VCC-9800P/9700P/9600P/9500P

Specifications

Camera type		36x, Day/Night Camera	36x, Color Camera	30x, Day/Night Camera	30x, Color Camera
Model No.		VCC-98□□□□□P	VCC-97□□□□□P	VCC-96□□□□□P	VCC-95□□□□□P
Scanning system		PAL standard 625 lines, 50 fields/sec.			
Image sensor		1/4" (approx. 3.6 x 2.7 mm) interline transfer method CCD			
Picture elements		Total: 795(H) x 596(V), Effective: 752(H) x 582(V)			
Horizontal resolution		520 TV lines			
Minimum illumination (approx.)	50 IRE	1.0 lx (at F1.6, GAIN: HIGH, color mode) 0.05 lx, (at F1.6, B/W mode)	1.0 lx (at F1.6, GAIN: HIGH, color mode)	0.8 lx (at F1.4, GAIN: HIGH, color mode) 0.04 lx, (at F1.6, B/W mode)	0.8 lx (at F1.4, GAIN: HIGH, color mode)
	20 IRE	0.4 lx (at F1.6, GAIN: HIGH, color mode) 0.02 lx, (at F1.6, B/W mode)	0.4 lx (at F1.6 GAIN: HIGH, color mode)	0.32 lx (at F1.4, GAIN: HIGH, color mode) 0.016 lx, (at F1.6, B/W mode)	0.32 lx (at F1.4, GAIN: HIGH, color mode)
Electronic sensitivity boost		Auto (interlocked with auto iris), up to 32x / OFF			
Video S/N ratio		More than 50 dB (AGC OFF)			
Backlight compensation		ON / OFF, slide SW, ON = Multi-spot photometry (48-section) / 5-section photometry / Multi-spot masking (48-section)			
White balance		ATW / AWC / Manual / Outdoor / Indoor / Fluorescent			
Gain control		LOW / NORMAL / MID / HIGH / OFF			
Electronic shutter		High-speed mode: 8 steps: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 Low-speed mode: 5 steps: 2x, 4x, 8x, 16x, 32x (1/25, 1/12, 1/6, 1/3, 1/1.5)			
Zoom lens		36x optical zoom, f = 3.4 to 122.4 mm (F1.6 to 4.5) ON / OFF, up to 16x electronic zoom (Max. 576x combined with optical zoom)		30x optical zoom, f = 3.5 to 105 mm (F1.4 to 3.7) ON / OFF, up to 16x electronic zoom (Max. 480x combined with optical zoom)	
Auto focus		Auto / One-push / Manual			
Iris control		Auto / Manual			
Backlight compensation		Centerweighted average metering/multi-spot evaluative metering			
Day/night operation		Auto / Color / B/W settings	—	Auto / Color / B/W settings	—
Electronic sensitivity boosting		Auto / OFF, works with auto iris, settings up to 32x setting possible			
Aperture		H/V setting possible			
Privacy masking		ON / OFF, max. of 24 masked locations (Wide view screen; 1 screen max. 4 masks) All-around privacy masking			
Alarm input/output		External inputs: 8, External outputs: 2, NO (Normal Open)/NC (Normal Closed) switch, Motion detection with external alarm AND/OR output options			
Preset positions		256		128	
Movement range	Panning	360° endless			
	Tilting	–5 to 185° (digital auto flip ON)			
Movement speed	Panning	Preset: 435°/sec., Manual: 0.1 to 120°/sec.			
	Tilting	Preset: 400°/sec., Manual: 0.1 to 120°/sec.			
Motion detection		ON (PRESET, ZONE) / OFF: Motion zoom function			
Synchronizing system		Internal sync. / Line lock (LINE PHASE)			
Communication		RS-485 / Coaxial control			
Protocols		SANYO, Pelco-D, Other (TBD)			
Environmental conditions	Temperature	–10 to 50°C (+14 to 122°F), –30 to 50°C (–22 to 122°F) when the outdoor housing, VA-80EX is used			
	Humidity	35 to 90% RH			
Power requirement		24 V AC, 50Hz or 230 V AC, 50Hz			
Power consumption (approx.)	Camera unit + Power supply base	TBD: VCC-MC800P + VA-84S TBD: VCC-MC800P + VA-80S	TBD: VCC-MC700P + VA-84S TBD: VCC-MC700P + VA-80S	16 W: VCC-MC600P + VA-84S 17 W: VCC-MC600P + VA-80S	16 W: VCC-MC500P + VA-84S 17 W: VCC-MC500P + VA-80S
	Outdoor housing	35W: VA-80EX			
Weight (approx.)	Outdoor types	5.1 kg = VCC-9800EXCP/9800EXSP VCC-9830EXCP/9830EXSP	5.1 kg = VCC-9700EXCP/9700EXSP VCC-9730EXCP/9730EXSP	5.1 kg = VCC-9600EXCP/9600EXSP VCC-9630EXCP/9630EXSP	5.1 kg = VCC-9500EXCP/9500EXSP VCC-9530EXCP/9530EXSP
	Surface types	2.4 kg = VCC-9800INP VCC-9830INP	2.4 kg = VCC-9700INP VCC-9730INP	2.4 kg = VCC-9600INP VCC-9630INP	2.4 kg = VCC-9500INP VCC-9530INP
	In-ceiling types	3.4 kg = VCC-9800EMP VCC-9830EMP 2.7 kg = VCC-9800EFP VCC-9830EFP	3.4 kg = VCC-9700EMP VCC-9730EMP 2.7 kg = VCC-9700EFP VCC-9730EFP	3.4 kg = VCC-9600EMP VCC-9630EMP 2.7 kg = VCC-9600EFP VCC-9630EFP	3.4 kg = VCC-9500EMP VCC-9530EMP 2.7 kg = VCC-9500EFP VCC-9530EFP

