

High speed gated intensified camera

Models 222 and 222-UV

The Cordin Model 222 gated, intensified multi-channel CCD camera offers the best image quality of any multi-channel intensified camera available. It is a powerful and easy to

use tool for studying events in the nanosecond to millisecond time domain. The camera system is based around a pellicle mirror beam splitter optical system that distributes the image from a single objective lens to eight separate imaging channels without vignetting, parallax or ghosting (-UV model uses a pyramid beam splitter which does incur some parallax). Each channel has an MCP device fiber-optically coupled to a 4MPixel CCD, and

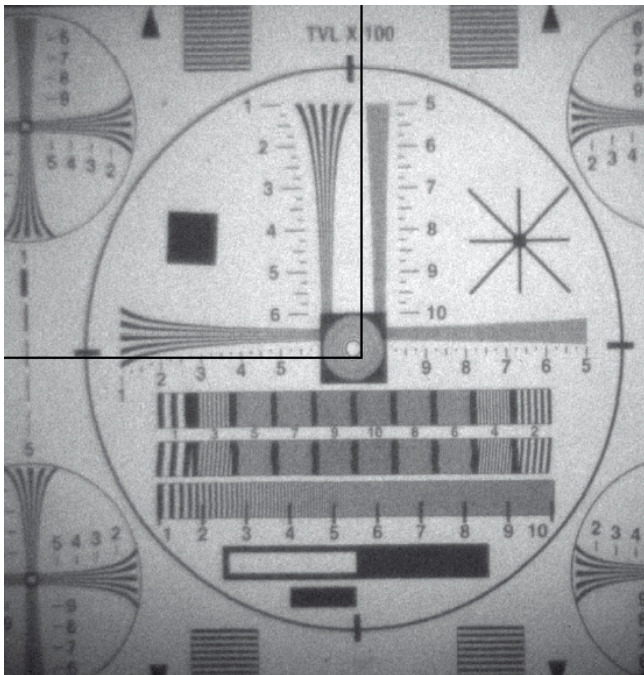
can capture two images per channel, for a total of 16 images captured by the system. Time between exposures on adjacent channels can be as short as 0 nanoseconds or as long as 10 milliseconds (adjustable in 250 ps increments). Time between exposures on a single channel can be as short as one microsecond. Operation of the camera is controlled via a Gigabit Ethernet interface with user-friendly software that allows the user to set timing, sequence, gain and triggering. 14 bit images can be saved as TIFF or RAW files, and any 8 bit subsampled image can be saved as BMP or JPG files. Camera settings can also be saved and reloaded later to duplicate a set-up.

The 222 is a thoroughly new design, building on Cordin's 20+ years of experience in this technology.



Features

- Very high image quality
- High resolution CCD, 2K x 2K pixels, 14 bit dynamic range
- Extremely short exposure time, down to 2.5 ns
- Very high sensitivity, enabling very short exposures in moderate light or microscope configurations
- Very high framing rate, Nanosecond interframe times (selectable from 0 ns to 10 ms in 250 ps steps)
- Independent control of gain, exposure time and time delay for each channel
- Display adjustment sliding scale to view 8 bit subsamples of full 14 bit images on the fly



Raw image of resolution chart at 5 ns exposure

Options

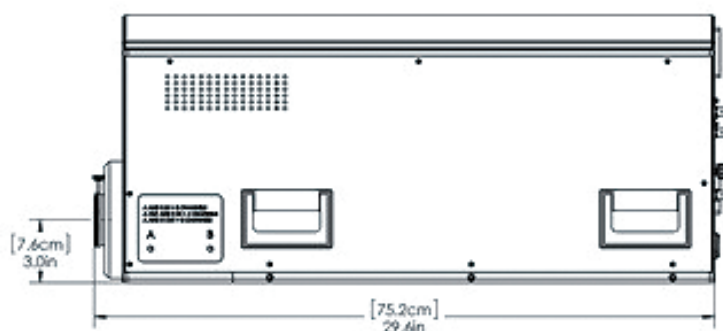
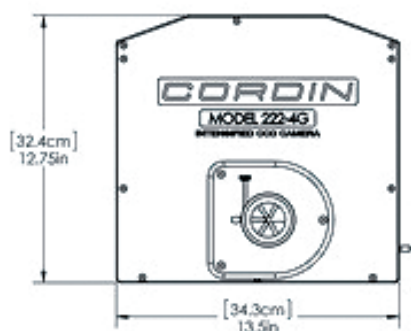
- Microscope integration
- Tele-focus macro objective lens
- Alternate photocathode materials for choice of wavelength range sensitivity
- UV configuration (model 222-UV) with 220 - 700 nm spectral range
- Modular Design: available with fewer channels, with option of adding channels later as an upgrade S20 Photocathode

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Specifications	
CCD	
Pixels	2048 x 2048
Device type	Full resolution progressive scan
Dynamic range	14 bit
Size	15.16 mm x 15.16 mm
Intensifier	
Device	18 mm Ø MCP
Photocathode	Super S25 (520 on -UV model)
Gain	up to 10,000:1
Shutter ratio	107:1
Grey scale	42 dB to 48 dB
Resolution	50 lp/mm
Optics	
Number of images	16 images on 8 channels
Objective lens	Nikon F mount (Pentax mount on -UV model,

Beam Splitter	Pellicle mirror system
Triggering and Interface	
Interframe times	0 ns to 10 ms in 250 ps steps with independent control of each frame
Exposure times	2.5 ns to 10 ms
System response	160 ns maximum
Jitter	±3 ns
Input triggers	Logic level, direct and isolated; analog and optical threshold
Outputs	Monitor, two programmable TTL outputs on common time base with images
Interface	USB 2.0



NOTE: Model 222-UV has alternate casing and dimensions. Contact Cordin for details.