



**VC2150A-24 and VC2150A-24C 1/3-Inch General-Purpose Monochrome Video Camera**

- **1/3-inch format**
- **Automatic linear shutter**
- **Backlight compensation**
- **EIA and CCIR versions**

The VC2150A-24 1/3-Inch General-Purpose Monochrome CCD Camera combines excellent picture quality with advanced features such as a linear shutter and backlight compensation. The VC2150A-24 is available in two models, the VC2150A-24 for the EIA television system and the VC2150A-24C for the CCIR television system. Unless noted otherwise, VC2150A-24 will be used to refer to both models. Refer to Table 1.

The interline-transfer CCD image device has approximately 252,000 pixels in the EIA version and 298,000 in the CCIR version. In addition to sharp, high-contrast images, the VC2150A-24 features an excellent sensitivity of 0.002 footcandles (0.02 lux) for fine performance at low light levels. Image quality is improved further by the very high signal-to-noise ratio of more than 50 dB.

Model Number	Product Code	Description
VC2150A-24	6574-04	EIA TV system, 24 V, 60 Hz input
VC2150A-24C	6574-03	CCIR TV system; 24 V, 50 Hz input

**Table 1: Models and Product Codes**

For roll-free sequential switching, multiple cameras can be synchronized to each other by line-locking with adjustable vertical phase. Both models have outputs for ES and AC (video-drive) autoiris lenses and CS-G (DC-drive) autoiris lenses.

The linear electronic shutter automatically selects an integration period appropriate for the illumination level. The range of speeds is 1/60 - 1/100,000 second for the EIA version and 1/50 - 1/100,000 second for the CCIR version. The linear shutter allows the camera to be used without an autoiris lens in indoor situations where the light level varies. However, an autoiris lens is recommended for best performance outdoors.

The VC2150A-24 meets IEC 1146-1 standards for non-broadcast single-sensor cameras and complies with requirements for an FCC Class A device. The VC2150A-24C complies with European Community EMC Directive 89/336. The product was subjected to the testing outlined in European Normalization Standard EN 50081-1 (Electromagnetic Compatibility - General Emissions Standard Part 1: Residential, Commercial, and Light Industry), and EN 50082-1 (Electromagnetic Compatibility - Generic Immunity Standard Part 1: Residential, Commercial, and Light Industry).

**ASSOCIATED EQUIPMENT AND ACCESSORIES**

**Model VC24PS-1 Power Supply:** Converts 120 VAC line power to 24 VAC. Product Specification 564.

**Model VC24PS-1-230 Power Supply:** Converts 220-240 VAC line power to 24 VAC. Product Specification 564.

**Notes:** SUPERSEDES PRODUCT SPECIFICATION 896-1299

**Contractors' Specification**

**1/3-inch General-Purpose Monochrome Camera**

The camera shall be a 1/3-inch format monochrome CCD camera. It shall use an interline transfer image pickup device with an active pixel count of more than 251,904 pixels (297,984 CCIR). Resolution shall be no less than 380 horizontal TV lines, and sensitivity shall be no less than 0.002 fc (0.02 lux) (conditions: f/1.2 lens, 20 IRE video output). Signal-to-noise ratio shall be greater than 50 dB.



The video output shall be in the form of composite video, 1.0 V p-p. External synchronization shall consist of line locking with a vertical phase adjustment. It shall have an automatic

electronic linear shutter to compensate for changing light levels; the linear shutter shall have a range of speeds from 1/60 (1/50 CCIR) to 1/100,000 sec.

The camera shall conform to the radiation standards of FCC Class A and meet IEC 1146-1 standards for non-broadcast single-sensor cameras.

Dimensions (H x W x L) shall not exceed 2.5 x 2.2 x 5.18 inches (64 x 55 x 132 mm). Weight shall be no greater than 0.88 lb (0.40 kg).

The camera shall be Vicon model VC2150A-24 (EIA) or VC2150A-24C (CCIR).

