Spectra® V Series Dome Systems

PREMIER INTEGRATED DOME SYSTEM

Product Features

- 30x Zoom Autofocus, Integrated Camera/Optics Packages
- Multiple models: Indoor In-Ceiling, Standard and Environmental Pendant, Pressurized and Stainless Steel Environmental Pendant
- Day/Night, 740 TVL, Wide Dynamic Range (WDR)
- Low Lux Noise Reduction
- Motion Detection
- Window Blanking, Horizontal and Zone Blanking
- Camera Title Overlay, 20 User-Definable Characters
- On-Screen Compass and Tilt Display
- Password Protection
- Built-in Surge and Limited Lightening Protection
- Integrated Passive Unshielded Twisted Pair (UTP) Circuit
- Internal Scheduling Clock

**IN-CEILING MODEL
SD530-FO**

**PENDANT MODEL
SD530-PG-0**

Modularity

Spectra® V was designed with ease of installation and ease of maintenance in mind. Each dome system consists of three components: a back box, a dome drive, and a lower dome. These three system components are interchangeable with other Spectra V dome systems, making retrofitting and application adjustments simple. Also, dome drives and lower domes can be removed and replaced reducing maintenance time.

Back Box

Spectra V back box options include the following models: environmental pendant. The Spectra V Series can also be ordered with heavy-duty, pressurized, and stainless steel back box options (refer to the appropriate product specification sheets for more information). Each back box model features built-in **back box memory** to store camera and location-specific dome settings, including labels, presets, patterns, and zones. A **passive UTP circuit** is located on the door assembly for convenient video transmission through twisted pair wire.

Dome Drive

The Spectra V dome drive's unique **integrated optics package** incorporates many advanced features that allow the system to produce high quality video in the most difficult environments. All cameras in Spectra V dome drives feature **LowLight**™ technology allowing the cameras to compensate for scenes where minimal light is present. The cameras feature built-in motion detection and advanced **WDR** that enables the system to compensate for scenes where dramatic contrasts in lighting are present.

Lower Dome

Special consideration was taken when designing the Spectra V lower dome bubble to ensure that an optimal optical relationship between the lens and bubble was achieved, providing crystal clear video at long focal lengths.

Dome Systems

Spectra V dome systems feature many software enhancements that increase performance and make configuration and operation easy. An **internal scheduling clock** allows for the scheduling of presets and patterns. **Window blanking** enables a user to configure up to eight, four-sided, user-defined privacy areas. **Password protection** prevents unauthorized users from changing the system settings. Configurable **on-screen compass and tilt display** provides positioning information when needed. Intuitive multilingual on-screen menus can be displayed in English, Spanish, Portuguese, Italian, French, German, Russian, Polish, Turkish, and Czech.

Spectra V's variable speed capabilities range from a smooth, fast pan motion of 400 degrees per second to a smooth "creep" speed of 0.1 degree per second. The system is capable of continuous 360 degrees rotation and has an **"auto flip"** feature that allows the dome to rotate 180 degrees and reposition itself for uninterrupted viewing of any subject that passes directly beneath the dome.

Durability

Pelco's **Pressurized** and **Stainless Steel** options are designed for harsh environmental installations. The Stainless Steel option meets NEMA Type 4X and IP66 standards. The components (back box and lower dome) provide added protection against corrosive conditions. The IDM4012SS mount is designed specifically for the Stainless Steel Spectra V and features an all stainless steel construction and conduit access in the bottom and back of the mount.

Pelco's **Pressurized** Spectra V option provides ultimate protection of the camera optics and electronics from moisture, corrosive gases, and airborne contaminants, meeting NEMA Type 6P and IP67 standards when installed properly. Domes are pressurized with dry nitrogen before or after installation to stabilize the internal environment. Temperature, pressure, and dew point sensors are placed inside the system to send "Alert" messages when conditions are beyond factory-set limits and allow for real time on-screen monitoring. The lower dome features an innovative single captivated fastener, O-ring seal, and a stainless steel V-band to create an easy and reliable pressure seal. Accessible on the lower dome trim ring is a Schrader valve for system purging and a pressure relief valve. The **Pressurized** Spectra V SE Series is supplied with a pre-wired cable with mating connector. The cable includes all wires for system functionality, including power, alarms, auxiliaries, coaxial video, UTP video, and serial control.

