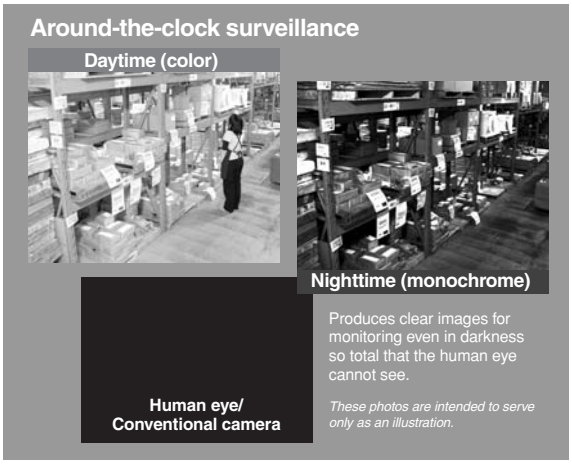
# C-CV854R-3
# Vandal Resistant Day/Night IR Camera




## DESCRIPTION

The C-CV854R-3 is a high-resolution, indoor/outdoor, vandal-resistant, 24V AC/12V AC power, infrared dome type surveillance camera that operates as a color camera in daylight and as a highly sensitive monochrome camera in darkness. By automatically turning on a built-in infrared LED illuminator capable of covering a visible range of up to 25 m (82.02 ft.) (in high-sensitivity mode), it can view a subject even under completely dark conditions, thus providing reliable and clear image monitoring that ensures nothing is missed. This automatic dual operating capability makes it ideal for applications where around the clock coverage is essential. Thanks to a noise-reduction function, clear images can be viewed even under poor lighting conditions. The camera body is made of die-cast aluminum alloy, with a polycarbonate dome cover, ensuring a high degree of resistance to even strong impacts with an energy of up to 50 Joules.

The C-CV854R-3 incorporates a 3-axis (horizontal, vertical and rotational) adjustment mechanism and a 3X varifocal lens, which facilitate adjustment of the camera's orientation and view angle during installation. The unit's dustproof and waterproof construction enables it to be mounted to an outdoor wall or ceiling without requiring any extra equipment to protect the camera against dust or rain. In addition, by installing the TOA C-A854H heater unit inside the camera housing, the camera may be used at ambient temperatures as low as –30°C (–22°F).

