


**BOSCH**

Invented for life

# VDM-3x5 and VDC-4x5 Series Dome Cameras FlexiDome VF and XT+



- ▶ **Low-impact and impact-resistant models**
- ▶ **1/3-inch format CCD imager**
- ▶ **Superior picture clarity in virtually all situations**
- ▶ **540 TVL color resolution**
- ▶ **AC or DC operation**
- ▶ **Patented dome shape for 90° vertical view**
- ▶ **Extended sensitivity with NightSense**
- ▶ **Bilinx bi-directional communication**

The FlexiDome<sup>VF</sup> and FlexiDome<sup>XT+</sup> series of dome cameras are an excellent solution for virtually any indoor or outdoor application. The cast aluminum housing, polycarbonate dome and hardened inner liner of the FlexiDome<sup>XT+</sup> version can withstand the equivalent of 120 lbs of force. The FlexiDome<sup>VF</sup> utilizes a standard indoor enclosure. These units contain full-featured color and monochrome cameras, with 1/3-inch CCD and integral varifocal lenses.

Installation is quick and easy, since the cameras come completely assembled and ready to use. Using the proprietary pan/tilt/rotation mechanism, installers can select exactly the required field of view. Mounting options are numerous, including surface, 4S, wall, corner and suspended ceiling.

The FlexiDome<sup>VF</sup> and FlexiDome<sup>XT+</sup> cameras are an ideal solution for many surveillance applications. Their compact, sleek design and virtually flush-mount appearance complement any decor. The camera enclosure provides the extra protection necessary for applications such as in schools, banks, prisons, parking garages, retail and commercial buildings.

## Functions

### Technology

The FlexiDome<sup>VF</sup> and FlexiDome<sup>XT+</sup> series incorporate the latest technology in imaging, with 540 TVL resolution color cameras. Their superior sensitivity, high resolution and picture quality provide optimal performance in virtually all situations. The choice of lenses makes these cameras very versatile, because they can cover everything from standard and telephoto to low-light applications.

### Operation

The lens wizard and focus aid make lens adjustment easy and straightforward, and ensure proper focus throughout the 24-hour cycle. All cameras can operate on both AC and DC. LineLock and phase adjustment are available, when AC power is used. NightSense, available in FlexiDome color versions, is a feature that can extend its excellent sensitivity by a factor of three in monochrome operation. All cameras incorporate Bilinx, a technology that allows technicians to set up and control the camera settings remotely over the video cable.

### Controls and Indicators

- OSD
- 5-key operation

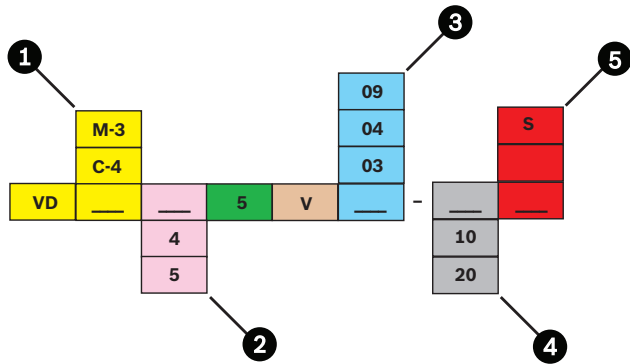
### Interconnections

- Video connection BNC on flying lead
- Power connection on flying leads

**Certifications and Approvals**

Region	Certification	
Europe	CE	Declaration of Conformity VDx 355-455-485-495
USA	FCC	Declaration of Conformity VDx 355-455-485-495
Safety	UL 1950; CSA 22.2 No. 950; EN 60950 (CE)	
Immunity	EN 50130-4 (CE)	
Emission	EN 50022 class B (CE); FCC, class B part 15	
Water/dust protection	IP 66 and NEMA-4X (VDM-355 and VDC-455 models only)	

**Installation/Configuration Notes**



<b>1</b>	<b>M-3</b>	<b>Monochrome</b>
	C-4	Color (with NightSense)
<b>2</b>	4	Low impact
	5	High impact
<b>3</b>	03	2.6 to 6 mm F1.4
	04	4 to 9 mm F1.6 (low impact version) 3.7 to 12 mm F1.6 (high impact version)
	09	9 to 22 mm F1.4
<b>4</b>	10	PAL color or CCIR mono
	20	NTSC color or EIA mono
<b>5</b>		Flush mount
	S	Surface mount