VA-80LAN Optional Network Board

Image compression	JPEG
Resolution	720 x 572, 720 x 572DFFC*, 720 x 286, 640 x 480, 640 x 480DFFC*, 360 x 286, 180 x 143
Picture quality	5 levels
Frame rate	Max. 25 IPS (720 x 286)
Audio compression method	G.711 (192 kbps), full duplex
Microphone input	–62 to –32 dB (monaural microphone) 3.5 mm mini jack
Audio output	LINE OUT, monaural audio output, Max. –8 dB, 3.5 mm mini jack
Bandwidth	128, 256, 512 Kbps, 1, 2, 3, 4 Mbps, no limitation
Alarm buffer	Up to 8 MB; configurable
Interface	10BASE-T/100BASE-TX (RJ45 connector)
Protocols	TCP, UDP, HTTP, HTTPS, SMTP, NTP, DHCP, FTP, UPnP
Simultaneous access capacity	Image: Max. 16, Voice: Max. 16 (admin: 1)
Security	BASIC authentication (ID/password), SSL supported (image only)
Bundled software	VA-SW3050LITE

*DFFC: Dynamic Field/Frame Conversion
Motion detection and field/frame conversion are performed to enhance the vertical resolution of images with no movement and reduce blurring of moving objects in images with movement.

Note:
- Frame rates are variable dependant upon network line conditions and PC performance.
- Because products and software described in this brochure are subject to continuous improvement; SANYO reserves the right to modify product specifications, functions and design without notice.
- Comparative images are representations only.

Caution: Please consult the instruction manual to ensure safe and proper operation of the product.

DI Company of SANYO Electric Co., Ltd. obtained Quality Management System ISO 9001 and Environmental Management System ISO 14001 certifications.

