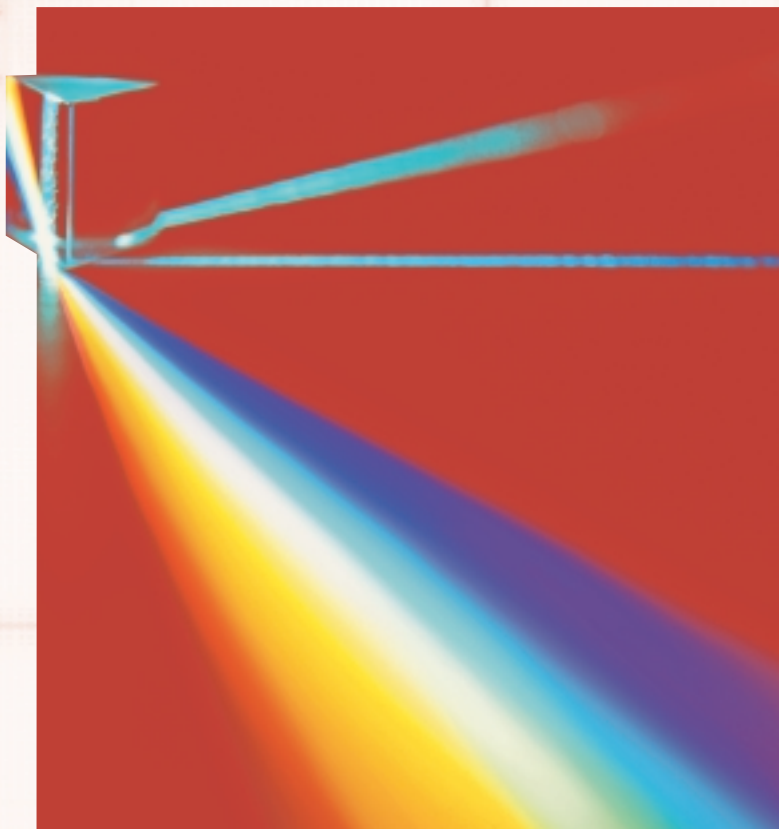


SCIENTIFIC SENSORS

- > HIGH SENSITIVITY
- > FRAME TRANSFER DEVICES
- > SQUARE PIXEL FORMAT
- > NON-ANTIBLOOMED FORMAT
- > IDEAL APPLICATIONS:
 - MICROSCOPY
 - SPECTROSCOPY
 - MACHINE VISION
 - X-RAY IMAGING



The next **revolution** in imaging is here



The range of high sensitivity scientific sensors from Marconi, use a novel output amplifier circuit that is capable of operation at very low light levels. This output amplifier gives the advantage of very low noise, typically <1eRMS, at high pixel rates and may be switched from the very high gain mode to normal operation by control of the operating voltages (details should be discussed with Marconi Applied Technologies).

Each of the devices below allows the use of an alternative, conventional, low noise output circuit for which the expected noise (with CDS) is <3eRMS @ 50kHz and <6eRMS @ 1MHz.

The serial register dump gate allows fast line dumping to facilitate windowing.

The sensor operates in the inverted mode, however to maximize dynamic range the option of non-IMO operation may be requested should the user wish to suppress dark current by running at low temperatures.

Full well capacity is maximized by the omission of antibloom structures, although provision has been made for the inclusion of shielded antiblooming drains if required.

Spectral response of these sensors is 400 – 1060 nm.

This makes the sensor well suited for scientific imaging where the illumination is limited, or dynamic resolution is required at very low light levels.

CCD 79

- 1024(H) x 1024(V) pixel image area
- Frame transfer device

- 13 x 13 μm 4-phase pixels
- Readout rates to >10MHz
- 100% active area

- Non-antibloomed format
- Serial register dump gate

CCD 86

- 640(H) x 512(V) pixel image area
- Frame transfer device

- 14 x 14 μm 4-phase pixels
- Readout rates to >5 MHz
- 100% active area

- Non-antibloomed format
- Serial register dump gate

CCD 87

- 512(H) x 512(V) pixel image area
- Frame transfer device

- 16 x 16 μm 4-phase pixels
- Readout rates to >10 MHz
- 100% active area

- Non-antibloomed format
- Serial register dump gate

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