**FlexiDome<sup>VF</sup> model overview**

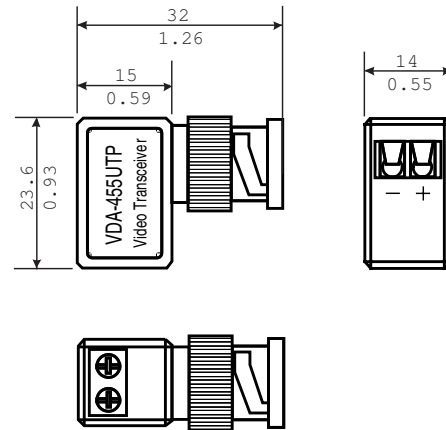
Model	Standard	Lens
<b>Monochrome</b>		
VDM-345V03-10	CCIR	2.6 to 6 mm F1.4
VDM-345V03-20	EIA	2.6 to 6 mm F1.4
VDM-345V04-10	CCIR	4 to 9 mm F1.6
VDM-345V04-20	EIA	4 to 9 mm F1.6
<b>Color</b>		
VDC-445V03-10	PAL	2.6 to 6 mm F1.4

VDC-445V03-20	NTSC	2.6 to 6 mm F1.4
VDC-445V04-10	PAL	4 to 9 mm F1.6
VDC-445V04-20	NTSC	4 to 9 mm F1.6
VDC-445V09-10	PAL	9 to 22 mm F1.4
VDC-445V09-20	NTSC	9 to 22 mm F1.4

**FlexiDome<sup>XT+</sup> model overview**

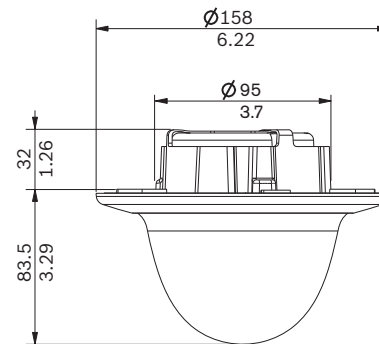
Model	Standard	Lens
<b>Monochrome</b>		
VDM-355V03-10	CCIR	2.6 to 6 mm F1.4
VDM-355V03-20	EIA	2.6 to 6 mm F1.4
VDM-355V04-10	CCIR	3.7 to 12 mm F1.6
VDM-355V04-20	EIA	3.7 to 12 mm F1.6
<b>Color</b>		
VDC-455V03-10	PAL	2.6 to 6 mm F1.4
VDC-455V03-20	NTSC	2.6 to 6 mm F1.4
VDC-455V04-10	PAL	3.7 to 12 mm F1.6
VDC-455V04-20	NTSC	3.7 to 12 mm F1.6
VDC-455V09-10	PAL	9 to 22 mm F1.4
VDC-455V09-20	NTSC	9 to 22 mm F1.4

**BNC to UTP Transceiver**



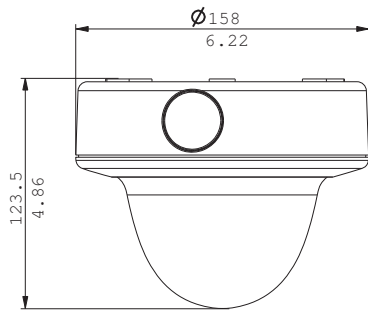
Dimensions in mm (in.)

**FlexiDome<sup>VF</sup> Low Impact, Indoor Flush Mounting Model**



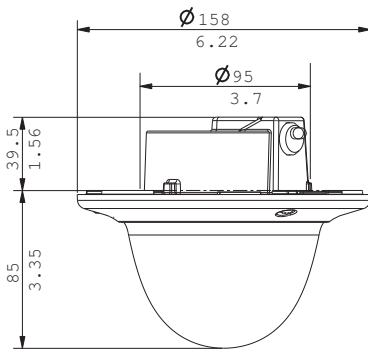
Dimensions in mm (in.)

