COMPACT COLOR CAMERAS

NTSC

C-CV102-CS



Lens is optional

C-CV202-3



2X varifocal lens included

C-CV202-F3



Fixed focal length lens included

DESCRIPTION

TOA's compact color cameras represent new approaches to high-performance and high-resolution cameras for CCTV applications, each camera having specific features and functions.

Color Camera:

C-CV102-CS (lens is optional)

Color Dome Camera:

C-CV202-3 (with 2X varifocal lens)

C-CV202-F3 (Fixed focal length lens)

FEATURES

- **Easy power requirements**
  TOA compact color cameras operate on 12V DC.

High-performance CCDs

- Each camera incorporates a 1/4” CCD with a resolution of 380,000 pixels resulting a high horizontal resolution that exceeds 480 lines.

- **2X varifocal lens (C-CV202-3)**
  To easily allow on-site adjustment for the viewing angle, dome camera is fitted with a 2X varifocal lens having an auto iris.
- **Wide-ranging view angles (C-CV202-3)**
  Optimal camera angle of view extends from 38.3 to a wide 76.7 degrees (horizontal), enhancing coverage over a wide range for more effective monitoring.
- **Backlight Compensation**
  To cope with varying lighting conditions, backlight compensation can be switched on or off as required.
- **Flicker-free for easier viewing (C-CV102-CS/C-CV202-3)**
  The cameras do not cause the image to deteriorate as often caused by fluorescent lighting. Annoying image flicker is eliminated for more effective monitoring.
- **Focus adjustment switch for easy focusing (C-CV102-CS/C-CV202-3)**
  To simplify focusing even without using the ND filter*, an adjustment switch is provided for foolproof focusing.
  *see rear page for more feature information.

TOA

C-CV102-CS

COLOR CAMERA (Lens is optional)



Lens is optional

- Specifically designed for use in indoor applications
- Lens available separately from a range of lens options. Camera accepts any CS mounted lens.
- 12V DC operation
- Horizontal resolution exceeds 480 lines.
- Backlight compensation function
- Flickerless operation for viewing ease
- Adjustment switch for easy focusing without using an ND filter

SPECIFICATIONS

Power Source	12V DC (±10%)
Power Consumption	1.5W (120mA)
Image Device	1/4 type IT-CCD
Number of Effective Pixels	768 (H) × 494 (V) (380,000 pixels)
Scanning System	2:1 interlace
Scanning Frequency	Horizontal: 15.734kHz, Vertical: 59.94Hz
Video Output	VBS 1.0V (p-p) 75Ω, BNC connector
Synchronizing System	Internal synchronization
Resolution	Horizontal: 480 lines (at center), Vertical: 350 lines (at center)
S/N Ratio	50dB
Minimum Illumination	3 lx (F1.4, 50 IRE), 1 lx (F1.4, 20 IRE)
White Balance Mode	ATW/AWB
Lens Mount	CS mount
Auto-Iris Lens Output	DC input type (4 pin connector)
Adjustment Switch	ON/OFF (used for focus adjustment)
Other Function	Backlight compensation, Shutter speed (1/60, 1/100), Iris control
Operating Temperature	–10˚C to +50˚C
Operating Humidity	Under 90% RH (no dew condensation produced)
Applications	Indoor use
Finish	Case: Surface-treated steel plate, cool gray, paint Front cover: ABS resin, cool gray
Dimensions	66.2 (W) × 63 (H) × 78.5 (D)mm
Weight	250g

C-CV202-3

COLOR DOME CAMERA



2X vertical lens included

- Equipped with lens having a 38.3 – 76.7 degree horizontal viewing angle and a 28.7 – 56.8 degree vertical viewing angle
- Specifically designed for use in indoor applications
- 12V DC operation
- Horizontal resolution exceeds 480 lines
- Backlight compensation function
- Flickerless operation for viewing ease
- Adjustment switch for easy focusing without using an ND filter
- Wide camera lens angle setting
- Monitor output for easy installation

