



PRODUCT SPECIFICATION

Spectra II™ Series Discreet Dome Systems

PREMIER INTEGRATED DOME SYSTEMS

CE

UL LISTED

UL

IP66

U.S. Patent
#5,931,432

Product Features

Standard Features (all models)

- Auto Focus with Manual Override
- AC Line Lock
- 64 Presets
- High Resolution Camera
- Auto Iris with Manual Override
- 5.9-inch Acrylic Bubble
- Variable Scan Speed (0.5-250°/Second)
- "Auto Flip" Dome Rotation
- 360° Continuous Pan Rotation
- Integral Multi-protocol Receiver/Driver
- Quick Disconnect Dome Drive
- 7 Alarm Inputs; 2 Auxiliary Outputs (1 Programmable)
- Built-in Power Line Surge and Lightning Protection

In-ceiling Model Features

- Very Easy In-Ceiling Installation Requiring Only 5.25-inch Space Above Ceiling and 3.25-inches Below

Pendant Model Features

- Environmentally Sealed; NEMA 4/4X, IP66 Rated
- -60°F (-51°C) Rated with Heater

Color Camera Options

- Color Images at .05 Lux with Standard 16X Optical Zoom, 8X Electronic Zoom Camera
- Color Images at .07 Lux with Optional 22X Optical Zoom, 8X Electronic Zoom Camera
- Color/B&W Images at .2 Lux with Optional 18X Optical Zoom, 4X Electronic Zoom Camera

A new high resolution color camera for the **Spectra II™ Series** has increased the light sensitivity to .05 lux through Lowlight™ color technology. This camera with 128X zoom (16X optical and 8X electronic zoom) is the standard camera for **Spectra II™**. Two new optional high resolution cameras that will be available in the 4th quarter of 1999 are the Lowlight™ color camera with .07 lux and 176 zoom (22X optical and 8X electronic), and the color/black and white camera with .2 lux and 72X zoom (18X optical and 4X electronic). This camera features the ability to function in color and b/w for optimum visible and IR light sensitivity.

Spectra II™ also is available with an optional translator card that allows the dome to accept control commands from competitive control systems. These protocols add to the capability of the dome, which also accepts Coaxitron® control, P protocol (RS-422 control of Pelco's CM6700/CM9750/CM9760 matrix systems), and D protocol (RS-422 control of Pelco's MPT9500/CM6700/CM8500 matrix systems).

Other **Spectra II™** features are a power-up recovery mode that allows the user to specify what condition the dome will assume whenever the power is cycled, a proportional turbo feature that decreases the turbo pan in proportion to the depth of zoom, a video blanking option that allows up to eight zones (programmable in size) to be set to output blank video, a variable scan speed that can be set between 1 and 40 degrees



IN-CEILING MODEL
SD5BC-FO



PENDANT MODEL SD5BC-PG-0
(SHOWN WITH SWM-GY WALL MOUNT)

per second, and a maximum of six minutes in the time period for running patterns.

Alarm features include programming an auxiliary output to activate when there is an alarm, programming the dome to resume its previous activity after all alarms are cleared, and defining alarms as low or high priority.

Spectra II™ Series domes also include a fully integrated, high performance dome system with a 1/4-inch camera; 360° rotation; high speed/variable speed capability; 64 presets; auto, frame, and random scanning with limit stops controlled by software; and an "auto flip" feature that allows the dome to rotate 180° and reposition itself for continuous viewing of a person who passes directly beneath the dome.

Spectra II™ Series domes may be ordered either as complete system models or as separate components. Each system consists of a back box, dome drive, and lower dome component. Back boxes can be pre-ordered and installed separately. The dome drive and lower dome assemblies can then be ordered separately at a later date.

Back box types are in-ceiling or pendant mount. The in-ceiling models may be installed in either suspended or hard ceilings without the need for access from above the ceiling. Pendant models mount directly to any recommended mount, flush to a ceiling, or to 1.5-inch NPT female pipe threads. An optional pendant conduit adapter (BB5-PCA) is available for use when installing a pendant dome to a hard ceiling such as a parking garage having surface-mounted conduit. Indoor and outdoor pendant models are available. Outdoor models include a sun shield and a heater.

The dome drive features a quick disconnect system which makes drive installation or replacement quick and easy.

The lower dome component includes an acrylic bubble and appropriate trim ring. Bubbles are available in clear, smoked, chrome or gold mirrored models. Because **Spectra II™** uses a black rotating liner, the clear bubble may be used to minimize light loss while preserving a discreet appearance.

