

PROGRESSIVE SCAN ANALOG CAMERAS



Cube Camera "A" Series

- ANALOG OUTPUT
- HIGH SPEED FRAME RATE
 - VGA (30, 60, 90 fps)
 - XGA (30 fps)
 - SXGA (15, 19 fps)
 - UXGA (15 fps)
- VERY SMALL (1.1" x 1.1" x 1.8")
- RS232 COMMUNICATIONS
- 2 TRIGGER MODES
(with Reset & Non-Reset)
 - PULSE WIDTH
 - EDGE PRESET
- PARTIAL SCAN (1/2, 1/4, Variable)
- AVAILABLE CONFIGURATIONS
 - CUBE
 - REMOTE HEAD
 - BOARD
- GAMMA = 0.45 OR 1.0
- SQUARE PIXELS



STC-SS1200 Remote Head Series



STC-33/83 Board Series

Full Specification Comparison Table on pages 68-69.

Progressive Scan Analog Cube Cameras

STC-A33A (0.3 MegaPixel)

- 1/3" CCD - VGA
- 30, 60, 90 fps (Full Resolution)
- CUBE CAMERA
- C MOUNT

SEE PAGES 70 & 71 FOR DETAILS.

STC-A83A (0.8 MegaPixel)

- 1/3" CCD - XGA
- 30 fps (Full Resolution)
- CUBE CAMERA
- C MOUNT

SEE PAGES 70 & 71 FOR DETAILS.

STC-A152A (1.3 MegaPixel)

- 1/2" CCD - SXGA
- 15, 30 fps (Full Resolution)
- CUBE CAMERA
- C MOUNT

SEE PAGES 72 & 73 FOR DETAILS.

STC-A202A (2 MegaPixel)

- 1/1.8" CCD - UXGA
- 15 fps (Full Resolution)
- CUBE CAMERA
- C MOUNT

SEE PAGES 72 & 73 FOR DETAILS.

Progressive Scan Analog Remote Head Cameras

STC-SS1200 (0.3 MegaPixel)

- 1/3" CCD - VGA
- 60 fps (Full Resolution)
- CASED CAMERA
- SUPER COMPACT REMOTE HEAD

SEE PAGES 74 & 75 FOR DETAILS.

STC-SS1200-90 (0.3 MegaPixel)

- 1/3" CCD - VGA
- 90 fps (Full Resolution)
- CASED CAMERA
- SUPER COMPACT REMOTE HEAD

SEE PAGES 74 & 75 FOR DETAILS.

Progressive Scan Analog Board Cameras

STC-33 (0.3 MegaPixel)

- 1/3" CCD - VGA
- 30, 60 fps (Full Resolution)
- BOARD CAMERA
- CS MOUNT

SEE PAGES 76 & 77 FOR DETAILS.

STC-83 (0.8 MegaPixel)

- 1/3" CCD - XGA
- 30 fps (Full Resolution)
- BOARD CAMERA
- CS MOUNT

SEE PAGES 76 & 77 FOR DETAILS.