CAMERA/OPTICS

	Day/Night (30X)
Signal Format	NTSC / PAL
Scanning System	2:1 Interlace
Image Sensor Effective Pixels	1/3-inch 1,296 (H) x 1,041 (V)

Horizontal Resolution
  NTSC
  PAL
	>740 TV Lines
	>740 TV Lines

Lens	f/1.4 (focal length, 4.3 ~ 129 mm)
Zoom	30X optical, 12X digital
Zoom Speed (optical range)	5.5/7.4/10.3 seconds

Horizontal
  Angle of view
  Focus
	58.3° at 4.3 mm wide zoom;
	2.1° at 129 mm telephoto zoom
	Automatic with manual override

Maximum Sensitivity at 35 IRE
  NTSC/EIA
 	
  PAL/CCIR
	0.55 lux at 1/60 sec (color)
	0.018 lux at 1/2 sec **(color)**
	0.0048 lux at 1/2 sec **(B-W)**
	
	0.45 lux at 1/50 sec **(color)**
	0.015 lux at 1/1.5 sec **(color)**
	0.004 lux at 1/1.5 sec **(B-W)**

White Balance	Automatic with manual override

Shutter Speed
  NTSC
  PAL
	Automatic (electronic iris)/Manual
	1/15 ~ 1/30,000
	1/13 ~ 1/30,000

Iris Control	Automatic iris control with manual override
Gain Control	Automatic/OFF
Video Output	1 Vp-p, 75 ohms
Video Signal-to-Noise	>50 dB
Wide Dynamic Range	128 db

DOME DRIVE FEATURES

- 256 Presets
- ±0.1° Preset Accuracy
- Multilingual Menus (English, Spanish, Portuguese, Italian, French, German, Russian, Polish, Turkish, and Czech)
- RJ-45 Data Port for Software Update and Setup
- On-Screen Compass, Tilt, and Zoom Display
- 400°/sec Pan Preset Speed and 200°/sec Tilt Preset Speed
- Rotating Discreet Liner with Sealed Fixed Bubble
- Window Blanking: Up to 8, Four-Sided, User-Defined Shapes
- 8 Zones (configurable in size) Can Be Labeled with up to 20 Characters Each or Set to Output Blank Video
- 7 Alarm Inputs
- 1 Auxiliary (Form C) Relay Output and 1 Open Collector Auxiliary Output (can be alternately configured to operate upon alarm)
- Configurable Locations of Labels and On-Screen Displays
- Action on Alarm: Alarms Can Be Individually Configured for 3 Priority Levels, to Initiate a Stored Pattern, or to Go to an Associated Preset When Received

- Resume After Alarm: Allows the Dome to Return to a Previously Configured State After Alarm Acknowledgment or to its Previous Position Before Alarm
- Multiple Park and Power-Up Action
- Patterns: Up to 8, On-Screen, User-Defined Configurable Patterns; Includes Pan, Tilt, Zoom, and Preset Functions
- Proportional Pan/Tilt: Continually Decreases Pan/Tilt Speeds in Proportion to Depth of Zoom
- Variable Scan Speed: Scan Speed Can Be Configurable Between 1 to 40°/sec
- Pan Motion Allows 0.1 to 150°/sec Pan Speed
- Configurable Limit Stops for Auto/Random/Frame Scan Modes
- Autosensing Protocol (Coaxitron®, RS-422 Pelco P and Pelco D, Sensormatic®, Vicon®); Accepts Other Control Protocols with Optional Translator Card
- Digital Position and Zoom Control and Feedback through Pelco D Protocol
- Built-in Menu System for Setup of Configurable Functions
- "Auto Flip" Rotates Dome 180° at Bottom of Tilt Travel
- Configurable Zoom Speeds
- Low Lux Noise Reduction (reduces noise in low light)

WINDOW BLANKING

Window blanking allows a user to configure up to eight, four-sided, user-defined areas that cannot be viewed by the operator of the dome system. A blanked area will move with pan and tilt functions and automatically adjust in size as the lens zooms telephoto and wide.

