

# CORDIN

S C I E N T I F I C I M A G I N G

## HIGH SPEED GATED INTENSIFIED CCD CAMERA

### Model 222-4G

- **Very high image quality**
- **High resolution CCD**, 2K x 2K pixels, 12 bit dynamic range
- **Extremely short exposure time**, down to 5 ns
- **Very high sensitivity**, enabling very short exposures in moderate light or microscope configurations
- **Very high framing rate**, minimum interframe times equivalent to 200 million frames per second
- **Independent control of gain**, exposure time and time delay for each channel
- **Display adjustment** sliding scale to view 8 bit subsamples of full 12 bit images on the fly



The **Cordin Model 222-4G** 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 beam splitter optical system that distributes the image from a single objective lens to eight separate imaging channels without vignetting, parallax or ghosting. 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 five nanoseconds. Time between exposures on a single channel can be as short as one microsecond. Operation of the camera is controlled via USB 2.0 with user-friendly software that allows the user to set timing, sequence, gain and triggering. 12 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 222-4G is a thoroughly new design, building on Cordin's 15 years of experience in this technology.

#### OPTIONS

Microscope integration

Tele-focus macro objective lens

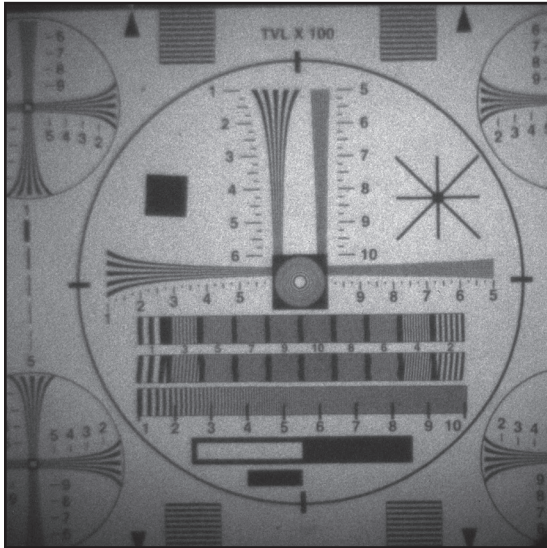
Alternate photocathode materials for choice of wavelength range sensitivity

UV configuration

Available with fewer channels at a lower cost, with option of adding channels later as an upgrade

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SCIENTIFIC IMAGING



Raw Image of Resolution Chart at 5ns exposure

## SPECIFICATIONS

### CCD

Pixels	2048 x 2048
Device Type	Full resolution progressive scan
Dynamic Range	12 bit

### INTENSIFIER

Device	18 mm Ø MCP
Photocathode	Super S25
Gain	10,000 watts/watt
Shutter Ratio	107:1
Grey Scale	42 dB to 48 dB
Resolution	40 lp/mm

### OPTICS

Number of Images	16 images on 8 channels
Objective Lens	Nikon F mount
Beam Splitter	Pellicle mirror system

### TRIGGERING AND INTERFACE

Interframe Times	5 ns to 10 ms in 5 ns steps with independent control of each frame
Exposure Times	5 ns to 1 ms in 5 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	USB 2.0