Distributed by:

SANYO Electric Co., Ltd.
www.sanyosecurity.com

SMS137

High-Performance Speed Dome Camera Systems

VCC-9800P PAL 36x Optical zoom DAY NIGHT
VCC-9700P PAL 36x Optical zoom
VCC-9600P PAL 30x Optical zoom DAY NIGHT
VCC-9500P PAL 30x Optical zoom

Outdoor type

High-performance cameras that integrate lenses, motorized drives, control systems and housings with newly developed cutting-edge technologies to provide high-precision surveillance matched to a broad range of applications.

Time-tested technology and know-how combine to provide both high-performance surveillance and ease of use.

Cameras that introduce an array of new technologies for surveillance with a motorized drive system for high-speed, 435°/sec panning and pinpoint accuracy, high-power magnification with a 36x optical* and a 16x digital zoom, and a host of features that include image stabilization, automatic tracking* and optimum auto focus.
Production of power supply bases and camera units—with integrated lens, motor and pan/tilt mechanism—starts and ends in Japan to ensure the highest build quality, while release levers on camera housings make installation and on-site maintenance as simple as can be.

*VCC-9800P/9700P cameras

In-ceiling type

Surface type

Outdoor type

Featuring industry-leading mechanisms newly developed for high performance.

High-Speed Panning at 435° per Second

The camera makes it possible to capture images at exact points during surveillance with high-speed panning at 435°/sec. between preset positions. The motor is several times more precise with movement in 0.009 of a degree increments. This precise mechanism allows capture of quickly moving objects and objects approaching the camera when it is zoomed in.

Pan/tilt speed	**Pan**	Max. 435°/sec.
	Tilt	Max. 400°/sec.
	Manual pan/tilt	0.1 to 120°/sec.

Preset Accuracy to ±0.014 (typical) of a Degree

In the case of a speed dome camera, the motorized drive's performance is vital in order to capture numerous points of surveillance during lens movement and zoom-ratio changes. SANYO's new series of speed dome cameras keeps the accuracy of the camera's return to preset points to within 0.014 (typical) of a degree for precision capture of images from surveillance.

Designated point set using preset position function

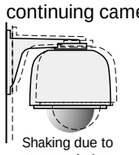
Image from conventional camera* with error margin as large as 0.2°

*VCC-9400P/9300P cameras

Error margin of designated point is a mere 0.014° (typical) with VCC-9800P/ 9700P/9600P/ 9500P cameras

Image Stabilization (VCC-9800P/9700P)

Blurring due to vibration of the camera can be electronically removed. It is also possible to correct for blurring only while continuing camera movement such as pan and tilt.



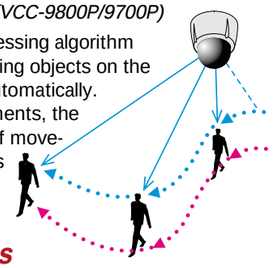
Shaking due to strong wind or traffic vibration

Without image stabilization

With image stabilization

Automatic Tracking (VCC-9800P/9700P)

Cameras feature an image processing algorithm that is capable of detecting moving objects on the screen and tracking an object automatically. When there are multiple movements, the object with the largest degree of movement is tracked. Further settings are available according to the pattern of movement.



Optimum Auto Focus

Further development of conventional auto-focus functions has resulted in not only shorter focus times, but also the added capability of remaining clearly focused on a targeted subject in front of the camera, even when other elements are passing in and out of the field of view. And with optimum focus, images remain in focus, even when the lens is in motion during pan/tilt operation.

Features

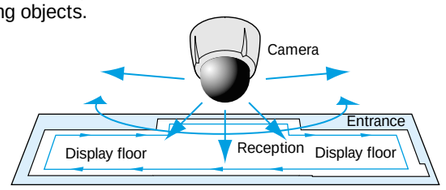
Max. 576x Zoom Combined with 36x Optical and 16x Digital Zooms (VCC-9800P/9700P)

The 36x optical zoom and 16x digital zoom can be combined for a close-up at a magnification power of 576x. This allows even distant subjects to be checked in detail, allowing one camera to monitor a wider area.