**VDA-445SMB–Surface Mount Box**



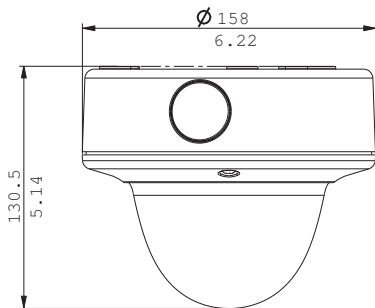
Dimensions in mm (in.) for the FlexiDome<sup>VF</sup> low-impact, indoor surface mounting model

**FlexiDome<sup>XT+</sup> Impact-resistant, Indoor Flush Mounting Model**



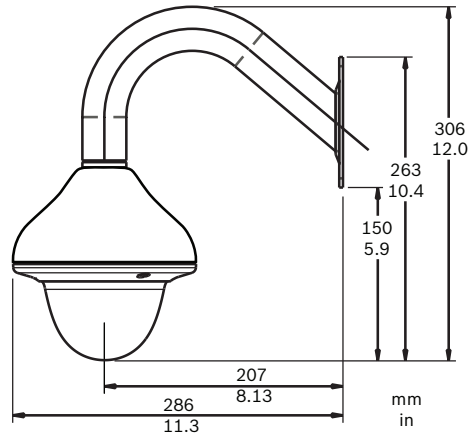
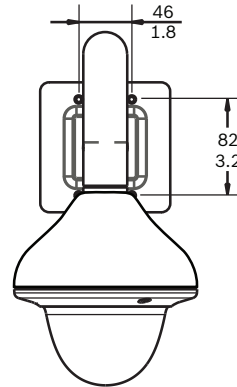
Dimensions in mm (in.)

**VDA-455SMB–Hardened Surface Mount Box**



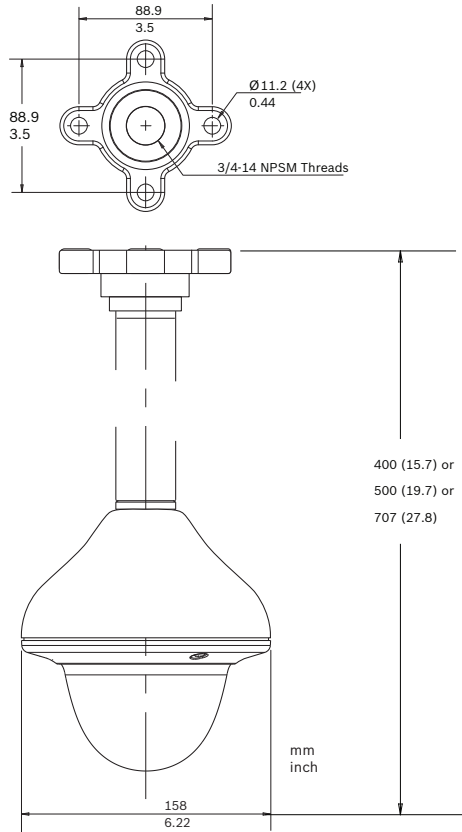
Dimensions in mm (in.) for the FlexiDome<sup>XT+</sup> impact-resistant, surface mounting model

**VDA-445WMT–Pendant Wall Mount**



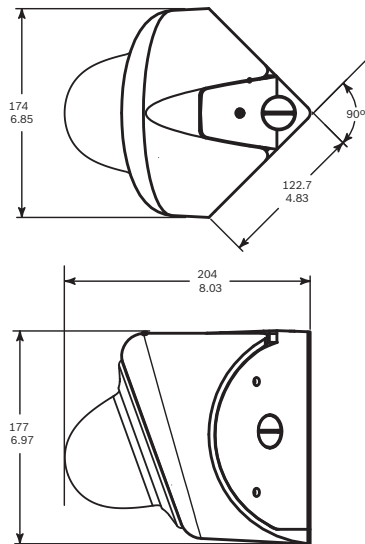
Dimensions in mm (in.) for wall mounting