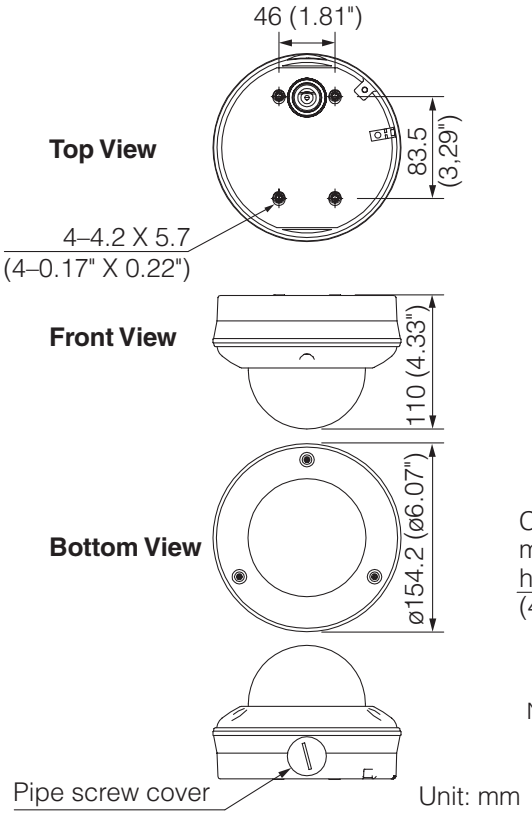
## FEATURES

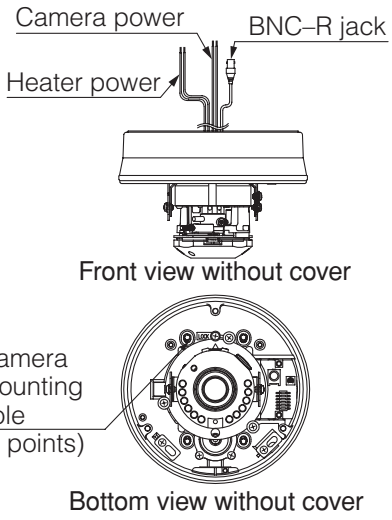
- **Around-the-clock surveillance**
  - An infrared LED feature makes it possible to capture clear images for monitoring even in total darkness (0 lx).
  - Infrared LED light can reach at a distance of about 25m (82.02 ft.). * Outdoors
  - Clear monochrome image is provided even under poor lighting conditions.
- **Maximum 8X sensitivity up function**
- **Wide range of view angles (3X varifocal lens)**
  - Horizontal: 90.3° – 31.9°, Vertical: 66.4° – 39.8°, Diagonal: 115.4° – 39.8°
- **High resolution (horizontal: 540 lines)**
  - 1/3" CCD with a resolution of 380,000 pixels
- **Backlight compensation**
  - Allows optimal viewing of dark areas in a backlight condition.
- **Easy viewing**
  - Flicker-free function
  - Noise reduction function
- **Vandal-resistant, sturdy design**
  - Impact-resistance against up to 50-joule energy
- **Dust- and water-proof construction (IP66)**
- **Easy installation**
  - 3-axis (horizontal, vertical and rotational) adjustment mechanism
  - Direct output to the monitor
- **Easy focusing without requiring an ND filter**
- **Flexible camera power source**
  - Compatible with 24V AC or 12V DC
- **Operating temperature of as low as –30°C (–22°F)**
  - With optional heater unit C-A854H

TOA

NTSC

## APPEARANCE AND DIMENSIONAL DIAGRAM

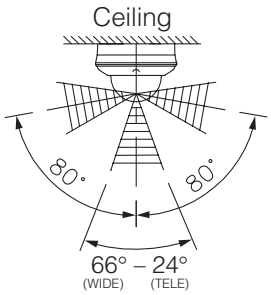



Note: When installing the camera outdoors, the 4 camera mounting holes must be protected to prevent rainwater from leaking into the enclosure.

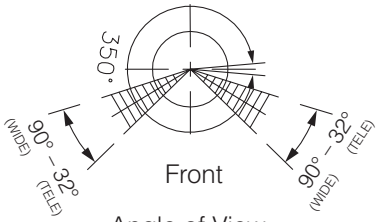
Camera angle setting range

(Rotaring angle to vertical direction)




Angle of View
(vertical direction)

(Rotaring angle to horizontal direction)




Angle of View
(horizontal direction)

