

Model: RT-S285I-0

Specifications V1.2

Subject to change without notice January 2009

Retriever Technology

Intensified CCD Cameras

General Description

Retriever Technology's RT-S285I-0 intensified CCD camera delivers unprecedented performance in light starved applications including day/night surveillance, homeland & border security, biochip readers, video microscopy and more. The camera provides a 1392 x 1040 pixel progressive scan readout digitized to 14 bits at 15 frames/second. The camera provides a wide range of exposure times, from 20 microseconds to several minutes, and provides on-board spatial and temporal filtering as well as programmable off-chip gain to further improve the image quality over a broad range of lighting conditions.

Features

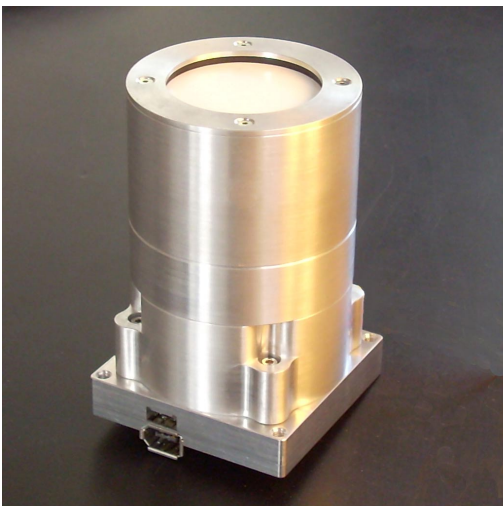
- ✓ 1392 x 1040 resolution, 15fps
- ✓ Ultra-low light sensitivity with intensifier gain of 1x – 10,000x
- ✓ 14-bit digitization
- ✓ Interline Transfer for on-chip electronic shuttering
- ✓ IEEE 1394A FireWire output

Applications

- ✓ Night Vision
- ✓ Surveillance
- ✓ Homeland and Border Security
- ✓ Low Light Video Microscopy
- ✓ Bio Applications

Camera Specifications

Sensor	Sony ICX285 ExView HAD Interline CCD
Effective Pixels	1392 x 1040
Pixel Size	6.45 μm x 6.45 μm
Full Well	24,000 e
Read Noise	9 e
Frame Rate	15 fps max
Linearity	< 1%
Binning	Up to 8x8
Lens Mount	C-Mount. ¹
Digital Signal Output	14 bit IEEE 1394A FireWire
Gain	1.5 e/ADU. 36 dB variable
Electronic Shutter	20 μsec min. - 500 sec max.
Exposure Modes	Free run, asynch trigger, LVTTTL, TTL
CDS	Yes
Dark Current	9 e/pixel/sec ²
Supply Voltage	Via FireWire connector. 12 V nom.
Power Consumption	1.8 W nom.
Mass	0.10 kg
Dimensions	60 x 60 x 90 mm (W x H x D) ³
Software	Provided. Full camera control. Source code available.
Warranty	One Year



¹ Custom mounts available.

² @ 25 °C

³ With optional 2.2:1 input taper. (40 mm diameter window. As shown.) 50 mm height with standard intensifier front end.



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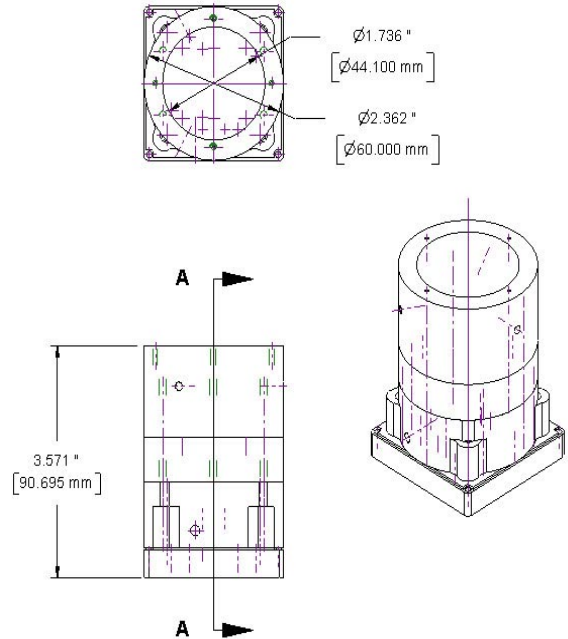
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Intensifier Specifications - RT-S285I-0

Intensifier	Phonix XX1450 VZ
Type	18/18 MCP-based Gen II non-inverting ⁴
Input Diameter	17.5 mm
Photocathode	S20
Phosphor	P43
Luminance Gain (@ $V_c = 0$ V)	3180 cd/m ² /lx
E.B.I.	0.01 μ lux
Resolution	36 lp/mm minimum
Gating	Down to 100 ns
Supply Voltage	2.7 VDC Nominal
BSP	Bright Source Protection operation on/off
Operation	Continuous or Gated
Operating Temperature	-20 °C - +50 °C

Package Drawing



About Retriever Technology

Retriever Technology has been making cameras and high end imaging solutions since 1998. Retriever Technology's cameras combine the low-noise and high resolution needed for true analytical measurements with the speed demanded in today's medical, commercial/industrial, aerospace and military imaging systems.

Retriever Technology offers standard products as well as fully customized designs to meet the needs of a broad range of markets. Applications include machine vision inspection, medical imaging, homeland security, and high resolution scanning. Cooled and uncooled, slow readout or high frame rate: a broad variety of cameras are available for demanding end users.

⁴ A variety of photocathode materials including Gen III intensifiers are available.

