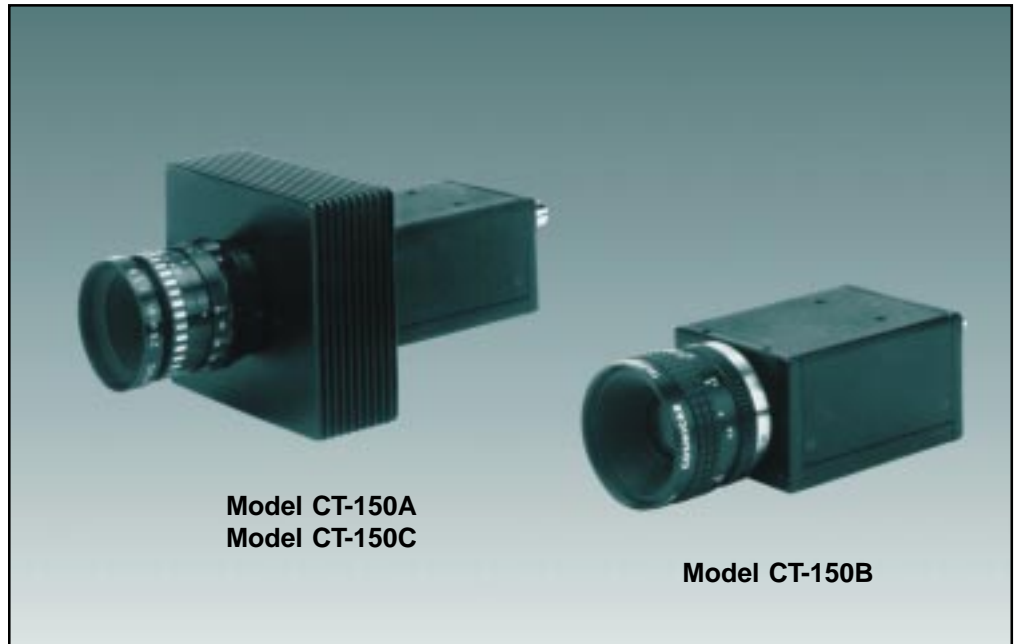


## THERMOELECTRICALLY COOLED CCD CAMERA

The CT-150A is a highly sensitive, 1/2-inch, integrating camera that utilizes Peltier thermoelectric cooling to eliminate "Dark Current" and extend the integration period up to 10 minutes.

The CT-150A 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-150A 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).

#### ■ Sensitivity – 11 lux @ f1.2 (AGC Off)

At full gain, the sensitivity is increased to 1.4 lux. Minimum illumination (AGC on) is .05 lux. In long term integration, frame accumulation mode, the sensitivity is increased by a factor of 1,800 per minute. In the 2X2 binning mode (optional), the sensitivity is increased to 7,200 per minute. The CCD's microlens system enhances the pixel fill factor for maximum sensitivity and maximum blue response.

#### ■ Mode Settings

The CT-150 has its shutter, field frame accumulation, Gamma and AGC modes set by external switches.

#### ■ Gain

The gain adjustment is set externally. Gain can be increased by a factor of 18 dB. This increases the sensitivity to 1.4 lux @ F1.2, while still providing a crisp picture of high resolution with a signal-to-noise ratio of 38 dB.

#### ■ Configurations

The CT-150A cools down to  $-40^{\circ}\text{C}$  for up to 20 minutes of integration time. The CT-150C cools down to  $-20^{\circ}\text{C}$  for up to 10 minutes of integration time. The CT-150B is an uncooled camera that can integrate up to 5 seconds.