## SPECIFICATIONS

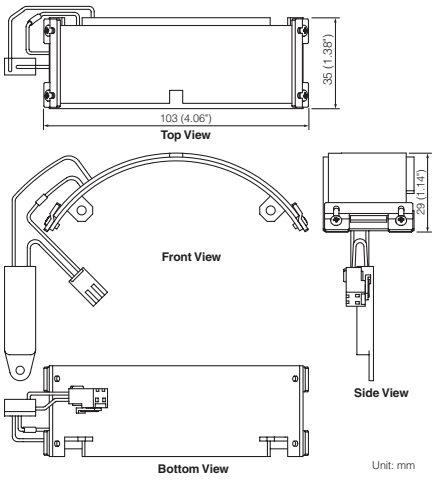
| | |
|---|---|
| **Power Source** | For camera: 24V AC, 50/60Hz or 12V DC, for heater: 24V AC, 50/60Hz |
| **Power Consumption** | 4W (300 mA, maximum current 800 mA) |
| **Image Device** | 1/3 type IT-CCD |
| **Number of Effective Pixels** | 768 (H) × 494 (V) (380,000 pixels) |
| **Scanning System** | 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 (at center)** | Horizontal: 540 lines (standard), Vertical: 350 lines |
| **S/N Ratio** | 50dB |
| **Minimum Illumination** | 0.5 lx (50 IRE, color, high-sensitivity switch OFF), 0.2 lx (20 IRE, color, high-sensitivity switch OFF),<br>0 lx (night mode) *Flickerless: OFF |
| **Threshold Illumination for mode switching** | Color-to-B/W mode: Approx. 2 lx,<br>B/W-to-color mode: Approx. 10 lx (incandescent lamp) |
| **White Balance mode** | ATW/AWB (switch selector) |
| **Focal Length** | f = 3.0 – 9.0mm |
| **Maximum Aperture Ratio** | 1:1.4 – 2.4 |
| **Iris** | Auto-iris |
| **Angle of View** | Horizontal: 90.3° – 31.9°, Vertical: 66.4° – 23.9°, Diagnal: 115.4° – 39.8° |
| **Infrared LED's Illumination Range** | Indoors: Approx. 18m (59.06 ft) (high-sensitivity swiitch OFF), Approx. 25m (82.02 ft) (high-sensitivity swiitch ON)<br>Outdoors: Approx. 15m (49.21 ft) (high-sensitivity swiitch OFF), Approx. 25m (82.02 ft) (high-sensitivity swiitch ON) |
| **Function** | Backlight compensation, Flickerless function, Iris control, Max. 8X sensitivity increase (auto/off), Noise reduction (24-hour),<br>Day/night mode (auto selector), Adjustment Switch: ON/OFF (used for focus adjustment) |
| **Dust/Water Protection** | IP66 |
| **Operating Temperature** | –10˚C to +50˚C(14°F to 122°F) (When an optional heater unit is attached: –30°C to +50°C (-22°F to 122°F)) |
| **Operating Humidity** | 90% RH or less (no condensation) |
| **Application** | Outdoor/Indoor use |
| **Finish** | Case, bezel: Die-cast aluminum, light gray, paint/Dome cover: PC resin (transparent) |
| **Dimensions** | ø154.2 × 110 (H)mm (ø6.07" x 4.33") (excluding the cables) |
| **Weight** | 1.2kg (2.65 lb) |
| **Accessory** | L-type wrench × 1, Base gasket ×1 |
| **Option** | Heater unit: C-A854H, Flush ceiling mount bracket: C-BC850U, Wall mount bracket: C-BC850W. Pole mount bracket: C-BC450PM,<br>Pole band: YS-60B |

Note: No camera mounting screws are supplied.
For mounting use screws of 4 × 25mm (0.16" × 0.98") or longer.

# OPTIONAL ACCESSORIES

## C-A854H
### Heater Unit





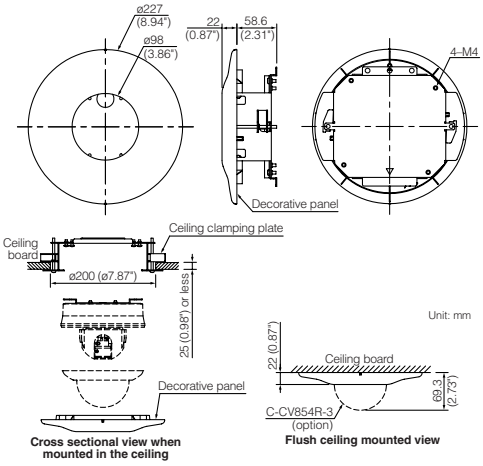

Installing this Heater Unit in the applicable dome camera allows the camera to be used in location exposed to extremely low ambient temperature.

**SPECIFICATIONS**

| | |
|---|---|
| Power Req. | 24V AC, 50/60Hz |
| Power Consumption | 15W (630mA) |
| Heater Operating Temperature | Turns on at under approx. 10˚C (50˚F) |
| Operating Temperature | –30˚C to +50˚C (-22˚F to +122˚F) |
| Dimensions | 103 (W) × 35 (H) × 29 (D)mm (4.06" × 1.38" × 1.14")<br>(excluding connector and thermostat) |
| Weight | 35g (0.08 lb) |
| Accessory | Mounting screw × 3 |
| Applicable Camera | C-CV854D-3/-9, C-CV854R-3 |

## C-BC850U
### Flush Ceiling Mount Bracket
*Indoor use only



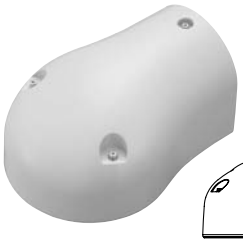



- Designed to mount the applicable dome camera in a ceiling, with only the camera dome cover exposed.
- Can mount the camera to a double-layer ceiling with gypsum board.