Optical zoom

Up to 256 Preset Positions

The user can set up to 256 preset positions with VCC-9800P/9700P cameras and up to 128 preset positions with VCC-9600P/9500P cameras. Preset positions can be set to any angle—from directly below the camera to 5° higher than the horizontal position—to allow capture of any image in the area under surveillance by facing any direction in the adjustable range of the lens. When manually operated, the lens can be moved at the speed of 0.1 to 120°/sec for accurate tracking of moving objects.



Store display floor example

3 Types of Auto Mode Settings

Sequence: Automatic viewing of up to 256 presets (36x models) or 128 presets (30x models), with selectable switching order and pause times for up to 4 different sequences.

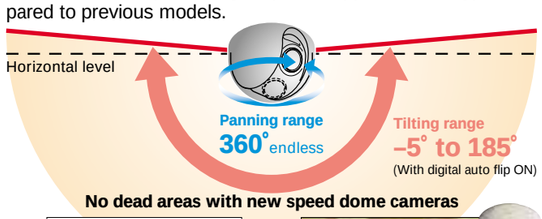
Auto pan: Up to 4 different settings for automatic panning between two points at selectable speeds.

Tour: Up to 4 different settings capable of storing up to 1,000 commands of manual pan/tilt/zoom operation in memory and recreating the same movement pattern.

Auto return: Enables automatic return to the mode set in "auto return" when manual operation is not performed within a specified amount of time.

Upward Surveillance Enabled PTZ Operation

In addition to endless 360°/sec panning, the camera's lens section enables 185°/sec tilting in the vertical plane for an area of surveillance expanded by 5° (indoor applications only) compared to previous models.



No dead areas with new speed dome cameras

Image from conventional camera* at 0° tilt
*VCC-9400P/9300P cameras

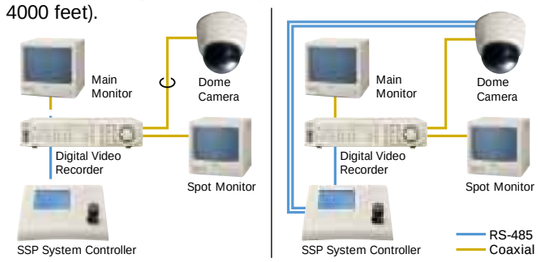
Upward tilt to 5° past zero for an expanded area of surveillance with VCC-9800P/9700P/9600P/9500P cameras

All-around Privacy Masking

When there is a house, or even a window, within the camera frame, it is possible to mask the area so that it will not appear on the monitor screen, thus protecting other people's privacy. Up to 24 rectangular masks of arbitrary size (rectangular) can be set.

SSP (RS-485) Compatible

By using SSP (SANYO Security Serial Protocol), devices can be controlled with just one controller via a daisy chain connection of up to 254 cameras and 100 DVRs. The maximum cable length (total length of the daisy chain path) is 1200 m (approx. 4000 feet).

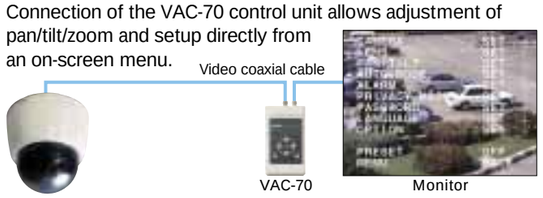


Coaxial Control or RS-485

Communication protocol:
Coaxial control: SSP / H-SSP / PELCO-C
RS-485: SSP / H-SSP / PELCO-D

Adjustment via VAC-70 Control Unit (Sold separately)

Connection of the VAC-70 control unit allows adjustment of pan/tilt/zoom and setup directly from an on-screen menu.



Flexible Motion Detection

The built-in motion sensing function can be used to detect movement by a target object such as an intruder.
The following two settings can be used for this function.

