



VC355-DSP / VC355C-DSP / VC366-DSP / VC366C-DSP 1/3-Inch Digital Color Camera

- DSP (Digital Signal Processing) for clear crisp images
- Brilliant true color
- Automatic linear electronic shutter
- Backlight compensation
- Accepts video- or DC-drive autoiris lenses
- Line-locking with V-phase
- Accepts C- or CS-mount lenses
- NTSC and PAL versions

The VC355-DSP/VC366-DSP 1/3-Inch Digital Color Cameras combine excellent picture quality with advanced features. The VC355-DSP CCD device has over 250,000 pixels (NTSC; PAL has over 290,000); the VC366-DSP CCD device has over 379,000 pixels (NTSC; PAL has over 437,000). This provides a sharp color image with accurate color rendition provided by an automatic through-the-lens (TTL) color compensation system. A linear shutter with speeds up to 1/100,000 second allows use in varying light levels without having an autoiris lens.

DSP cameras take the analog signal, convert it to digital format, adjust specific video parameters and display the image in analog format. Digital control offers crisp lines, detail reproduction and assures that functions are unaffected by time and temperature. These cameras feature the extremely low levels of lag, blooming, and transfer smear characteristic of CCD pickup devices.

The VC355-DSP has a minimum scene illumination of 0.08 footcandles (0.8 lux) at standard gain that provides a usable video output at 40 IRE; at high gain, sensitivity is 0.05 footcandles (0.5 lux) at 40 IRE. Horizontal resolution is 330 TV lines. The VC366-DSP has a minimum scene illumination of 0.09 footcandles (1 lux) at standard gain that provides a usable video output at 40 IRE; at high gain, sensitivity is 0.07 footcandles (0.7 lux) at 40 IRE. Horizontal resolution is 540 horizontal TV lines.

Both cameras have dual autoiris modes, video-drive lenses (ES and AC models) and DC-drive (CS-G) lenses. Connection of the video-drive lens is by screw terminals. The CS-G lenses' circuit is located in the camera and lenses come with a molded connector. To connect the CS-G lens, plug the connector into the mating connector on the camera.

All controls on the camera are located on the rear panel. Synchronization is selectable, internal or line-locking. Multiple cameras can be synchronized with the line-locking function. Vertical phase is adjustable. Selectable backlight compensation permits the camera to generate correctly exposed images in a variety of difficult lighting situations.

The cameras accept C-mount and CS-mount lenses. A fully isolated power supply provides stable images when they are used on a common power supply with other cameras.

The cameras meet IEC 1146-1 standards for non-broadcast single-sensor cameras and comply with radiation requirements for an FCC Class A device.

ACCESSORIES AND OPTIONS

Models VC24PS-1/VC24PS-1-230 Power Supplies, Product Codes 4297/4297-01: Convert 120/230VAC line power to 24 VAC. Product Specification 564.

Model V2448-175PS Power Supply, Product Code 6410-20: 4-channel, 24/28 VAC output, 7/6.25 A (total). Product Specification 738.

Models V248-3.5PS and V2416-8PS Power Supplies, Product Codes 7668/7669: 8/16-channel, 24 VAC output, 3.5/8 A (total). Product Specification V082.

Model Number	Product Code	Operating System	Input Power
VC355-DSP	8308-04	NTSC	24 V, 60 Hz
VC355C-DSP	8308-03	PAL	24 V, 50 Hz
VC366-DSP	8309-54	NTSC	24 V, 60 Hz
VC366C-DSP	8309-53	PAL	24 V, 50 Hz

Table 1: Models and Product Codes

Technical Information

VIDEO CHARACTERISTICS

Image Device: 1/3-inch interline transfer CCD chip with complementary color filters.

Active Picture Elements: VC355-DSP: 510 (H) x 492 (V).
VC355C-DSP: 500 (H) x 582 (V).
VC366DSP: 768 (H) x 494 (V).
VC366C-DSP: 752 (H) x 582 (V).