DataFAX Documents

SPEC: 21487

MANUAL: CONSULT FACTORY

A&E: CONSULT FACTORY

C1487/REVISED 7-99

157

TECHNICAL SPECIFICATIONS

COMPONENT FEATURES

Dome Drive

- 64 Presets with 20-Character Labels Each
 - Rotating ABS Liner with Sealed Fixed Bubble
 - Eight Zones (programmable in size) can be Labeled with up to 20 Characters Each or Set to Output Blank Video (when used with appropriate control)*
 - Seven Alarm Inputs
 - One Auxiliary (Form C) Relay Output and One Open Collector Auxiliary Output (can be alternately programmed to operate upon alarm)
 - Action on Alarm – Alarms can be individually programmed for high or low priority, to initiate a stored pattern, or go to an associated preset when received
 - Resume After Alarm – Allows the dome to return to a previous state after alarm acknowledgement
 - Single Pattern May Be Programmed in One of Three Modes (1.5, 3, or 6 Minutes) or May Be Split into Two Patterns of Half Duration
 - Proportional Turbo – Decreases turbo pan in proportion to depth of zoom
 - Variable Scan Speed – Scan speed can be programmable between 1-40 degrees per second
 - Pan Motion Profile Allows 80 Degree/Second Pan Speed (when not in Turbo mode)
 - Programmable Limit Stops for Auto/Random/Frame Scan Modes**
 - Coaxitron®, RS-422 "P" Series and "D" Series Protocols; Accepts Competitive Control Protocol with Optional Translator Card (TXB-A or TXB-AB)
 - Built-in Menu System for Setup of Camera Functions
 - "Auto Flip" Rotates Dome 180° at Bottom of Tilt Travel
- * Zone feature not programmable by System 9760™ Matrix controls.
 ** Not available in CM7500 Matrix, MPT9000 or KBD9000 controls.

Back Box, In-Ceiling

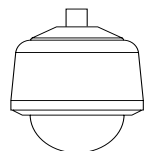
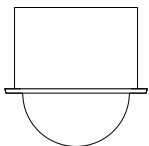
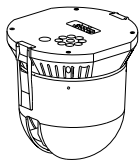
- Single Back Box for Suspended or Hard Ceiling Applications
- Very Easy In-Ceiling Installation Requiring Only 5.25-inch Space Above Ceiling and 3.25-inches Below
- Minimum Ceiling Thickness .5-inch; Maximum 1.75-inches
- Quick Disconnect to Dome Drive
- Plenum Rated
- Ratings: NEMA 1, IP40

Back Box, Pendant

- Available in Black or Gray Finish
- Pendant 9.50-inch Overall Length x 8.52-inch Diameter (including dome)
- Quick Disconnect to Dome Drive
- Ratings: NEMA 4/4X, IP66

GENERAL

Construction	Aluminum
Back Box	Aluminum, ABS plastic
Dome Drive	Aluminum, ABS plastic
Lower Dome	Acrylic
Light Attenuation	Smoked (1/2 f-stop light loss) Clear (Zero light loss) Chrome (2 f-stop light loss) Gold (2 f-stop light loss)



Cable Entry (Back Box)

In-ceiling	.75-inch conduit fitting	
Pendant	Through 1.5-inch NPT pendant mount	
Dimensions	See dimension drawing	
Weight (approximate)	Unit	Shipping
Back Box		
In-ceiling	1.5 lb (.68 kg)	2 lb (.9 kg)
Pendant Indoor	3 lb (1.36 kg)	4 lb (1.81 kg)
Outdoor Pendant	4.25 lb (1.93 kg)	6 lb (2.72 kg)
Dome Drive	2.65 lb (1.20 kg)	5 lb (2.27 kg)
Lower Dome		
In-ceiling	.19 lb (.09 kg)	1 lb (.45 kg)
Pendant	1.3 lb (.59 kg)	2.2 lb (1.0 kg)
Environment	Indoor only	
In-ceiling	Indoor/Outdoor	
Pendant		
Operating Temperature		
In-ceiling	32° to 122°F (0° to 50°C)	
Pendant		
Without heater:	32° to 140°F (0° to 60°C) absolute maximum operating temperature; 32° to 122°F (0° to 50°C) sustained maximum operating temperature	
With heater:	(Assumes no wind chill factor; for detailed test conditions, contact Pelco.)	
Maximum	140°F (60°C) absolute maximum; 122°F (50°C) sustained maximum	
Minimum	-60°F (-51.11°C) absolute minimum; Minimal icing at sustained minimum of -50°F (-45.56°C); Prevents icing at sustained minimum of -40°F (-40°C); de-ices .1 inch (2.5 mm) within 3 hours after power-up.	
Effective Projected Area (EPA*)	~175 square inches	

MECHANICAL

Pan Movement	360° Continuous pan rotation
Vertical Tilt	Unobstructed +2° to -92°
Manual Pan/Tilt Speeds***	
Pan	0.5°-40°/sec manual operation, 150°/sec Turbo
Tilt	0.5°-40°/sec
Preset Speeds:	
Pan	250°/sec
Tilt	200°/sec

*** For variable-speed operation an appropriate controller is required. (With non-variable speed control, Spectra II™ pan/tilt speed is 24°/second.)