PRESET: Detects motion at a preset position. Allows setting of motion detection within the whole picture or setting of mask patterns to exclude certain elements from detection. The camera can be set to zoom in and out automatically when motion is detected.

Surveillance of a detected object can be conducted at the following zoom magnifications.
IN: 1.4x, 2x, 2.8x, 4x, 5.6x, 8x, FULL (zooming in to the TELE end)
OUT: 1/1.4x, 1/2x, 1/2.8x, 1/4x, 1/5.6x, 1/8x, FULL (zooming out to the WIDE end)

ZONE: Detects motion in detection areas (from one to four areas) set within the whole space for which surveillance is possible during a pan/title operation. Sensing is performed by splitting the field of view into 48 areas. Movement and brightness levels within the picture are analyzed to accurately detect surveillance targets. When motion is detected, the camera can be set to output alarm detection to ALARM OUT or LINE OUT, etc.

With ZONE setting, sensing occurs in areas set within the picture of the zone targeted by the camera. No sensing occurs outside the camera's target zone.

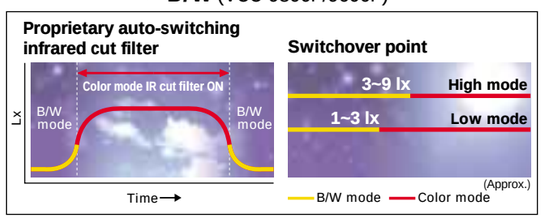
Setting of both modes, PRESET and ZONE, cannot be performed at the same time.

Setting Alarm Function

The unit can be connected to an external door switch or infrared sensor (external alarm input: 8 channels). When an alarm is detected, the camera gives notice by automatically moving to the preset position, zooming in on the image or displaying the alarm on the screen. Furthermore, it has a built-in motion sensor, which outputs alarm signals when a moving object, such as an intruder, is detected. If you connect external buzzers and/or lamps (external alarm output: 2 channels), alarm signals will also be output to them at alarm detection for you to have audible and/or visual notifications.

Terminal side (Side-A)

DAY NIGHT Intelligent Switching from Color to B/W (VCC-9800P/9600P)



High-Sensitivity, Minimum Required Illumination

Model no.	High gain, color mode		High gain, B/W mode	
	20 IRE	50 IRE	20 IRE	50 IRE
VCC-9800P (with F1.6 lens)	0.4 lx	1.0 lx	0.02 lx	0.05 lx
VCC-9700P (with F1.6 lens)	0.4 lx	1.0 lx	—	—
VCC-9600P (with F1.4 lens)	0.32 lx	0.8 lx	0.016 lx	0.04 lx
VCC-9500P (with F1.4 lens)	0.32 lx	0.8 lx	—	—

SANYO Security Systems for the Creation of a Full-fledged LAN or Internet

Network Board VA-80LAN (Sold separately)

This optional board for network connection enables SANYO VCC-9800P/9700P/9600P/9500P cameras to connect to a network. The user can operate a network connected camera using a web browser (Internet Explorer). Included with the board is the VA-SW3050LITE viewer software for viewing feeds from multiple cameras.

Network Recording Software VA-SW3050 (Sold separately)

VA-SW3050 network recording software is sold separately for recording of surveillance video and audio captured by cameras. With a PC used as a local server, the VA-SW3050 software enables not only data playback and recording but also improved system operation, making it a powerful tool for network management.

