

CORDIN

SCIENTIFIC IMAGING

HIGH SPEED GATED INTENSIFIED CCD CAMERA

Model 214-8

- **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 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.

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

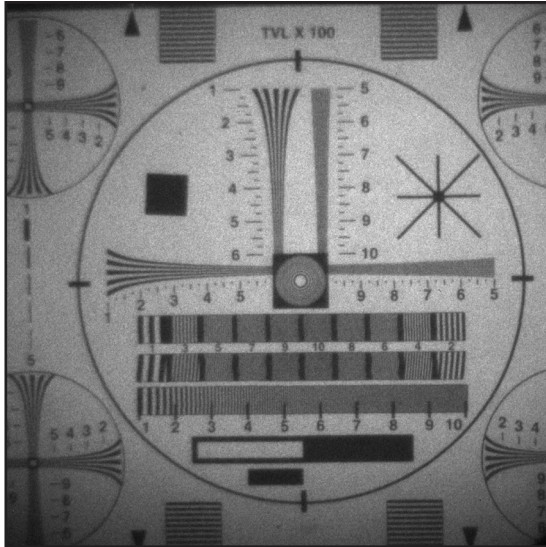
UV configuration

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Raw Image of Resolution Chart at 5ns exposure

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 |