ELECTRICAL

Input Voltage	18-30 VAC; 24 VAC nominal
Input Power	30 vA nominal (indoor, w/o heater); 75 vA nominal (outdoor, with heater)
Fuse	1.6A
Auxiliary Outputs	2
Alarm Inputs	7

	Wire Gauge					
	20	18	16	14	12	10
Indoor (30 vA)	94 ft (28m)	150 ft (45m)	238 ft (72m)	380 ft (115m)	603 ft (183m)	960 ft (292m)
Outdoor (75 vA)	37 ft (11m)	60 ft (18m)	95 ft (29m)	152 ft (46m)	241 ft (73m)	384 ft (117m)

* Projects curved surfaces as flat to presume worst case conditions when calculating stress from external forces.

Reaction forces, attributable to environmental conditions, are minimal. Cyclic fatigue and stress corrosion, relative to the fastening of the dome/mount combination, must be closely monitored. Severity of environmental conditions dictates how often the fastening system should be checked. Thorough, scheduled maintenance procedures to monitor structural corrosion/fatigue is a requirement in any outdoor installation.

TECHNICAL SPECIFICATIONS

CAMERA/OPTICS

COLOR (16X/22X) and COLOR/B&W (18X)

Signal Format	NTSC (models DD5BC, DD5BC22, and DD5BCBW) PAL (models DD5BC-X, DD5BC22-X, and DD5BCBW-X)
Scanning System	2:1 interlace
Image Sensor	1/4-inch interline transfer CCD
Effective pixels	
NTSC	768 (H) x 494 (V)
PAL	752 (H) x 582 (V)
Horizontal Resolution	470 TV lines
Lens	
Standard (16X)	f/1.4 (f = 4-64 optical, 16X optical zoom, 8X electronic zoom)
Optional (22X)	f/1.6 (f = 4-88 optical, 22X optical zoom, 8X electronic zoom)
Optional (18X)	f/1.4 (f = 4.1-73.8 optical, 18X optical zoom, 4X electronic zoom)
Horizontal Angle of View	47° at 4mm wide zoom, 3° at 64mm telephoto zoom
MTBF	>2 million cycles nominal (zoom, focus, iris)
Focus	Automatic with manual override
Sensitivity:	
Standard (16X)	.05 lux at 1/2-second shutter speed
Optional (22X)	.07 lux at 1/2-second shutter speed
Optional (18X)	.2 lux at 1/4-second shutter speed
Sync System	AC line lock, phase adjustable via remote control*
White Balance	Automatic with manual override*
Shutter Speed	Automatic (electronic iris)/manual
NTSC	
DD5BC, DD5BC22	1/2 - 1/30,000*
DD5BCBW	1/4 - 1/30,000*
PAL	
DD5BC-X, DD5BC22-X	1/2 - 1/30,000*
DD5BCBW-X	1/4 - 1/30,000*
Iris Control	Automatic with manual override*
Gain Control	Automatic with manual override*
Video Output	
NTSC	.714V ± .07V (100 IRE ± 10 IRE)
PAL	.7V ± .07V
Signal to Noise Ratio	>46 dB

MONOCHROME

Signal Format	EIA (model DD5AM) CCIR (model DD5AM-X)
Scanning System	2:1 interlace
Image Sensor	1/4-inch interline transfer CCD
Effective pixels	
EIA	768 (H) x 494 (V)
CCIR	752 (H) x 582 (V)
Horizontal Resolution	>500 TV lines
Lens	f/1.4 (f=4-64mm optical, 16X optical zoom, 8X electronic zoom)
Horizontal Angle of View	47° at 4mm wide zoom, 3° at 64mm telephoto zoom
MTBF	>2 million cycles nominal (zoom, focus, iris)
Focus	Automatic with manual override
Sensitivity	
EIA	.1 lux at f/1.4, AGC Gain 26.5 dB, signal level 40 IRE, without IR cut filter
CCIR	.1 lux at f/1.4, AGC Gain 29.5 dB, signal level 300 mV, without IR cut filter
Signal Process	DSP-3R
Sync System	AC line lock, phase adjustable via remote control*
Shutter Speed	Automatic (electronic iris)/manual
EIA	1/60 - 1/30,000*
CCIR	1/50 - 1/30,000*
Iris Control	Automatic with manual override*
Gain Control	Automatic with manual override*
Video Output	
EIA	.714V ± .07V (100 IRE ± 10 IRE)
CCIR	.7V ± .07V
Signal to Noise Ratio	>46 dB