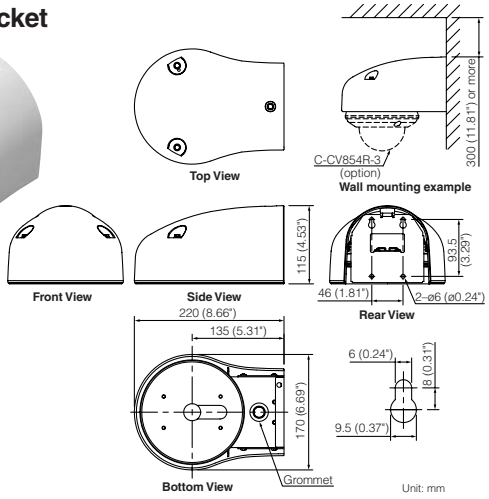
**SPECIFICATIONS**

| | |
|---|---|
| Board Thickness for Mounting | 25mm (0.98") or less |
| Finish | Decorative panel: PC resin, light gray<br>Mounting bracket: Rolled steel plate, black, paint |
| Mounting Hole Diameter | ø200mm (ø7.87") |
| Dimensions | ø227 × 80.6 (H)mm (ø8.94" × 3.17") |
| Weight | 930g (2.05 lb) |
| Accessory | Camera mounting screw (M4×10) × 4, Decorative panel × 1 |
| Applicable Camera | C-CV854D-3/-9, C-CV854R-3 |

## C-BC850W
### Wall Mount Bracket







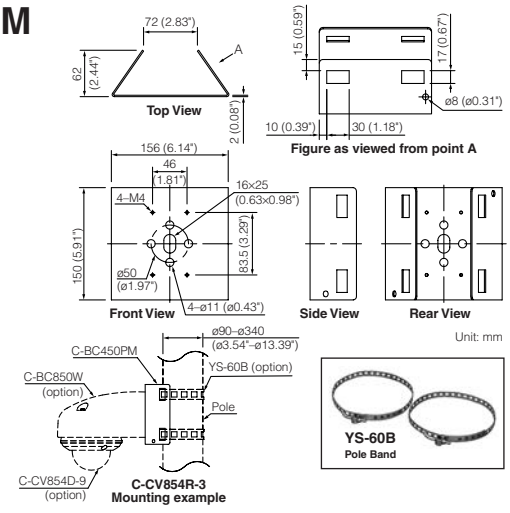

- Designed to mount the applicable dome camera to a wall.
- Can mount the camera on pole with optional C-BC450PM and YS-60B.

**SPECIFICATIONS**

| | |
|---|---|
| Finish | Cover: PC resin, light gray/Bracket: Stainless steel |
| Dimensions | 170 (W) × 115 (H) × 220 (D)mm (6.69" × 4.53" × 8.66") |
| Weight | 1.1kg (2.43 lb) |
| Accessory | Joint base × 1, Base mounting screw (M4×16, with washer) × 4<br>Camera mounting screw (M4×12) × 4 |
| Applicable Camera | C-CV854D-3/-9, C-CV854R-3 |

## C-BC450PM
### Pole Mount Bracket






- Designed to mount TOA CCTV Cameras on a pole in conjunction with the optional C-BC850W and YS-60B.

**SPECIFICATIONS**

| | |
|---|---|
| Applicable Pole Diameter | ø90 – ø340mm (ø3.54" – ø13.39") |
| Finish | Stainless steel |
| Dimensions | 156 (W) × 150 (H) × 62 (D)mm (6.14" × 5.91" × 2.44") |
| Weight | 660g (1.46 lb) |
| Option | Pole band: YS-60B<br>Wall Mount bracket: C-BC850W |

# ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

### GENERAL REQUIREMENTS

The specified product shall be a high-resolution, outdoor-use, 24V AC/12V DC-powered day/night infrared camera equipped with a 3X varifocal lens and featuring a 1/3-inch CCD that offers a high resolution of 380,000 pixels (NTSC). The camera shall comply with the IP 66 Dustproof/Waterproof Standard.

The camera body shall be made of die-cast aluminum alloy, with a polycarbonate dome cover, ensuring a high degree of resistance to even strong impacts with an energy of up to 50 Joules.

