HIGH SPEED GATED INTENSIFIED CCD CAMERA

Models 222, 222-UV

- 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, 1 ns interframe times (selectable from 0 ns to 10 ms in 1 ns 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

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 1 ns 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.

OPTIONS
Microscope integration / 20X and 50X microscopic lenses
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
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 (S20 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, lens not included)
- Beam Splitter: Pellicle mirror system (Pyramid on -UV model)

TRIGGERING AND INTERFACE
- Interframe Times: 0 ns to 10 ms in 1 ns steps with independent control of each frame
- Exposure Times: 2.5 ns to 10 ms in 1 ns steps
- System Response: 65 ns maximum
- Jitter: ±3 ns
- Input Triggers: Logic Level, direct and isolated; Analog and Optical with threshold
- Outputs: Monitor, two programmable LVDS outputs on common time base with images
- Interface: Gigabit Ethernet for camera

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