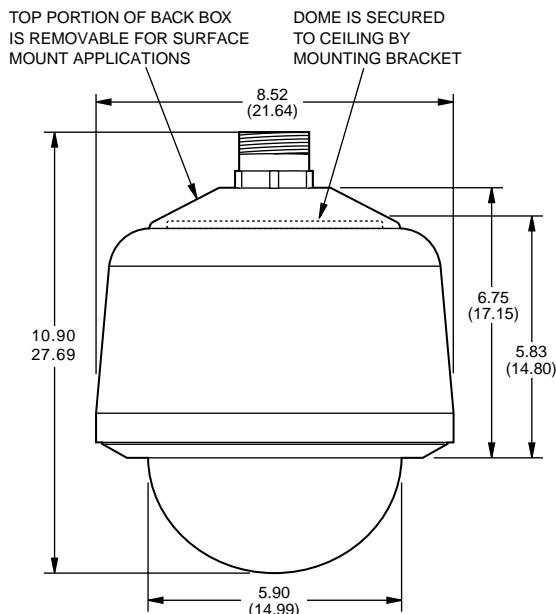
* Manual control of camera setup functions can be done with CM6700, CM8500, CM9500, CM9760 and MPT9500 controllers, but not with CM7500, MPT9000 or KBD9000 controllers.

CERTIFICATIONS

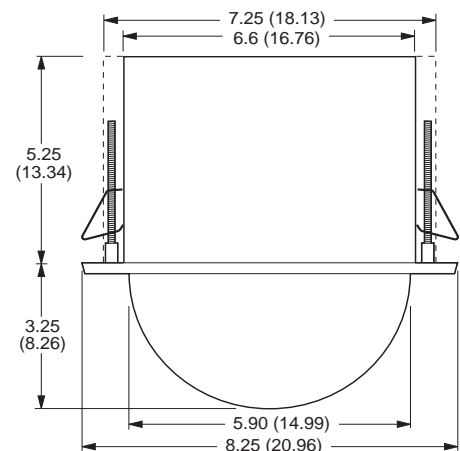
- ◆ CE (models BB5A-F, BB5A-PB, BB5A-PG, BB5A-PG-E, and DD5AM-X). (DD5BC-X, DD5BC22-X and DD5BCBW-X pending.)
- ◆ UL, cUL (models BB5A-F, BB5A-PB, BB5A-PG, BB5A-PG-E, DD5AM and DD5BC). (DD5BC22 and DD5BCBW pending.)

Applicable directives/standards

- FCC, Class B
- NEMA Type 4, IP66 (Indoor pendant models)
- NEMA Type 4X, IP66 (Environmental pendant)
- NEMA Type 1, IP40 (In-ceiling models)



PENDANT DOME



IN-CEILING DOME



SYSTEM MODELS AND RELATED PRODUCTS

Each basic Spectra II™ dome system consists of three components: Back Box (BB5), Dome Drive (DD5), and Lower Dome (LD5).

Refer to the chart below to order a dome system with a standard imager type (16X camera). To order individual components, including optional color imager type (22X) and optional color/BW imager (18X), refer to the component models on this page.

For environmental applications, you must order the environmental back box (BB5A-PG-E) and lower dome (LD5PG-E0 or LD5PG-E1). (Heater kit is not sold separately and cannot be retrofitted.) Refer to the component models on this page.

To order a fixed mount dome system refer to the component models on this page and select one each of the following: back box (BB5A-F), dome drive (DD5-FM), plus choice of lower dome (LD5F-0, LD5F-1, LD5F-2 or LD5F-3).