BEFORE

AFTER

WIDE DYNAMIC RANGE

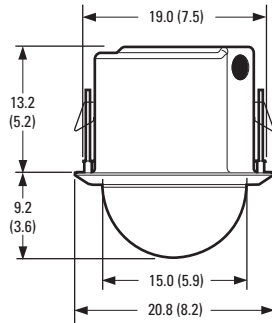The WDR setting balances the brightest and darkest sections of a scene to produce a picture that provides more detail.

BEFORE

AFTER

TECHNICAL SPECIFICATIONS

BACK BOX FEATURES

✋ NOTE: VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.

IN-CEILING INDOOR

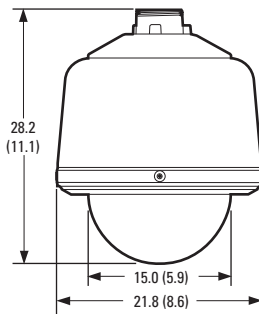Dimensions: 19.0 (7.5), 13.2 (5.2), 9.2 (3.6), 15.0 (5.9), 20.8 (8.2)

In-Ceiling (Indoor)
- Built-in Memory Stores Camera/Dome Settings
- Single Back Box for Suspended or Hard Ceiling Applications
- Requires 13.35 cm (5.25 in) Space Above Ceiling and 8.25 cm (3.25 in) Below
- Minimum Ceiling Thickness 1.27 cm (0.50 in); Maximum 4.45 cm (1.75 in)
- Quick Disconnect to Dome Drive
- Aluminum Construction
- Suitable for Use in Environmental Air Handling Spaces
- Integrated Passive UTP

ENVIRONMENTAL DOME WITH SUN SHROUD

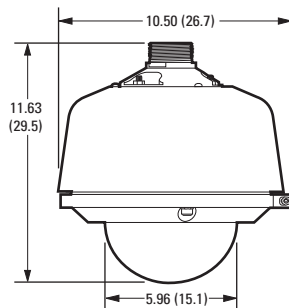Dimensions: 28.2 (11.1), 15.0 (5.9), 21.8 (8.6)

Standard and Environmental Pendant
- Standard and Environmental Models
- Built-in Memory Stores Camera/Dome Settings
- Standard Pendant Available in Black or Gray Finish; Environmental Pendant Gray Finish Only
- Quick Disconnect to Dome Drive
- Aluminum Construction
- Environmental Model Includes Sun Shield, Fan, and Heater
- Integrated Passive UTP

ENVIRONMENTAL PENDANT PRESSURIZED

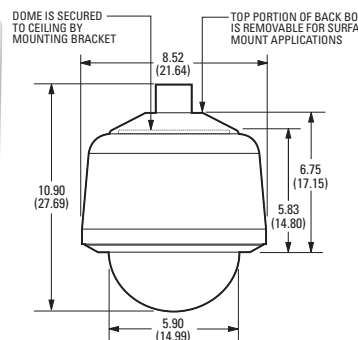Dimensions: 10.50 (26.7), 11.63 (29.5), 5.96 (15.1)

Environmental Pressurized Pendant Additions
- Back Box: Grey, Polyurethane Powder Coated Finish
- Type 316L Stainless Steel
- Schrader Value Brass
- Connect Nickel-Plated Steel
- Meets NEMA Type 6P and IP67 Standards
- Pressurization:
  - Pressure 8 psig (55 kPa) (Not Factory Pressurized)
  - Pressure Relief 10 psig (69 kPa)