SPECIFICATIONS

Power Source	12V DC (±10%)
Power Consumption	1.5W (120mA)
Image Device	1/4 type IT-CCD
Number of Effective Pixels	768 (H) × 494 (V) (380,000 pixels)
Scanning System	2:1 interlace
Scanning Frequency	Horizontal: 15.734kHz, Vertical: 59.94Hz
Monitor Output	VBS 1.0V (p-p) 75Ω, RCA pin jack
Video Output	VBS 1.0V (p-p) 75Ω, BNC-R jack
Synchronizing System	Internal synchronization
Resolution	Horizontal: 480 lines (at center), Vertical: 350 lines (at center)
S/N Ratio	50dB
Minimum Illumination	8 lx (50 IRE), 2 lx (20 IRE)
White Balance Mode	ATW/AWB
Focal Length	f = 2.8 – 5.8mm
Maximum Aperture Ratio	1: 1.4 –1.8
Iris	Auto-iris
Angle of View	Horizontal: 76.7° – 38.3°, Vertical: 56.8° – 28.7°
Adjustment Switch	ON/OFF (used for focus adjustment)
Other Function	Backlight compensation, Shutter speed (1/60, 1/100). Iris control
Operating Temperature	–10˚C to +50˚C
Operating Humidity	Under 90% RH (no dew condensation produced)
Applications	Indoor use
Finish	Case: ABS resin, cool gray Dome cover: Acrylic resin, smoked
Dimensions	ø107 × 78.7 (H)mm
Weight	170g
Accessory	Dome cover fixing screw (2.6 × 8) × 1

Note: No camera mounting screws are supplied. For mounting, use screws of 4 x 25mm or longer.
The power source requires rated voltage of 12V DC rated current of 0.5A or more.

C-CV202-F3
COLOR DOME CAMERA



Fixed focal length lens included

- Equipped with lens having a 73.9 degree horizontal viewing angle and a 54.0 degree vertical viewing angle
- Specifically designed for use in indoor applications
- 12V DC operation
- Horizontal resolution exceeds 480 lines
- Backlight compensation function
- Wide camera lens angle setting
- Monitor output for easy installation

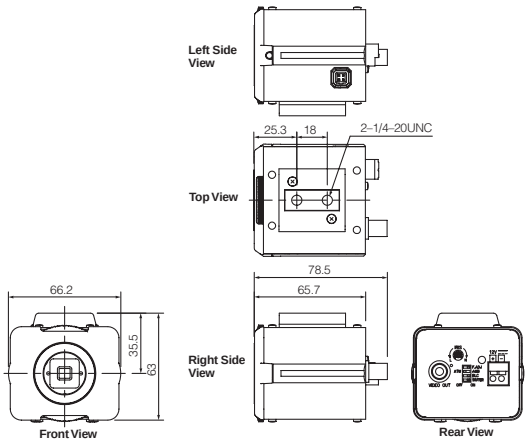
SPECIFICATIONS

Power Source	12V DC (±10%)
Power Consumption	1.2W (100mA)
Image Device	1/4 type IT-CCD
Number of Effective Pixels	768 (H) × 494 (V) (380,000 pixels)
Scanning System	2:1 interlace
Scanning Frequency	Horizontal: 15.734kHz, Vertical: 59.94Hz
Monitor Output	VBS 1.0V (p-p) 75Ω, RCA pin jack
Video Output	VBS 1.0V (p-p) 75Ω, BNC-R jack
Synchronizing System	Internal synchronization
Resolution	Horizontal: 480 lines (at center), Vertical: 350 lines (at center)
S/N Ratio	50dB
Minimum Illumination	15 lx (50 IRE), 4 lx (20 IRE)
White Balance Mode	ATW/AWB
Focal Length	f = 3.0mm
Maximum Aperture Ratio	1 : 2.0
Iris	Automatic electronic shutter iris
Automatic Electronic Shutter Range	1 : 2000 (F2.0 – F89)
Angle of View	Horizontal: 73.9°, Vertical:54.0°
Other Function	Backlight compensation, Iris control
Operating Temperature	–10˚C to +50˚C
Operating Humidity	Under 90% RH (no dew condensation produced)
Applications	Indoor use
Finish	Case: ABS resin, cool gray Dome cover: Acrylic resin, smoked
Dimensions	ø107 × 78.7 (H)mm
Weight	150g
Accessory	Dome cover fixing screw (2.6 × 8) × 1

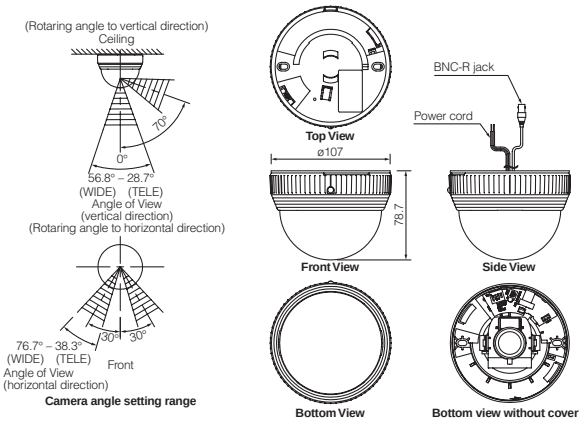
Note: No camera mounting screws are supplied. For mounting, use screws of 4 x 25mm or longer.
The power source requires rated voltage of 12V DC rated current of 0.5A or more.

