



## VC2430A-24 and VC2430A-24C 1/3-Inch High-Resolution Monochrome CCD Camera

- **1/3-inch format**
- **High resolution, 580 TV lines**
- **Automatic electronic linear shutter**
- **Backlight compensation**
- **EIA and CCIR versions**

The VC2430A-24 1/3-Inch High-Resolution Monochrome CCD Camera combines excellent picture quality with advanced features such as a linear shutter and backlight compensation. The VC2430A-24 is available in two models, the VC2430A-24 for the EIA television system and the VC2430A-24C for the CCIR television system. Unless noted otherwise, VC2430A-24 will be used to refer to both models. Refer to Table 1.

The high-resolution image device has over 380,000 pixels in the EIA version and over 438,000 in the CCIR version. In addition to sharp, high-contrast images, the VC2430A-24 features an excellent sensitivity of 0.0028 footcandles (0.03 lux) for fine performance at low light levels. Image quality is improved further by the very high signal-to-noise ratio of more 50 dB.

Model Number	Product Code	Description
VC2430A-24	6575-04	EIA TV system; 24 V, 60 Hz input
VC2430A-24C	6575-03	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 with the line-locking function. Vertical phase is adjustable over a range of 300 degrees. 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 for the EIA version and 1/50 - 1/100,000 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 VC2430A-24 meets IEC 1146-1 standards for non-broadcast single-sensor cameras and complies with requirements for an FCC Class A device. The VC2430A-24C complies with VDE 0871 Class A and 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, product code 4297:** Converts 120 VAC line power to 24 VAC. Product Specification 564.

**Model VC24PS-1-230 Power Supply, product code 4297-01:** Converts 220-240 VAC line power to 24 VAC. Product Specification 564.

**Notes:** SUPERSEDES PRODUCT SPECIFICATION 894-997

## Contractors' Specification

### 1/3-Inch High-Resolution Monochrome CCD Camera

The camera shall be a 1/3-inch format high-resolution monochrome CCD camera. It shall use an interline transfer image pickup device with an active pixel count of 380,874 pixels (438,246 CCIR). Resolution shall be no less than 580 horizontal TV lines, and sensitivity shall be no less than 0.0028 fc (0.03 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 power lines phase

locking, with a vertical phase adjustment range of 300°. 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 meet requirements for an FCC Class A device and IEC 1146-1 standard for non-broadcast single-sensor cameras.

Dimensions (H × W × L) shall not exceed 2.5 × 2.2 × 5.18 inches (64 × 55 × 132 mm). Weight shall be no greater than 0.88 lb (0.4 kg).

The camera shall be Vicon Model VC2430A-24 (EIA) or VC2430A-24C (CCIR).

# Technical Information

## VIDEO CHARACTERISTICS

- Image Device:** 1/3-inch format interline transfer CCD sensor.
- Picture Elements:** EIA/NTSC: 771 (H) × 494 (V).  
Total active pixels: 380,874.  
CCIR/PAL: 753 (H) × 582 (V).  
Total active pixels: 438,246.
- Scanning System:** EIA: 525 lines, 60 fields/sec, 2:1 interlace.  
CCIR: 625 lines, 50 fields/sec, 2:1 interlace.
- Sensitivity:** 0.0028 fc (0.03 lux). Conditions: scene illumination; f/1.2 lens; usable video (20 IRE) output.
- Resolution:** EIA: 580 TV lines horizontal, 350 lines vertical.  
CCIR: 580 TV lines horizontal, 420 lines vertical.
- Signal-to-Noise Ratio:** Greater than 50 dB.
- Video Signal Output:** 1.0 V p-p (140 IRE) composite video, consisting of 714 mV (100 IRE) of luminance and a negative-going sync signal of 286 mV (40 IRE).
- Synchronization In:** Power lines phase locking (line-locking) with 300° vertical phase adjustment; internal.
- Automatic Gain Control (AGC):** Switch selectable, max. 18 dB.
- Output for Autoiris:** (1) ES and AC type (video drive type) autoiris lenses.  
(2) DC-drive output for for CS-G lenses.
- Automatic Electronic Linear Shutter:** Speed range from 1/60 (1/50 CCIR) to 1/100,000 sec.

## ELECTRICAL

- Input Power Source:** VC2430A-24: 24 V ±20%, 60 Hz.  
VC2430A-24C: 24 V ±20%, 50 Hz.
- Power Consumption:** 3.6 W (150 mA).
- Heat Equivalent:** 0.2 btu/min (0.05 cal/min).  
NOTE: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.
- IEC Standard:** 1146-1, for non-broadcast single-sensor cameras.
- Radio-Frequency Emission Rating:** VC2430A-24: FCC Class A.  
VC2430A-24C: VDE 0871 Class A.
- Safety Standard:** UL 2044.
- 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 Base to Optical center of Lens (X):** 1.43 in. (36.3 mm).
- Weight:** 0.88 lb (0.5 kg).
- Mechanical Focus (Back focus):** Cam with friction lock.
- Lens Mount:** C/CS mounts (adapter included).
- 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).
- 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

- Ambient Temperature Range:** 14 to 131° F (-10 to 55° C).
- Humidity:** Up to 85% relative, noncondensing.
- Storage Temperature Range:** -20 to 140° F (-29 to 60° C).
- Storage Humidity:** Up to 85% relative, noncondensing.