**VDA-455PMT—Pendant Pipe Mount**



Dimensions in mm (in.) for pipe mounting

**VDA-455CMT—Corner Mount**



Dimensions in mm (in.) for corner mounting

**Technical Specifications**

**Electrical**

Power Supply	
Rated Voltage	12 VDC or 24 VAC, 50/60 Hz
Voltage Range	10.8 to 39 VDC or 12 to 28 VAC, 45 to 65 Hz
Power Consumption	
VDM-345 and VDC-445	4 W
VDM-355 and VDC-455	4 W (6 W with heater operation)
Imager	Interline transfer CCD, 1/3-inch image format
Active Picture Elements	
PAL Models	752 H x 582 V
NTSC Models	768 H x 494 V

**Sensitivity (3200 K)**

Model	Usable Picture (30 IRE)	Usable Picture (50 IRE)	Full Video (100 IRE)
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**Monochrome**

VDM-345V03	0.09 lx (0.008 fc)	0.2 lx (0.019 fc)	0.78 lx (0.074 fc)
VDM-355V03			
VDM-345V04	0.12 lx (0.011 fc)	0.26 lx (0.024 fc)	1.0 lx (0.095 fc)
VDM-355V04			

**Color**

VDC-445V03	Color	0.44 lx (0.041 fc)	0.98 lx (0.091)	3.9 lx (0.36)
VDC-455V03	NightSense	0.18 lx (0.016 fc)	0.39 lx (0.036 fc)	1.6 lx (0.15 fc)
VDC-445V04	Color	0.58 lx (0.053 fc)	1.3 lx (0.12 fc)	5.1 lx (0.48 fc)
VDC-455V04	NightSense	0.23 lx (0.021 fc)	0.5 lx (0.048 fc)	2.0 lx (0.19 fc)
VDC-445V09	Color	0.44 lx (0.041 fc)	0.98 lx (0.091)	3.9 lx (0.36)
VDC-455V09	NightSense	0.18 lx (0.016 fc)	0.39 lx (0.036 fc)	1.6 lx (0.15 fc)

**Horizontal Resolution**

Color Models	540 TVL
Monochrome Models	570 TVL
Signal-to-noise Ratio	>50 dB
AGC	20 dB (max)
Auto Black	On/off selectable
Electronic Shutter	Flickerless, on/off
NightSense	Auto, forced, off selectable
Sharpness Correction	Horizontal and vertical, symmetrical
Backlight Compensation	Center window weighting, off selectable
White Balance	Automatic sensing (2500 to 9000 K) and hold
Video Output	Composite video 1.0 Vpp, 75 Ohm

Synchronization	Internal or LineLock*
Connector	Flying leads (through the back)
* Line-lock (only when AC-powered) synchronizes the camera to the power line zero crossing for roll-free vertical interval switching. Vertical phase delay can be adjusted (from 0° to 358°) to allow vertical synchronization in multi-phase power installations.	
<b>Optical</b>	
Varifocal	Manual zoom and focus adjustment
Iris Control	Automatic iris control
<b>Viewing Angle</b>	
2.6 to 6 mm	Wide: 98.5° x 75.3° (H x V) Tele: 48.1° x 36.2° (H x V)
4 to 9 mm	Wide: 68° x 50.2° (H x V) Tele: 32.1° x 24.1° (H x V)
3.7 to 12 mm	Wide: 76.1° x 55.8° (H x V) Tele: 23.8° x 17.9° (H x V)
9 to 22 mm	Wide: 31.2° x 22.8° (H x V) Tele: 12.8° x 9.6° (H x V)
<b>Mechanical</b>	
Dimensions	See drawings
<b>Weight</b>	
VDM-345 and VDC-445	440 g (1.1 lb)
VDM-355 and VDC-455	740 g (1.63 lb)
Mounting	Flush on hollow surface with three (3) screws in a 4S electrical box
Color	White (RAL9010) trim ring with black inner liner
Adjustment Range	360° pan, 90° tilt, ±90° azimuth
Dome Bubble	Polycarbonate, clear with UV blocking anti-scratch coating
Trim Ring	Vandal resistant models: aluminum Low impact models: polycarbonate
<b>Environmental</b>	
<b>Operating temperature</b>	
VDM-345 and VDC-445	-10 °C to +45 °C (+14 °F to +113 °F)
VDM-355 and VDC-455	-50 °C to +50 °C (-58 °F to +122 °F) (with heater 'ON')
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Humidity	5% to 93% relative humidity
Impact protection	IEC 60068-2-75 test Eh, 50 J; EN 50102, exceeding IK 10 (VDM-355 and VDC-455 models only)