<b>Vicon Product Facts</b>	 	Model No: VC2150A-24 VC2150A-24C	Product Code: Refer to Table 1	SEC: 2	SPEC: 896	REV: 1200
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# Technical Information

## VIDEO CHARACTERISTICS

- Image Device:** 1/3-inch interline transfer CCD.
- Picture Elements:** EIA: 512 (H) × 492 (V).  
Total active pixels: 251,904.  
CCIR: 512 (H) × 582 (V).  
Total active pixels: 297,984.
- Scanning System:** EIA: 525 lines, 60 fields/sec,  
2:1 interlace.  
CCIR: 625 lines, 50 fields/sec,  
2:1 interlace.
- Sensitivity:** 0.002 fc (0.02 lux).  
Conditions: scene illumination; f/1.2  
lens; usable video (20 IRE) output.
- Resolution:** EIA: 380 lines horizontal, 350 lines  
vertical.  
CCIR: 380 lines horizontal, 420 lines  
vertical.
- Automatic Electronic  
Linear Shutter:** EIA speed range: 1/60 sec to  
1/100,000 sec.  
CCIR speed range: 1/50 sec to  
1/100,000 sec.
- Backlight  
Compensation:** Switch selectable, on-off.
- Signal-to-Noise  
Ratio (SNR):** Greater than 50 dB (AGC off).
- Video Signal Output:** 1.0 V p-p (140 IRE) composite video,  
consisting of 714 mV (100 IRE) of  
luminance and of negative-going sync  
signal of 286 mV (40 IRE).
- Synchronization:** Line locking with vertical phase  
adjustment or internal.
- Automatic Gain  
Control (AGC):** Switch selectable, max 18 dB.
- Output for  
Autoiris Lens:** (1) ES and AC (video drive type)  
autoiris lenses.  
(2) DC-drive output for CS-G lenses.

## ELECTRICAL

- Input Power:** VC2150A-24: 24 VAC ±20%, 60 Hz.  
VC2150A-24C: 24 VAC ±20%, 50 Hz.
- Power Consumption:** 3.6 W (150 mA).
- Heat Equivalent:** 0.2 btu/min (0.05 kg-cal/min).  
NOTE: These figures represent the  
conversion of 100% of the electrical  
energy to heat. Actual percentage of  
heat generated will vary from product  
to product. These figures are provid-  
ed as an aid in determining the extent  
of cooling required for an installation.
- Radio-Frequency  
Emission Rating:** FCC class A.
- IEC Standard:** 1146-1, for non-broadcast single-  
sensor cameras.
- European Community  
(CE) Standard:** EN 50081-1 generic emissions.  
EN 50082-1 generic immunity.

## MECHANICAL

- Dimensions:** Height (H): 2.5 in. (64 mm).  
Width (W): 2.2 in. (55 mm).  
Length (L): 5.18 in. (132 mm).
- Distance from the  
Base to the Optical  
Center of the Lens (X):** 1.43 in. (36.3 mm).
- Maximum Lens  
Penetration into  
Camera:** Measured from the lens mounting  
surface on the front of the camera:  
CS mount: 0.35 in. (8.9 mm).  
C mount: 0.54 in. (14 mm).
- Weight:** 0.88 lb (0.40 kg).
- Lens Mount:** C or CS mount; adapter included.
- Camera Mounting:** 1/4-20 threaded hole in mounting  
foot which can be positioned on the  
bottom or the top of the camera.
- Shipping Dimensions:** Height: 3.75 in. (95 mm).  
Width: 4.4 in. (112 mm).  
Length: 6.7 in. (170 mm).
- Shipping Weight:** 1.1 lb (0.5 kg).
- Shipping Volume:** 0.06 ft<sup>3</sup> (0.002 m<sup>3</sup>).

## ENVIRONMENTAL

- Operating  
Temperature Range:** 14 to 122° F (-10 to +50° C).
- Operating  
Humidity Range:** 0 to 85%, relative, noncondensing.
- Storage  
Temperature Range:** -20 to 140° F (-29 to 60° C).
- Storage Humidity:** Up to 85%, relative, noncondensing.