# MODEL CT-150 THERMOELECTRICALLY COOLED CCD CAMERA

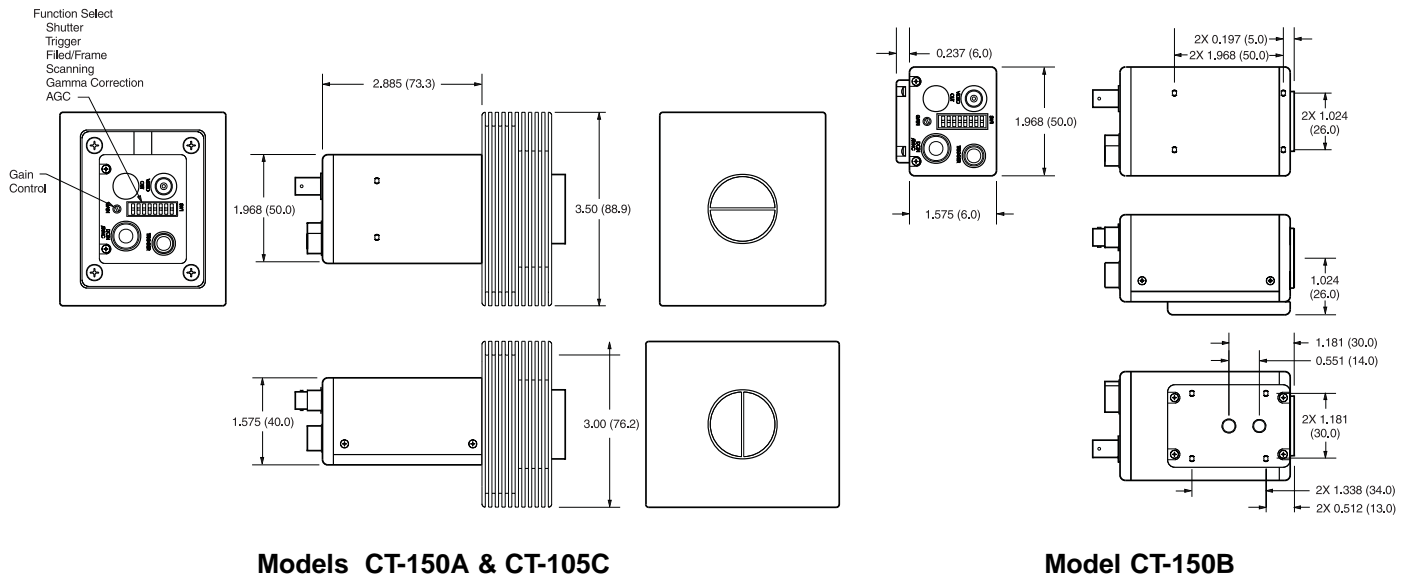
## SPECIFICATIONS

<b>Imaging Device</b>	Solid state interline transfer CCD 768 (H) x 493 (V) pixels, EIA 756 (H) x 581 (V) pixels, CCIR	<b>Cooling</b>	Two stage Peltier, CT-150A: -40 °C CT-150C: -20 °C
<b>Scanning Area</b>	6.45mm x 4.84mm (1/2-inch)	<b>Lens Mount</b>	C-Mount
<b>Pixel Size</b>	8.4 (H) x 9.8 (V) $\mu\text{m}$ , EIA 8.6 (H) x 8.3 (V) $\mu\text{m}$ , CCIR	<b>Ambient Temperature</b>	CT-150A: -10 to +35 °C CT-150B: -10 to +60 °C CT-150C: -10 to +35 °C
<b>Scanning System</b>	2:1 interlace, frame and field accumulation	<b>Power</b>	CT-150A: 12V DC, 180mA 7.5V DC, 1.85A CT-150B: 12V DC, 180mA CT-150C: 12V DC, 180mA 5V DC, 1.1A
<b>Output Signals</b>	Composite video, 1.0V <sub>p-p</sub> , Sync negative	<b>Weight:</b>	CT-150A: 1.3 lbs CT-150B: 0.46 lbs CT-150C: 1.2 lbs
<b>Resolution (HxV) TV lines</b>	570 x 485, EIA 560 x 575, CCIR		
<b>S/N</b>	56 dB (AGC Off, $\gamma = \text{Off}$ )		
<b>Sensitivity</b>	Standard: 11 lux (f1.2, 2850K) Minimum: 0.5 lux (f1.2, 2850K, AGC On, $\gamma = 0.45$ )		
<b>Integration Time</b>	CT-150A: 20 minutes (Typical) CT-150B: 3 seconds (Typical) CT-150C: 10 minutes (Typical)		

## Options

1. CT-150A AC/DC power supply with video and control break-out
2. CT-150B AC/DC power supply with video and control break-out
3. Tripod mount
4. Two meter control cable

## DIMENSIONS



**CTEC**  
PHOTONICS

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Specifications subject to change without notice.

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