### Ordering Information

<b>VDM-345V03-10 Indoor Monochrome Model</b> 1/3-inch, B/WCCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white.	<b>VDM-345V03-10</b>
<b>VDM-345V03-10S Indoor Monochrome Model, Surface Mount</b> 1/3-inch, B/WCCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount	<b>VDM-345V03-10S</b>
<b>VDM-345V03-20 Indoor Monochrome Model</b> 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white.	<b>VDM-345V03-20</b>
<b>VDM-345V03-20S Indoor Monochrome Model, Surface Mount</b> 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount	<b>VDM-345V03-20S</b>
<b>VDM-345V04-10 Indoor Monochrome Model</b> 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/4-9 mm F1.6 Varifocal lens, white.	<b>VDM-345V04-10</b>
<b>VDM-345V04-10S Indoor Monochrome Model, Surface Mount</b> 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/4-9 mm F1.6 Varifocal lens, white, surface mount	<b>VDM-345V04-10S</b>
<b>VDM-345V04-20 Indoor Monochrome Model</b> 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/4-9 mm F1.6 Varifocal lens, white.	<b>VDM-345V04-20</b>
<b>VDM-345V04-20S Indoor Monochrome Model, Surface Mount</b> 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/4-9 mm F1.6 Varifocal lens, white, surface mount	<b>VDM-345V04-20S</b>
<b>VDC-445V03-10 Indoor Color Model</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white.	<b>VDC-445V03-10</b>
<b>VDC-445V03-10S Indoor Color Model, Surface Mount</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount	<b>VDC-445V03-10S</b>
<b>VDC-445V03-20 Indoor Color Model</b> 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white	<b>VDC-445V03-20</b>
<b>VDC-445V03-20S Indoor Color Model, Surface Mount</b> 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount	<b>VDC-445V03-20S</b>

**Ordering Information**

<b>VDC-445V04-10 Indoor Color Model</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/4-9 mm F1.6 Varifocal lens, white	<b>VDC-445V04-10</b>
<b>VDC-445V04-10S Indoor Color Model, Surface Mount</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/4-9 mm F1.6 Varifocal lens, white, surface mount	<b>VDC-445V04-10S</b>
<b>VDC-445V04-20 Indoor Color Model</b> 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/4-9 mm F1.6 Varifocal lens, white	<b>VDC-445V04-20</b>
<b>VDC-445V04-20S Indoor Color Model, Surface Mount</b> 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/4-9 mm F1.6 Varifocal lens, white, surface mount	<b>VDC-445V04-20S</b>
<b>VDM-355V03-10 Vandal Resistant Monochrome Model</b> 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white	<b>VDM-355V03-10</b>
<b>VDM-355V03-10S Vandal Resistant Monochrome Model, Surface Mount</b> 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount	<b>VDM-355V03-10S</b>
<b>VDM-355V03-20 Vandal Resistant Monochrome Model</b> 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white	<b>VDM-355V03-20</b>
<b>VDM-355V03-20S Vandal Resistant Monochrome Model, Surface Mount</b> 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount	<b>VDM-355V03-20S</b>
<b>VDM-355V04-10 Vandal Resistant Monochrome Model</b> 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/3.7-12 mm F1.6 Varifocal lens, white	<b>VDM-355V04-10</b>
<b>VDM-355V04-10S Vandal Resistant Monochrome Model, Surface Mount</b> 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/3.7-12 mm F1.6 Varifocal lens, white, surface mount	<b>VDM-355V04-10S</b>
<b>VDM-355V04-20 Vandal Resistant Monochrome Model</b> 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/3.7-12 mm F1.6 Varifocal lens, white	<b>VDM-355V04-20</b>
<b>VDM-355V04-20S Vandal Resistant Monochrome Model, Surface Mount</b> 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/3.7-12 mm F1.6 Varifocal lens, white, surface mount	<b>VDM-355V04-20S</b>