Comparison Chart

Sentech Progressive Scan Analog Cameras

Models	STC-A33A	STC-A83A	STC-A152A	STC-A202A
Type:	Cube			
Resolution:	VGA (0.3 MP)	XGA (0.8MP)	SXGA (1.3MP)	UXGA (2MP)
Image Sensor:	1/3" IT CCD	1/3" IT CCD	1/2" IT CCD	1/1.8" IT CCD
Signal Format:	Monochrome Progressive Analog			
Frame Rate:	30, 60, 90 fps	30 fps	15, 19 fps	15 fps
Effective Pic. Element:	659 (H) x 494 (V)	1034 (H) x 779 (V)	1392 (H) x 1040 (V)	1628 (H) x 1236 (V)
Active Picture Element:	648 (H) x 494 (V)	1024 (H) x 768 (V)	1360 (H) x 1040 (V)	1620 (H) x 1220 (V)
Chip Size (mm):	5.79(H) x 4.89(V)	5.80 (H) x 4.92 (V)	7.60(H) x 6.20(V)	8.50 (H) x 6.80 (V)
Cell Size (µm):	7.4 (H) x 7.4 (V)	4.65 (H) x 4.65 (V)	4.65 (H) x 4.65 (V)	4.4 (H) x 4.4 (V)
Vertical Frequency:	94.784Hz	29.59Hz	19.3Hz	15.3164Hz
Horizontal Drive Freq:	36.8181MHz	29.5MHz	36.8181MHz	
Horizontal Frequency:	47.2028kHz	23.23kHz	20.57kHz	19.176kHz
Scanning Method:	Full Scan, Partial Full Scan, Partial Scan (1/2, 1/4, Variable), Binning, Binning Partial Scan (1/1, 1/2, 1/4, Variable)			
Sync System:	Internal / External			
Communication:	RS232 via 12pin connector			
Trigger Shutter:	Edge Preset: V Reset, Non-Reset Pulse Width Trigger: V Reset, Non-Reset			
Shutter Speed:	Dip Switch: OFF, 1/200, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/8,000, 1/12,000 Communication: OFF, 1/2 to 1/100,000 (Variable at every H and Clock)			
Minimum Illumination:	0.14 Lux @ F1.2 50 IRE	0.17 Lux @ F1.2 50 IRE	0.16 Lux @ F1.2 50 IRE	0.07 Lux @ F1.2 50 IRE
Gain:	Manual (0 to 27 dB)			
S/N Ratio:	56dB (Gain 0dB)			
Gamma:	1.0 / 0.45			
Lens Mount:	C Mount			
Video Output:	1 V p-p, 75Ω DC Coupling (0V Clamp)			
Optical Filter:	No IR cut filter			
Optical Center Accuracy:	Position accuracy in H and V direction: +/- 0.31mm			
Shock and Vibration:	Vibration: 10G (20 to 200Hz) Shock: 70G (3 directions, 3 times each)			
Power:	DC 12V +/- 10%			
Power Consumption:	< 1.8W, 150mA		< 2.2 W 183mA	< 3.0 W 250mA
Operating Temp.:	-5°C ~ 50°C (23°F ~ 122°F)			
Storage Temp.:	-30°C ~ 65°C (-21.9°F ~ 149°F)			
Dimensions:	28 (W) x 28 (H) x 46.3 (D) mm (1.12" x 1.12" x 1.8")			
Weight:	52g (1.8 oz.)			

STC-SS1200	STC-SS1200-90	STC-33	STC-83
Remote Head Cube		Board	
VGA (0.3 MP)		VGA (0.3 MP)	XGA (0.8MP)
1/3" IT CCD			
Monochrome Progressive Analog			
60 fps	90 fps	30, 60 fps	30 fps
659 (H) x 494 (V)	659 (H) x 494 (V)	659 (H) x 494 (V)	1034 (H) x 779 (V)
648 (H) x 494 (V)	648 (H) x 494 (V)	648 (H) x 494 (V)	1024 (H) x 768 (V)
5.79(H) x 4.89(V)	5.80 (H) x 4.92 (V)	5.79(H) x 4.89(V)	5.80 (H) x 4.92 (V)
7.4 (H) x 7.4 (V)	4.65 (H) x 4.65 (V)	7.4 (H) x 7.4 (V)	4.65 (H) x 4.65 (V)
59.94Hz	89.91Hz	29.97/59.94Hz	29.18Hz
24.5454MHz	36.818MHz	12.272/24.545Hz	14.75MHz
31.4685kHz	47.203kHz	15.734/31.468kHz	23.228kHz
Full Scan, Partial Full Scan, Partial Scan (1/2, 1/4), Binning, Binning Partial Scan (1/1, 1/2, 1/4)			
Internal / External (HD/VD) Automatically			
-	-	-	-
Edge Preset: V Reset, Non-Reset, Sync Reset, Restart-Reset Pulse Width Trigger: V Reset, Non-Reset, Sync Reset, Restart-Reset		Edge Preset Trigger (10 Steps) Pulse Width Trigger	
1/60 ~ 1/20,000 (8 Steps)	1/90 ~ 1/10,000 (8 Steps)	1/30 ~ 1/16,000 (10 steps) 1/60 ~ 1/32,000 (10 steps)	1/30 ~ 1/16,000 (10 steps)
1.82 Lux @ F1.2 50 IRE	1.64 Lux @ F1.2 50 IRE	0.14 Lux @ F1.2 50 IRE	0.17 Lux @ F1.2 50 IRE
AGC/Manual (4 to 24 dB)			
52dB (Gain 0dB)		50dB (Gain 0dB)	
0.45/1		1.0	
Special Mount (Male 10.5 Female P0.5)		CS-Mount	
1Vp-p, 75Ω			
No IR cut filter		N/A	
Position accuracy in H and V direction: +/- 0.31mm		N/A	
Vibration: 10G (20 to 200Hz) Shock: 70G (3 directions, 3 times each)			
DC 12V			
2.64W, ≤ 220 mA		1.44W, 120 mA	1.56W, 130 mA
-10°C ~ 45°C (14°F ~ 113°F)			
-30°C ~ 60°C (-22°F ~ 140°F)			
CCD Head: 20 (W) x 20 (H) x 25 (D) mm CCU: 110 (W) x 80 (H) x 28 (D) mm		30 (W) x 30 (H) x 32 (D) mm	
CCD Head: 80g (2.82 oz.) CCU: 150g (5.33 oz.)		27g (0.95 oz.)	