ENVIRONMENTAL PENDANT STAINLESS STEEL

DOME IS SECURED TO CEILING BY MOUNTING BRACKET

TOP PORTION OF BACK BO IS REMOVABLE FOR SURFA MOUNT APPLICATIONS

Dimensions: 8.52 (21.64), 10.90 (27.69), 6.75 (17.15), 5.83 (14.80), 5.90 (14.99)

Environmental Stainless Steel Pendant Additions
- Back Box: Grey, Polyurethane Power Coated Finish
- Lower Trim Ring: Black Polyurethane Powder Coated Finish
- Type 316L Stainless Steel
- Meets NEMA Type 4X and IP66 Standards

Note: The Spectra V Series can be ordered with heavy-duty, pressurized, and stainless steel back box options. Refer to the appropriate product specification sheets for more information.

MECHANICAL *(Dome Drive Only)*

Pan Movement	360° continuous pan rotation
Vertical Tilt	Unobstructed +2° to –92°
Manual Pan/Tilt Speeds	
Pan	0.1° to 80°/sec manual operation, 150°/sec Turbo
Tilt	0.1° to 40°/sec manual operation
Preset Speeds	
Pan	400°/sec
Tilt	200°/sec
	For variable-speed operation, an appropriate controller is required (with nonvariable speed control, Spectra V pan/tilt speed is 20°/sec)

ELECTRICAL

Input Voltage	18 to 32 VAC; 24 VAC nominal
	22 to 27 VDC; 24 VDC nominal
Input Power	
24 VAC	23 VA nominal (without heater); 73 VA nominal (with heater)
24 VDC	0.7 A nominal (without heater); 3 A nominal (with heater)
Fuse	1.25 A
Auxiliary Outputs	2
Alarm Inputs	7

CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- FCC, Class B
- UL/cUL Listed
- C-Tick
- S Mark for Argentina
- Meets NEMA Type 4X, IP66 when installed properly (BB4-PG, BB4-PSG-E, and BB4-PG-E))
- Meets NEMA Type 1, IP40 (BB4-F)
- Meets NEMA Type 6P and IP67 standards when installed properly (BB4-PR-E, LD53PR-0)
- U.S. Patents 5,931,432; 6,793,415 B2; 6,802,656 B2; 6,821,222 B2; 7,161,615 B2

GENERAL

Construction	
Back Box	
In-Ceiling	Aluminum
Pendant	Aluminum
Dome Drive	Aluminum, thermo plastic
Bubble	Acrylic
Construction Pressurized	
Back Box and Lower Dome	Type 316L stainless steel
Bubble Polycarbonate	0.090-inch thick Light Attenuation 1 F-stop (smoked); zero light loss (clear)
V-Band Type	316L stainless steel
Pressure Relief	Brass
Schrader Valve	Brass
Connector	Nickel-plated steel
Construction Stainless Steel	
Back Box	316 stainless steel; gray, polyurethane powder coated finish
Lower Dome	Trim Ring 316 stainless steel; black, polyurethane powder coated finish
Light Attenuation	
Smoked	f/0.5 light loss
Clear	Zero light loss
Cable Entry (Back Box)	
In-Ceiling and Surface Mount	0.75-inch conduit fitting
Pendant	Through 1.5-inch NPT pendant mount

Weight (Approximate)	Unit	Shipping
Back Box		
In-Ceiling	0.95 kg (2.1 lb)	1.36 kg (3 lb)
Pendant	1.59 kg (3.5 lb)	2.27 kg (5 lb)
Dome Drive	1.48 kg (3.3 lb)	2.27 kg (5 lb)
Lower Dome		
In-Ceiling	0.09 kg (0.2 lb)	0.45 kg (1 lb)
Pendant	0.27 kg (0.6 lb)	0.90 kg (2 lb)
Pressurized Weights	Unit	Shipping
Back Box	4.6 kg (10.2 lb)	5.9 kg (13 lb)
Lower Dome	1.5 kg (3.3 lb)	1.81 kg (4 lb)
Stainless Steel Weights	Unit	Shipping
Back Box	2.15 kg (4.75 lb)	3.18 kg (7 lb)
Lower Dome	0.83 kg (1.83 lb)	1.81 kg (4 lb)