VA-SW3050LITE/VA-SW3050 Feature Comparison

		VA-SW3050LITE (Bundled)	VA-SW3050 (Sold separately)
Number of cameras supported		Max. 128	Max. 128
Number of users supported		Max. 16	Max. 16
Search camera		Yes	Yes
Live monitor		Yes	Yes
Camera control	PTZ, etc.	Yes	Yes
	Menu	Yes	Yes
Recording		No	Yes
Playback		No	Yes
Video search		No	Yes
Backup/Restore		No	Yes
Download/Print		No	Yes

VA-SW3050LITE/VA-SW3050 System Requirements

PC	IBM PC/AT and compatibles
OS	Windows® 2000 Professional SP4, Windows® XP Home Edition SP2, Windows® XP Professional SP2
CPU/ Memory	When the number of cameras connected is 4 or fewer: CPU: Pentium® 4, 2.0 GHz or higher, Memory: 512 MB or more When the number of cameras connected is between 5 and 16: CPU: Pentium® 4, 3.0 GHz or higher, Memory: 1 GB or more MEMO (VA-SW3050): When you record live video from 17 or more cameras simultaneously on a single PC, recording performance may be diminished depending on your monitoring system configuration. In such cases, add PCs used for recording so that the number of cameras to record simultaneously per PC becomes 16 or fewer.
Network interface	100Base-TX
Display card	1024 x 768 pixels or higher, 16 million colors or higher AGP graphics card supporting hardware overlay or PCI Express graphics card (Requires the latest DirectX 9.0c compatible driver.) Recommended graphics chips: ATI: RADEON 9000 series or higher nVidia: GeForce 4 series or higher Quadro 4 series or higher Matrox: MillenniumP series or higher
Audio	Sound card and speakers with 100% DirectX compatibility
Component	DirectX 9.0c

Applications

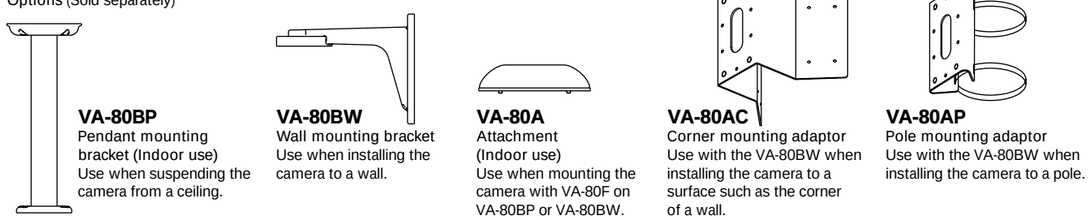
A wide selection of options is available — covering camera performance, housings, mounting brackets and more — for a match to the application of your choice. Installation work and maintenance is now easier than ever before.

Available in Three Types: Outdoor, Surface or In-Ceiling

The camera is available in three different styles. Assemble them with different fittings and covers to make the camera most suitable for your surveillance needs.

Mounting Brackets

Options (Sold separately)



VA-80BP
Pendant mounting bracket (Indoor use)
Use when suspending the camera from a ceiling.

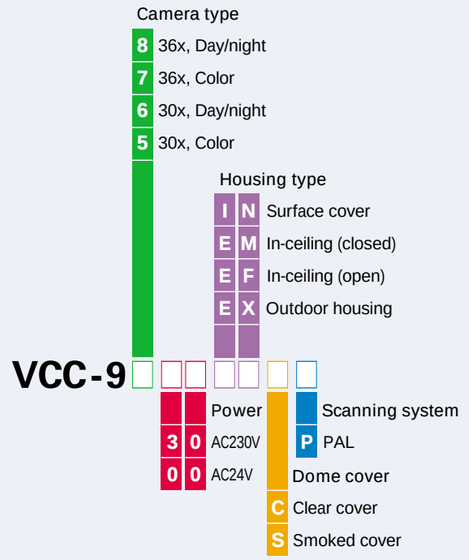
VA-80BW
Wall mounting bracket
Use when installing the camera to a wall.

VA-80A
Attachment
(Indoor use)
Use when mounting the camera with VA-80F on VA-80BP or VA-80BW.

VA-80AC
Corner mounting adaptor
Use with the VA-80BW when installing the camera to a surface such as the corner of a wall.

VA-80AP
Pole mounting adaptor
Use with the VA-80BW when installing the camera to a pole.