Sensitivity: VC355-DSP:
0.08 fc (0.8 lux) at standard gain;
0.05 fc (0.5 lux) at high gain.
VC366-DSP:
0.09 fc (1 lux) at standard gain;
0.07 fc (0.7 lux) at high gain.
Conditions: scene illumination, lens at f/1.2, 89.9% scene highlight reflectance, and 40 IRE video output.

Horizontal Resolution: VC355-DSP: 330 TV lines.
VC366-DSP: 540 TV lines.

Automatic Linear Electronic Shutter: VC355-DSP/VC366-DSP:
1/60 to 1/100,000 sec.
VC355C-DSP/VC366C-DSP:
1/50 to 1/100,000 sec.

Scanning System: 2:1 interlace, 3:4 aspect ratio.
NTSC: 525 lines, 60 fields/sec.
PAL: 625 lines, 50 fields/sec.

Integration Mode: Field integration.

Geometric Distortion: None.

Horizontal Frequency: NTSC: 15.750 kHz (line-locked)
15.734 Hz (internal).
PAL: 15.625 kHz.

Vertical Frequency: NTSC: 60 Hz (line-locked),
59.94 Hz (internal).
PAL: 50 Hz (line-locked).

Signal-to-Noise Ratio: Better than 52 dB (AGC off).

Automatic White Balance: 2500 to 7500 K.

Video Signal Output: 1.0 V p-p composite video consisting of 714 mV video signal, 286 mV negative-going sync signal; 140 IRE (100 IRE video, 40 IRE sync).

Synchronization In: 1. Power lines phase locking (line-locking) with vertical phase adjustment.
2. Internal crystal control.

Output for Autoiris: Two types of autoiris operation:
1. For video-drive lenses (ES and AC lenses):
Power: 50 mA at 9 V, regulated.
Video signal: composite video.
2. Internal autoiris board for DC-drive (CS-G) autoiris lenses.

ELECTRICAL

Input Power Source: 24 VAC \pm 20%, 250 mA.

Input Power Isolation: Internal fully isolated power supply.
Power Consumption: 6 W maximum.
Heat Equivalent: 0.3 btu/min (0.09 kg-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.

Radio-Frequency Emission Standard: FCC Class A.

IEC Standard: 1146-1, for non-broadcast single-sensor cameras.

CONTROLS AND CONNECTORS

External Controls: 7-position DIP Switch Selects:
synch, line-lock or internal crystal;
backlight compensation, on or off;
electronic or automatic linear shutter;
auto-tracking (continuous) white balance (ATW) or automatic white balance (AWB); automatic gain control (AGC), on or off; hi-gain, on or off; flickerless, on or off .
Manual AWB button.
Vertical phase adjustment.
Autoiris level control (DC lens).
Power indicator.

Connectors: Power: clamping screw terminals.
Video-drive (ES or AC) autoiris lenses: clamping screw terminals.
DC-drive (CS-G) autoiris lenses: 4-pin molded connector.
Video out: BNC.

MECHANICAL

Dimensions: Height (H): 3.0 in. (76 mm).
Width (W): 2.3 in. (59.4 mm).
Length (L): 2.9 in. (74.8 mm).

Distance from Base to Optical Center of Lens (X): 1.25 in. (32 mm).

Weight: 0.35 lb (158 g).

Mechanical Focus: Adjustable, self-locking.

Lens Mount: C and CS mounts included.

Maximum Lens Penetration into

Camera: Measured from lens mounting surface on front of camera.
CS mount: 0.180 in. (4.6 mm).
C mount: 0.380 in. (9.6 mm).

Camera Mounting: 1/4-20 threaded hole in camera bottom and camera top.

Technical Information (cont'd)

Shipping Dimensions: Height: 3.75 in. (95 mm).
Width: 5.0 in. (127 mm).
Length: 4.0 in. (102 mm).
Shipping Weight: 0.55 lb (0.25 kg).
Shipping Volume: 0.04 ft³ (0.001 m³).

ENVIRONMENTAL

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