Sentech America
1345 Valwood Parkway
Suite 320
Carrollton, TX 75006
USA

Toll Free:
(877) 736-8324
Telephone:
(972) 481-9223
Fax:
(972) 481-9209

Accessories

Cables

12W-0.45
12W-02, 03, 05

Connectors

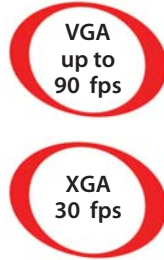
Hirose: HR10-10P-12S
Hirose: HR10-10R-12P

Lenses

Various C-Mount Lenses
Various Mega-Pixel Lenses
Various Telecentric Lenses

STC-A33A/A83A

Progressive Scan Cube Cameras

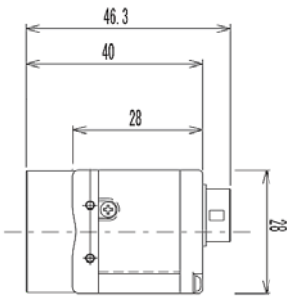


STC-A33A (VGA, 30, 60, 90 fps, 0.3MP)
STC-A83A (XGA, 90 fps, 0.8MP)

The STC-A33A/A83A models are very powerful analog out progressive scan machine vision cameras. These cameras are in a very small package of only 28(W) x 28(H) x 46.3(D) mm in size, including the C-Mount. This series features a VGA sensor with a scan rate of 30, 60, 90 fps, full resolution or with an XGA sensor with a scan rate of 30 fps.

FEATURES

- VGA (30, 60, 90 fps) AND XGA (30 fps)
- MONOCHROME
- HIGH SPEED TRIGGERING
- SQUARE PIXELS
- ANALOG OUTPUT
- COMMUNICATION: RS232C
- PARTIAL SCANNING
- COMPACT SIZE:
28(W) x 28(H) x 46.3(D) mm



ANALOG B/W PROGRESSIVE SCAN VGA (0.3MP) & XGA (0.8MP)



Models	STC-A33A	STC-A83A
Resolution:	VGA (0.3 MegaPixel)	XGA (0.8 MegaPixel)
Image Sensor:	1/3" Interline CCD: ICX424AL	1/3" Interline CCD: ICX204AL
Signal Format:	Monochrome Progressive Analog	
Frame Rate:	30, 60, 90 fps	30 fps
Active Picture Element:	648 (H) x 494 (V)	1024 (H) x 768 (V)
Chip Size (mm):	5.79(H) x 4.89(V)	5.80 (H) x 4.92 (V)
Cell Size (µm):	7.4 (H) x 7.4 (V)	4.65 (H) x 4.65 (V)
Vertical Frequency:	94.784Hz	29.59Hz
Horizontal Drive Freq:	36.8181MHz	29.5MHz
Horizontal Frequency:	47.2028kHz	23.23kHz
Scanning Method:	Full Scan, Partial Full Scan, Partial Scan (1/2, 1/4, Variable), Binning, Binning Partial Scan (1/1, 1/2, 1/4, Variable)	
Sync System:	Internal / External	
Communication:	RS232 via 12pin connector	
Trigger Shutter:	Edge Preset: V Rest, Non-Reset Pulse Width Trigger: V Reset, Non-Reset	
Shutter Speed:	- Dip Switch: OFF, 1/200, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/8,000, 1/12,000 - Communication: OFF, 1/2 to 1/100,000 (Variable at every H and Clock)	
Minimum Illumination:	0.14 Lux @ F1.2, 50 IRE	0.17 Lux @ F1.2, 50 IRE
Gain:	Manual (0 to 27 dB)	
S/N Ratio:	56dB (Gain 0dB)	
Gamma:	1.0 / 0.45	
Lens Mount:	C-Mount	
Video Output:	1 V p-p, 75Ω DC Coupling (0V Clamp)	
Optical Filter:	No IR cut filter	
Optical Center Accuracy:	Position accuracy in H and V direction: +/- 0.31mm	
Shock and Vibration:	Vibration: 10G (20 to 200Hz) Shock: 70G (3 directions, 3 times each)	
Power:	12V DC	
Power Consumption:	< 1.8W, 150mA	
Operating Temperature:	-5°C ~ 45°C (23°F ~ 113°F)	
Storage Temperature:	-30°C ~ 65°C (-21.9°F ~ 149°F)	
Dimensions:	28 (W) x 28 (H) x 46.3 (D) mm (1.1" x 1.1" x 1.8")	
Weight:	52g (1.8 oz.)	