APPEARANCE AND DIMENSIONAL DIAGRAM

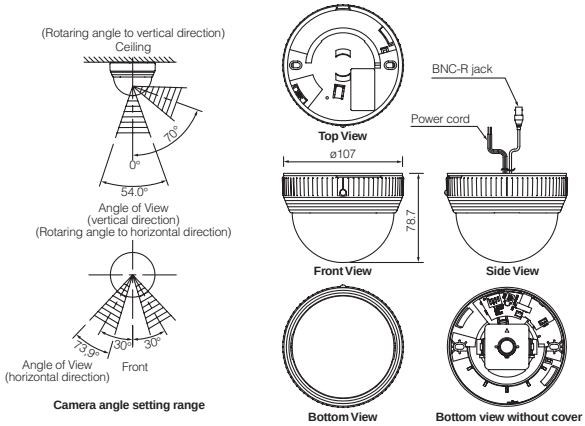
C-CV102-CS



C-CV202-3



C-CV202-F3



unit: mm

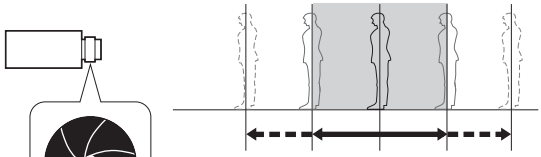
Function Comparison Table

Function	C-CV102-CS	C-CV202-3	C-CV202-F3
			
Type	Box	Fixed Dome	Fixed Dome
Lens	—	2x Varifocal Lens	Fixed Focal Length Lens
Auto Iris	●	●	—
Auto Electronic Shutter Iris	—	—	●
Focus Adjust Switch	●	●	—
Flicker Reduction	●	●	—
Back Light Compensation	●	●	●

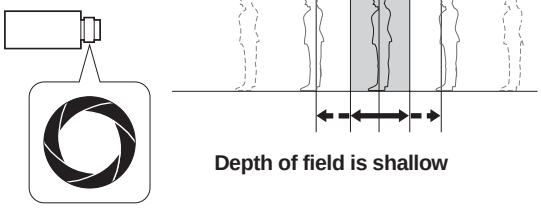
*Focus Adjustment without the ND filter (C-CV102-CS/C-CV202-3)

Iris and field of depth

When adjusting focus, an important aspect is depth of field, actually the depth of the focus. The term depth is used is because we can describe it as being deep or shallow. If the in-focus area goes well into (long distance) the subject field is referred to as being deep. If the background area is not in focus but the subject field is in sharp focus, the field is referred to as being shallow.



Depth of field is deep



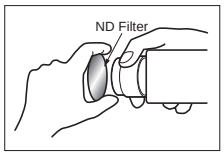
Depth of field is shallow

The depth of field will change depending on the focal length of the lens, the iris of the lens and the shooting distance. And in surveillance cameras, the lens iris has an effect on focusing. As the diagram makes clear, the wider the lens iris opening size, the shallower will be the depth of field.

Why will correct focus set during the day go off at night?

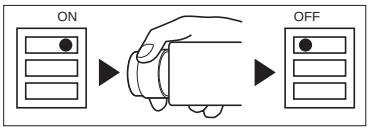
That's because focus has not been precisely set. Shooting with an auto-iris lens, the amount of light during the day makes the lens iris opening stay small. This results in a deep depth of field. But as day turns to night, the lens iris opens to get more light, the depth of field is reduced and the focus goes off. To adjust the focus, it is necessary to open the lens iris and reduce the depth of field. When using an auto-iris lens, the ND filter must be used to approximate nighttime light conditions so that the lens iris stays open and depth of field is reduced before adjusting the focus.

* Neutral Density (ND) Filter:
A filter which reduces light coming through the camera lens without any effect on the light's color temperature.



Adjustment switch makes focusing simple.

TOA Compact Cameras do not require an ND filter for adjusting focus. By just setting the focus adjustment switch on the camera to ON, the lens iris opens and a shallow depth of field is maintained. To achieve perfect focus simply and easily, just set the adjustment switch ON, adjust focus and then set the switch OFF.



TOA Corporation

http://www.toa.jp/

Specifications are subject to change without notice.
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