Environment	
In-Ceiling	Indoor
Pendant, Environmental	Indoor/outdoor
Operating Temperature	
Indoor In-Ceiling	32° to 122°F (0° to 50°C)
Environmental Pendant	(Assumes no wind chill factor)
Maximum	60°C (140°F) absolute maximum; 50°C (122°F) sustained maximum
Minimum	–51°C (–60°F) absolute minimum; prevents icing at sustained minimum of –45°C (–50°F); de-ices 2.5 mm (0.1 inch) within 3 hours after power-up
TS2	–34° to 74°C (–29.2° to 165°F)
	Per NEMA TS2, para. 2.1.5.1, using fig. 2.1 test profile
Effective Projected Area (EPA)	52.07 square cm (20.5 square inches), without mount
	119.38 square cm (47 square inches), with IWM Series mount

TECHNICAL SPECIFICATIONS

RECOMMENDED MOUNTS

In-Ceiling Domes

SD5-P	2' x 2' drop ceiling panel, aluminum construction; replaces 2' x 2' ceiling tile
SCA1	Support rails for BB4-F; for use in ceiling tile applications

Pendant Domes

BB5-PCA-BK*	Pendant conduit adapter, black
BB5-PCA-GY*	Pendant conduit adapter, gray
IWM Series	Wall mount, with or without integral 24 VAC, 100 VA transformer; black or gray finish; can be adapted for corner, parapet, or pole applications
MRCA	Ceiling mount, black
PP350/PP351	Parapet wall/roof mount
SWM-GY	Compact wall mount

*Not suitable for use with heavy-duty, pressurized, or stainless steel Spectra domes.

Pressurized Domes and Stainless Domes

IDM4012SS	Stainless steel wall mount with feed-through capabilities

RECOMMENDED POWER SUPPLIES

MCS Series	Indoor, 24 VAC power supply
WCS Series	Outdoor, 24 VAC power supply

Refer to individual power supply specifications for more information.

SYSTEM AND COMPONENT MODELS

SYSTEM MODEL NUMBERS

Type	Back Box Color	Lower Dome	Spectra V Series, 30X Day/Night (NTSC/PAL)
In-Ceiling, Indoor	White	Smoked	SD530-F0
Pendant, Standard	Grey	Smoked	SD530-PG-0
		Clear	SD530-PG-1
Pendant, Environmental*	Grey	Smoked	SD530-PG-E0
		Clear	SD530-PG-E1
Pendant, Environmental, Pressurized*	Grey	Smoked	SD530-PRE0
		Clear	SD530-PRE1
Pendant, Environmental, Stainless Steel*	Grey	Clear	SD530-PSGE1

*Environmental dome systems include a heater, a fan, and a sun shield.

COMPONENT MODEL NUMBERS

Back Box		Dome Drive		Lower Dome†	
BB4-F	In-ceiling, white	DD530	Day/Night (NTSC/PAL) camera (30X)	LDHQF-0	Smoked, surface, white
BB4-PG	Pendant mount, grey			LDHQPB-0	Smoked, pendant, grey
BB4-PG-E	Pendant mount, grey, environmental			LDHQPB-1	Clear, pendant, grey
BB4-PR-E	Pendant mount, environmental, pressurized, grey			LD53PR-0	Smoked, pressurized, grey
BB4-PSG-E	Pendant mount, stainless steel, grey			LD53PR-1	Clear, pressurized, grey
				LD53PSB-1	Clear, stainless steel

Notes:
To order a fixed mount dome system, refer to the component models above and select one each of the following options: back box, dome drive, plus choice of lower dome.