**Ordering Information**

<b>VDC-455V03-10 Vandal Resistant Color Model</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white	<b>VDC-455V03-10</b>
<b>VDC-455V03-10S Vandal Resistant Color Model, Surface Mount</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount	<b>VDC-455V03-10S</b>
<b>VDC-455V03-20 Vandal Resistant Color Model</b> 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white	<b>VDC-455V03-20</b>
<b>VDC-455V03-20S Vandal Resistant Color Model, Surface Mount</b> 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount	<b>VDC-455V03-20S</b>
<b>VDC-455V04-10 Vandal Resistant Color Model</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/3.7-12 mm F1.6 Varifocal lens, white	<b>VDC-455V04-10</b>
<b>VDC-455V04-10S Vandal Resistant Color Model, Surface Mount</b> 1/3-inch, PAL color, 540 TVL, 12V DC/24 VAC, 50 Hz, w/3.7-12 mm F1.6 Varifocal lens, white, surface mount	<b>VDC-455V04-10S</b>
<b>VDC-455V04-20 Vandal Resistant Color Model</b> 1/3-inch, NTSC color, 540 TVL, 12V DC/24 VAC, 60 Hz, w/3.7-12 mm F1.6 Varifocal lens, white	<b>VDC-455V04-20</b>
<b>VDC-455V04-20S Vandal Resistant Color Model, Surface Mount</b> 1/3-inch, NTSC color, 540 TVL, 12V DC/24 VAC, 60 Hz, w/3.7-12 mm F1.6 Varifocal lens, white, surface mount	<b>VDC-455V04-20S</b>
<b>VDC-445V09-10 Indoor Color Model</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white.	<b>VDC-445V09-10</b>
<b>VDC-445V09-20 Indoor Color Model</b> 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white.	<b>VDC-445V09-20</b>
<b>VDC-445V09-10S Indoor Color Model, Surface Mount</b> 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white, surface mount.	<b>VDC-445V09-10S</b>

**Ordering Information****VDC-445V09-20S Indoor Color Model, Surface Mount** **VDC-445V09-20S**

1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white, surface mount.

**VDC-455V09-10 Vandal Resistant Color Model** **VDC-455V09-10**

1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white.

**VDC-455V09-20 Vandal Resistant Color Model** **VDC-455V09-20**

1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white.

**VDC-455V09-10S Vandal Resistant Color Model, Surface Mount** **VDC-455V09-10S**

1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white, surface mount.

**VDC-455V09-20S Vandal Resistant Color Model, Surface Mount** **VDC-455V09-20S**

1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white, surface mount.

**Accessories****VDA-445DMY-S** **VDA-445DMY-S**  
Flexidome surface mounted indoor dummy camera**VDA-445SMB** **VDA-445SMB**  
Surface mount box, indoor for VDM-345 and VDC-445**VDA-455SMB** **VDA-455SMB**  
Surface mount box, high impact for VDM-345, VDC-445, VDM-355, VDC-455, VDC-485 and VDN-495 (not for FlexiDome VF).**VDA-445WMT** **VDA-445WMT**  
Wall mounting bracket**VDA-455PMT** **VDA-455PMT**  
Pendant pipe mount**VDA-455CMT** **VDA-455CMT**  
Corner mounting bracket for interior corner**VDA-455UTP** **VDA-455UTP**  
Adaptor for UTP twisted pair output**S1460 Service/Monitor Cable** **S1460**  
for FlexiDome analog and IP (2.5 mm connector to BNC), 1 m**UPA-1509-60 Power Supply** **UPA-1509-60**  
120 VAC, 60 Hz, 15 VDC, 9 VA Out**UPA-1509-50 Power Supply** **UPA-1509-50**  
220 VAC, 50 Hz, 15 VDC, 9 VA Out**UPA-2420-50 Power Supply** **UPA-2420-50**  
220 VAC, 50 Hz, 24 VAC, 20 VA Out**Ordering Information****UPA-2450-50 Power Supply** **UPA-2450-50**  
220 VAC, 50 Hz, 24 VAC, 50 VA Out**VDA-455TBL Tinted bubble** **VDA-455TBL**  
Tinted bubble for FlexiDome series**VDA-455CBL Clear bubble** **VDA-455CBL**  
Clear Bubble for FlexiDome series**Software Options****VP-CFGSFT Configuration Software** **VP-CFGSFT**  
for cameras using Bilinx, includes VP-USB Adaptor

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