Sentech America
1345 Valwood Parkway
Suite 320
Carrollton, TX 75006
USA

Toll Free:
(877) 736-8324
Telephone:
(972) 481-9223
Fax:
(972) 481-9209

Accessories

Cables

12W-0.45
12W-02, 03, 05

Connectors

Hirose: HR10-10P-12S
Hirose: HR10-10R-12P

Lenses

Various C-Mount Lenses
Various Mega-Pixel Lenses
Various Telecentric Lenses

STC-A152A/A202A

Progressive Scan Cube Cameras



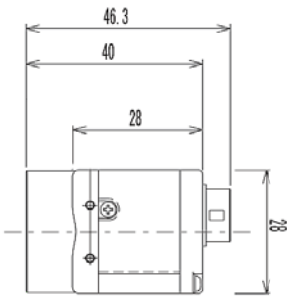
1.3 & 2MP
15 fps

STC-A152A (SXGA, 15, 19 fps, 1.3MP)
STC-A202A (UXGA, 15 fps, 2MP)

The STC-A152A & STC-A202A models are very powerful analog out progressive scan machine vision cameras. These cameras are in a very small package of only 28(W) x 28(H) x 40(D) mm in size, including the C-Mount. This series features a SXGA sensor and an UXGA sensor with a scan rate of 15 fps full resolution.

FEATURES

- SXGA (15, 19 fps) AND UXGA (15 fps)
- MONOCHROME
- HIGH SPEED TRIGGERING
- SQUARE PIXELS
- ANALOG OUTPUT
- COMMUNICATION: RS232C
- PARTIAL SCANNING
- COMPACT SIZE:
28(W) x 28(H) x 46.3(D) mm



ANALOG B/W PROGRESSIVE SCAN

SXGA (1.3MP) & UXGA (2MP)



Models	STC-A152A	STC-A202A
Resolution:	SXGA (1.3 MegaPixel)	UXGA (2 MegaPixel)
Image Sensor:	1/2" Interline CCD: ICX205AL	1/1.8" Interline CCD: ICX274AL
Signal Format:	Monochrome Progressive Analog	
Frame Rate:	15, 19 fps	15 fps
Active Picture Element:	1360 (H) x 1040 (V)	1620 (H) x 1220 (V)
Chip Size (mm):	7.60(H) x 6.20(V)	8.50 (H) x 6.80 (V)
Cell Size (µm):	4.65 (H) x 4.65 (V)	4.4 (H) x 4.4 (V)
Vertical Frequency:	19.3Hz @ 19 fps	15.3164Hz
Horizontal Drive Freq:	36.8181MHz	
Horizontal Frequency:	20.57kHz @ 19 fps	19.176kHz
Scanning Method:	Full Scan, Partial Full Scan, Partial Scan (1/2, 1/4, Variable), Binning, Binning Partial Scan (1/1, 1/2, 1/4, Variable)	
Sync System:	Internal / External	
Communication:	RS232 via 12pin connector	
Trigger Shutter:	Edge Preset: V Rest, Non-Reset Pulse Width Trigger: V Reset, Non-Reset	
Shutter Speed:	- Dip Switch - Communication	
Minimum Illumination:	0.16 Lux @ F1.2, 50 IRE	0.07 Lux @ F1.2, 50 IRE
Gain:	Manual (0 to 27 dB)	
S/N Ratio:	56dB (Gain 0dB)	
Gamma:	1.0 / 0.45	
Lens Mount:	C-Mount	
Video Output:	1 V p-p, 75Ω DC Coupling (0V Clamp)	
Optical Filter:	No IR cut filter	
Optical Center Accuracy:	Position accuracy in H and V direction: +/- 0.31mm	
Shock and Vibration:	Vibration: 10G (20 to 200Hz) Shock: 70G (3 directions, 3 times each)	
Power:	DC 12V +/- 10%	
Power Consumption:	< 2.2 W, 183mA	< 3.0 W, 250mA
Operating Temperature:	-5°C ~ 45°C (23°F ~ 113°F)	
Storage Temperature:	-30°C ~ 65°C (-21.9°F ~ 149°F)	
Dimensions:	28 (W) x 28 (H) x 46.3 (D) mm (1.1" x 1.1" x 1.8")	
Weight:	52g (1.8 oz.)	

