

High speed gated intensified CCD camera

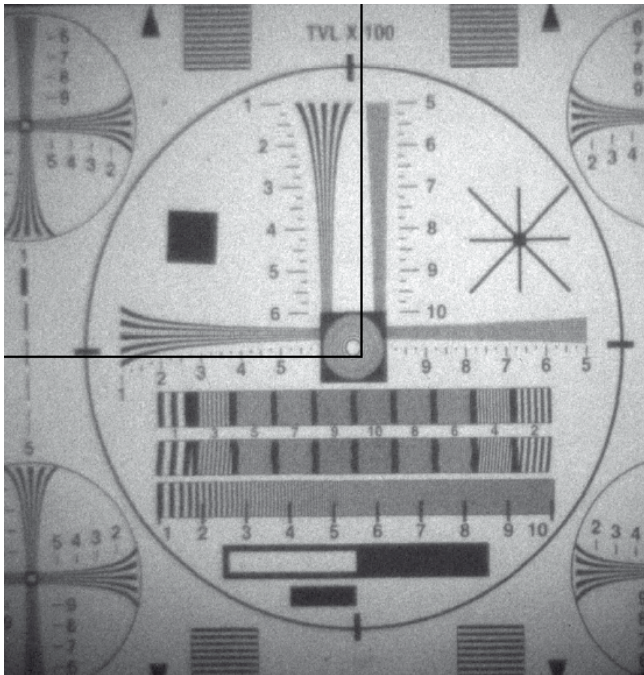
Model 214-8

The Cordin Model 214-8 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 four 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 eight 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 214-8 is a thoroughly new design, building on Cordin's 15 years of experience in this technology for improved performance, stability and reliability.



- 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



Raw Image of Resolution Chart at 5ns exposure

Options

- Model 212-4 – Two channel configuration for four frames, upgradable
- Microscope integration
- Tele-focus macro objective lens
- Alternate photocathode materials for choice of wavelength range sensitivity
- UV configuration

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| Specifications CCD | |
|--------------------|----------------------------------|
| Pixels | 2000 x 2000 |
| 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 | 8 images on 4 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 |