INDOOR DOME SYSTEMS

Type	Back Box Color	Lower Dome	Model Number*	
			Color	Monochrome
In-Ceiling	N/A	Smoked	SD5BC-F0	SD5AM-F0
		Clear	SD5BC-F1	SD5AM-F1
		Chrome	SD5BC-F2	SD5AM-F2
		Gold	SD5BC-F3	SD5AM-F3
Pendant	Black	Smoked	SD5BC-PB-0	SD5AM-PB-0
		Clear	SD5BC-PB-1	SD5AM-PB-1
		Chrome	SD5BC-PB-2	SD5AM-PB-2
		Gold	SD5BC-PB-3	SD5AM-PB-3
	Lt. Gray	Smoked	SD5BC-PG-0	SD5AM-PG-0
		Clear	SD5BC-PG-1	SD5AM-PG-1
		Chrome	SD5BC-PG-2	SD5AM-PG-2
		Gold	SD5BC-PG-3	SD5AM-PG-3

ENVIRONMENTAL DOME SYSTEMS

Type	Back Box Color	Imager Type	Lower Dome	Other	Model*
Pendant	Lt. Gray	Color	Smoked	Heater, Sun Shield	SD5BC-PG-E0
			Clear		SD5BC-PG-E1
			Chrome		SD5BC-PG-E2
	Lt. Gray	Monochrome	Smoked	Heater, Sun Shield	SD5AM-PG-E0
			Clear		SD5AM-PG-E1
			Chrome		SD5AM-PG-E2
		Gold		SD5AM-PG-E3	

* For PAL and CCIR models add "-X" suffix to part number.
Example: SD5AC-PG-E0-X

COMPONENT MODELS

Back Box	
BB5A-F	Back box, in-ceiling
BB5A-PB	Back box, pendant mount, black, indoor
BB5A-PG	Back box, pendant mount, gray, indoor
BB5A-PG-E	Same as BB5A-PG except supplied with heater and sun shield, outdoor

Dome Drive

DD5BC	Dome drive with color (NTSC) camera (128X)
DD5BC-X	Dome drive with color (PAL) camera (128X)
DD5BC22**	Dome drive with color (NTSC) camera (176X)
DD5BC22-X**	Dome drive with color (PAL) camera (176X)
DD5BCBW**	Dome drive with color/B&W (NTSC/EIA) camera (72X)
DD5BCBW-X**	Dome drive with color/B&W (PAL/CCIR) camera (72X)
DD5AM	Dome drive with monochrome (EIA) camera (128X)
DD5AM-X	Dome drive with monochrome (CCIR) camera (128X)
DD5-FM	Removable fixed mount bracket only (no camera package)

**Available 4th Quarter 1999

Lower Dome

LD5F-0	Smoked lower dome, in-ceiling
LD5F-1	Clear lower dome, in-ceiling
LD5F-2	Chrome lower dome, in-ceiling
LD5F-3	Gold lower dome, in-ceiling
LD5PB-0	Smoked lower dome, pendant, black
LD5PB-1	Clear lower dome, pendant, black
LD5PB-2	Chrome lower dome, pendant, black
LD5PB-3	Gold lower dome, pendant, black
LD5PG-0	Smoked lower dome, pendant, gray
LD5PG-1	Clear lower dome, pendant, gray
LD5PG-2	Chrome lower dome, pendant, gray
LD5PG-3	Gold lower dome, pendant, gray
LD5PG-E0	Same as LD5PG-0 except with heater
LD5PG-E1	Same as LD5PG-1 except with heater

OPTIONS

BB5-PCA-BK	Pendant conduit adapter, black
BB5-PCA-GY	Pendant conduit adapter, gray
SCA1	Support rails for BB5A-F; for use in ceiling tile applications.
SD5-SS	Sun shield, gray
TXB-AB	Translator board for AD Manchester and Philips (Burle) Allegiant Bi-phase protocols.

RECOMMENDED MOUNTS

In-Ceiling Domes

SD5-P	2' x 2' drop ceiling panel, aluminum construction. Replaces 2' x 2' ceiling tile
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Pendant Domes

IWM24-BK, IWM24-GY	Wall mount with cable feedthrough. Includes integral 24 VAC, 100 vA transformer. Black or gray finish. Can be adapted for corner, parapet or pole applications. (See C203 spec)
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IWM-BK, IWM-GY	Same as IWM24-BK/IWM24-GY except does not include integral transformer.
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MRCA	Ceiling mount (See C234 spec)
MRWA	Wall mount (See C234 spec)
PP4348	Parapet mount (See C204 spec)
PP350/PP351	Parapet mount (See C212 spec)
SWM-BK	Compact wall mount, black finish (See C293 spec)
SWM-GY	Compact wall mount, gray finish (See C293 spec)
SWM-PA-BK, SWM-PA-GY	Pole adapter for SWM-BK and SWM-GY, black/gray finish. (See C293 spec)

RECOMMENDED POWER SUPPLIES

MCS Series	24 VAC Indoor transformer (See C653 spec and C655 spec)
WCS Series	24 VAC Weatherproof transformer (See C654 spec)

Specifications subject to change without notice.
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