Sentech America
1345 Valwood Parkway
Suite 320
Carrollton, TX 75006
USA

Toll Free:
(877) 736-8324
Telephone:
(972) 481-9223
Fax:
(972) 481-9209

STC-SS1200 Series

Progressive Scan Cased Cameras

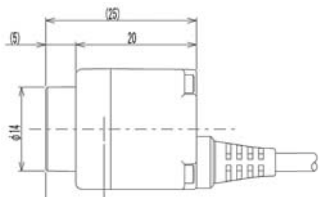


STC-SS1200 (VGA, 60 fps, 0.3MP)
STC-SS1200-90 (VGA, 90 fps, 0.3MP)

The STC-SS1200 series was designed for high speed applications where size and weight are extremely critical. The remote head design features a super small, super light head so that a minimum amount of inertia is generated during very fast stop/start XYZ type movements. The STC-SS1200 series offers high speed triggering with 60 or 90 fps analog output, utilizing a VGA progressive scan format.

FEATURES

- VGA (60 OR 90 fps)
- MONOCHROME
- 1/3" IT CCD
- ANALOG OUTPUT
- HIGH SPEED TRIGGERING
- VARIOUS HEAD CABLE ENTRY CONFIGURATIONS
- SUPER COMPACT HEAD:
20(W) x 20(H) x 25(D) mm



Remote Head

REMOTE HEAD B/W

PROGRESSIVE SCAN

VGA (0.3MP, 60 or 90 fps)



Models	STC-SS1200	STC-SS1200-90
Resolution:	VGA (0.3 MegaPixel)	
Image Sensor:	1/3" Interline CCD: ICX424AL	
Signal Format:	Monochrome Progressive Analog	
Frame Rate:	60 fps	90 fps
Active Picture Element:	648 (H) x 494 (V)	648 (H) x 494 (V)
Chip Size (mm):	5.79(H) x 4.89(V)	5.80 (H) x 4.92 (V)
Cell Size (µm):	7.4 (H) x 7.4 (V)	4.65 (H) x 4.65 (V)
Vertical Frequency:	59.94Hz	89.91Hz
Horizontal Drive Freq:	24.5454MHz	36.818MHz
Horizontal Frequency:	31.4685kHz	47.203kHz
Scanning Method:	Full Scan, Partial Full Scan, Partial Scan (1/2, 1/4), Binning, Binning Partial Scan (1/1, 1/2, 1/4)	
Sync System:	Internal / External (HD/VD) Automatically	
Trigger Shutter:	Edge Preset: V Rest, Non-Reset, Sync Reset, Restart-Reset Pulse Width Trigger: V Reset, Non-Reset, Sync Reset, Restart-Reset	
Shutter Speed:	1/60 ~ 1/20,000 (8 Steps)	1/90 ~ 1/10,000 (8 Steps)
Minimum Illumination:	1.82 Lux @ F1.2, 50 IRE	1.64 Lux @ F1.2, 50 IRE
Gain:	AGC/Manual (4 to 24 dB)	
S/N Ratio:	52dB (Gain 0dB)	
Gamma:	0.45/1.0	
Lens Mount:	Special Mount (Male 10.5 Female P0.5)	
Video Output:	1Vp-p, 75Ω	
Optical Filter:	No IR cut filter	
Optical Center Accuracy:	Position accuracy in H and V direction: +/- 0.31mm	
Shock and Vibration:	Vibration: 10G (20 to 200Hz) Shock: 70G (3 directions, 3 times each)	
Power:	12V DC	
Power Consumption:	2.64W, ≤ 220 mA	
Operating Temperature:	-10°C ~ 45°C (14°F ~ 113°F)	
Storage Temperature:	-30°C ~ 60°C (-22°F ~ 140°F)	
Dimensions:	CCD Head: 20 (W) x 20 (H) x 25 (D) mm (0.8" x 0.8" x 11.85") CCU: 110 (W) x 80 (H) x 28 (D) mm (4.4" x 1.12" x 3.2") Cable: 600 mm (24")	
Weight:	CCD Head: 80g (2.82 oz.) CCU: 150g (5.33 oz.)	