The camera shall be capable of automatically switching from color ("Day") mode to black-and-white ("Night") mode when the subject illumination is reduced, and from black-and-white ("Night") mode to color ("Day") mode when the illumination increases, so that the camera functions as a color camera in bright areas, and as a black-and-white camera in dark areas by mechanically attaching and detaching an infrared block filter. In Night mode, the camera shall be capable of viewing the subject even in ambient illumination conditions as low as 0 lx with the aid of its built-in infrared LED illuminator, which shall be capable of lighting a visible range of up to 25 m (82.02 ft.) (in high-sensitivity mode), both indoors and outdoors.

The camera shall have a noise reduction function to ensure clear images even under poor lighting conditions and a function to reduce monitor image flicker caused by fluorescent lighting. The specified product shall offer a backlight compensation function which allows optimal viewing of dark areas in a backlight condition, and focus adjustment switch which allows the installer to easily perform focus adjustment without using an ND (Neutral Density) filter.

The following two options must be made available: (1) ATW (Automatic Tracking White), a function that automatically adjusts the camera white balance to match variations in subject color temperature, and (2) AWB (Auto White Balance) that fixes the color by adjusting the white balance. The camera shall also be designed to enable its built-in AGC (automatic gain control) function when the image is dark, and to enable its high-sensitivity function when the image becomes much darker. The camera shall automatically boost electronic sensitivity up to 8X according to the objects' illumination.

Monitor output shall provide a convenient monitor connection for installer to align the camera.

By installing optional heater unit inside the camera housing, the camera shall be used at ambient temperatures as low as -30°C (-22°F).

The optional mounting brackets shall allow the camera to be mounted in a ceiling and wall and on a pole.

### CAMERA SPECIFICATIONS

Resolution: Horizontal: 540 lines, vertical: 350 lines
Scanning System: 2:1 interlace
Scanning Frequency: Horizontal: 15.734 kHz, vertical: 59.94 Hz
S/N Ratio: 50 dB
Minimum Illumination (Flickerless off):
0.5 lx (50 IRE, color, high-sensitivity switch OFF),
0.2 lx (20 IRE, color, high-sensitivity switch OFF),
0 lx (night mode)
Threshold Illumination for Mode Switching:
Color-to-B/W mode: Approx. 2 lx
B/W-to-color mode: Approx. 10 lx (incandescent lamp)
White Balance: ATW/AWB (switch selector)

### LENS SPECIFICATIONS

Focal Length: f=3.0-9.0 mm
Maximum Aperture Ratio: 1 :1.4 – 2.4
Iris: Auto-iris
Angle of View: Horizontal: 90.3° – 31.9°
Vertical: 66.4° – 23.9°
Diagnal: 115.4° – 39.8°

### ELECTRICAL SPECIFICATIONS

Power Source: 24V AC, 50/60Hz or 12V DC/
Optional heater unit: 24V AC, 50/60Hz
Power Consumption: 4W (300mA, maximum current: 800 mA)
Monitor Output: VBS 1.0V (p-p) 75 ohms
Video Output: VBS 1.0V (p-p) 75 ohms
Synchronizing System: Internal synchronization

### MECHANICAL SPECIFICATIONS

Monitor Output: RCA pin jack
Video Output: BNC-R jack
Dimensions: ø154.2 × 110(H) mm (6.07" × 4.33")
(excluding the cables)
Weight: 1.2 kg (2.65 lb)

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: -10°C to +50°C (14°F to 122°F)
(When an optional heater unit is attached: -30°C to +50°C (-20°F to 122°F))
Operating Humidity: Under 90%RH (no condensation)

### CERTIFICATIONS AND RATINGS

Safety: cULus (UL2044), Part 15 of FCC rules (class B equipment)
Water/dust protection: IP66 rated.

The vandal resistant day/night IR camera shall be TOA model C-CV854R-3.
The heater unit shall be C-A854H.
The wall mount bracket shall be C-BC850W.
The flush ceiling mount bracket shall be C-BC850U.
The pole mount bracket shall be C-BC450PM.
The band for pole mount bracket shall be YS-60B.



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Specifications are subject to change without notice.
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