Model number codes



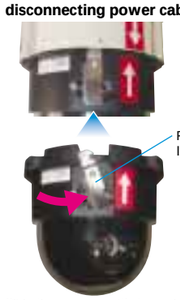
Model configurations example

Model name	Camera unit	+	Power basement	+	Housing	+	Dome cover
VCC-9800EXCP	VCC-MC800P	+	VA-84S	+	VA-80EX	+	VA-CM8C
VCC-9530EFCP	VCC-MC500P	+	VA-80S	+	VA-80MF		
VCC-9700INSP	VCC-MC700P	+	VA-84S	+	VA-80F	+	VA-CZ80

Easy-to-Manage Installation, Setup and Adjustment

Enclosed within the housing are an integrated lens, a motor and a pan/tilt mechanism. Attachment to the power supply base by simply sliding the release levers simplifies installation at the point of surveillance. The settings circuit board is detachable for access to protocol, address and other switch settings, and the VAC-70 controller (sold separately) and can be connected after installation to allow adjustment of PTZ control and other settings from an on-screen menu.

Detachable without disconnecting power cable



Slide the camera unit's two release levers and lock the power supply base into position. No special tools required for camera unit installation or removal.

Safety Cable
Equipped with a safety cable that connects the housing and power supply base to prevent the camera unit from falling.

Detachable Settings Circuit Board

Basic camera settings can be made while holding the settings circuit board in hand, as the board is detachable from the power supply base. The I/O side of the board features 8 input and 2 output terminals for alarm signals.

Terminal side (Side-A)

Alarm inputs (8)
Alarm outputs (2)
RS-485A/RS-485B

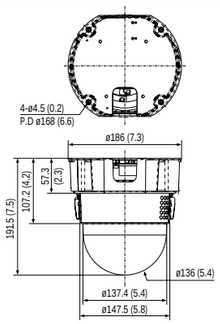
DIP switch side (Side-B)

Address setting
Baud rate setting
RS-485/Coax setting
SSP/Pelco setting
Termination setting

Dimensions

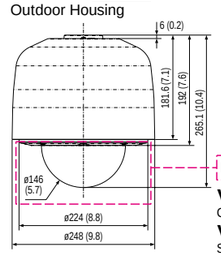
Unit: mm (inch)

Camera Unit/Power Supply Base



Housings (Sold separately)

VA-80EX 24 V AC
Outdoor Housing



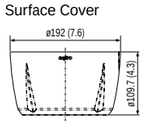
Dome Cover

VA-CM8C
Clear dome cover for outdoor housing

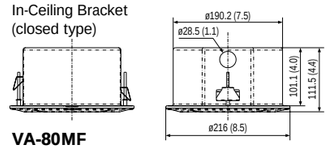
VA-CM8S
Smoked dome cover for outdoor housing

VA-CZ80
Smoked dome cover for indoor housing

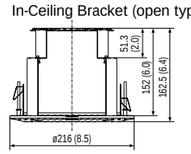
VA-80F
Surface Cover



VA-80ME
In-Ceiling Bracket (closed type)

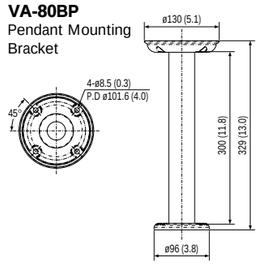


VA-80MF
In-Ceiling Bracket (open type)

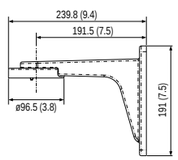


Mounting Brackets (Sold separately)

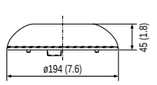
VA-80BP
Pendant Mounting Bracket



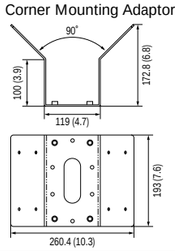
VA-80BW
Wall Mounting Bracket



VA-80A
Attachment



VA-80AC
Corner Mounting Adaptor



VA-80AP
Pole Mounting Adaptor