Sentech America
1345 Valwood Parkway
Suite 320
Carrollton, TX 75006
USA

Toll Free:
(877) 736-8324
Telephone:
(972) 481-9223
Fax:
(972) 481-9209

Accessories

Cables

12W-0.45
12W-02, 03, 05

Power Supplies

45-601
PWR-PSI450-6
PWR-PSISP-6

Connectors

Hirose: HR10-10P-12S
Hirose: HR10-10R-12P

Lenses

Various C-Mount Lenses
Various CS-Mount Lenses
Various Telecentric Lenses

Lens Mount

C-Adapter

STC-33/83

Progressive Scan Board Cameras



Trigger
Shutter

STC-33 (VGA, 30, 60 fps, 0.3MP)
STC-83 (XGA, 30 fps, 0.8MP)

The STC-33/83 series are full featured, low cost, VGA (STC-33), XGA (STC-83) progressive scan machine vision board camera with a 1/3" monochrome CCD. These cameras provide an analog output signal and feature high speed triggering capability. The VGA (STC-33) provides 30 or 60 fps and the XGA (STC-83) provides 30 fps.

FEATURES

- VGA (30, 60 fps) & XGA (30 fps)
- MONOCHROME
- 1/3" IT CCD
- ANALOG OUTPUT
- HIGH SPEED TRIGGERING
- PARTIAL SCANNING
- SQUARE PIXELS
- COMPACT SIZE:
30(W) x 30(H) x 32(D) mm

ANALOG B/W PROGRESSIVE SCAN VGA (0.3MP) & XGA (0.8MP)



Models	STC-33	STC-83
Resolution:	VGA (0.3 MegaPixel)	XGA (0.8 MegaPixel)
Image Sensor:	1/3" Interline CCD: ICX424AL	1/3" Interline CCD: ICX204AL
Signal Format:	Monochrome Progressive Analog	
Frame Rate:	30, 60 fps	30 fps
Active Picture Element:	648 (H) x 494 (V)	1024 (H) x 768 (V)
Chip Size (mm):	5.79(H) x 4.89(V)	5.80 (H) x 4.92 (V)
Cell Size (µm):	7.4 (H) x 7.4 (V)	4.65 (H) x 4.65 (V)
Vertical Frequency:	29.97 / 59.94Hz	29.18Hz
Horizontal Drive Freq:	12.272 / 24.545MHz	14.75MHz
Horizontal Frequency:	15.734 / 31.468kHz	23.228kHz
Scanning Method:	Full Scan, Partial Full Scan, Partial Scan (1/2, 1/4), Binning, Binning Partial Scan (1/1, 1/2, 1/4)	
Sync System:	Internal / External (HD/VD) Automatically	
Trigger Shutter:	Pulse Width Trigger Edge Preset Trigger (10 Steps)	
Electronic Shutter:	1/30 ~ 1/16,000 (10 steps) 1/60 ~ 1/32,000 (10 steps)	1/30 ~ 16,000 (10 steps)
Minimum Illumination:	0.14 Lux @ F1.2, 50 IRE	0.17 Lux @ F1.2, 50 IRE
Gain:	AGC/Manual (4 to 24 dB)	
S/N Ratio:	50dB (Gain 0dB)	
Gamma:	1.0	
Lens Mount:	CS Mount	
Video Output:	1Vp-p 75Ω	
Shock and Vibration:	Vibration: 10G (20 to 200Hz) Shock: 70G (3 directions, 3 times each)	
Power Supply:	DC 12V +/- 10%	
Power Consumption:	1.44W, 120 mA	1.56W, 130mA
Operating Temperature:	-10°C ~ 45°C (14°F ~ 113°F)	
Storage Temperature:	-30°C ~ 60°C (-22°F ~ 140°F)	
Dimensions:	30 (W) x 30 (H) x 32 (D) mm (1.12" x 1.12" x 1.28")	
Weight:	27g (0.95 oz.)	

