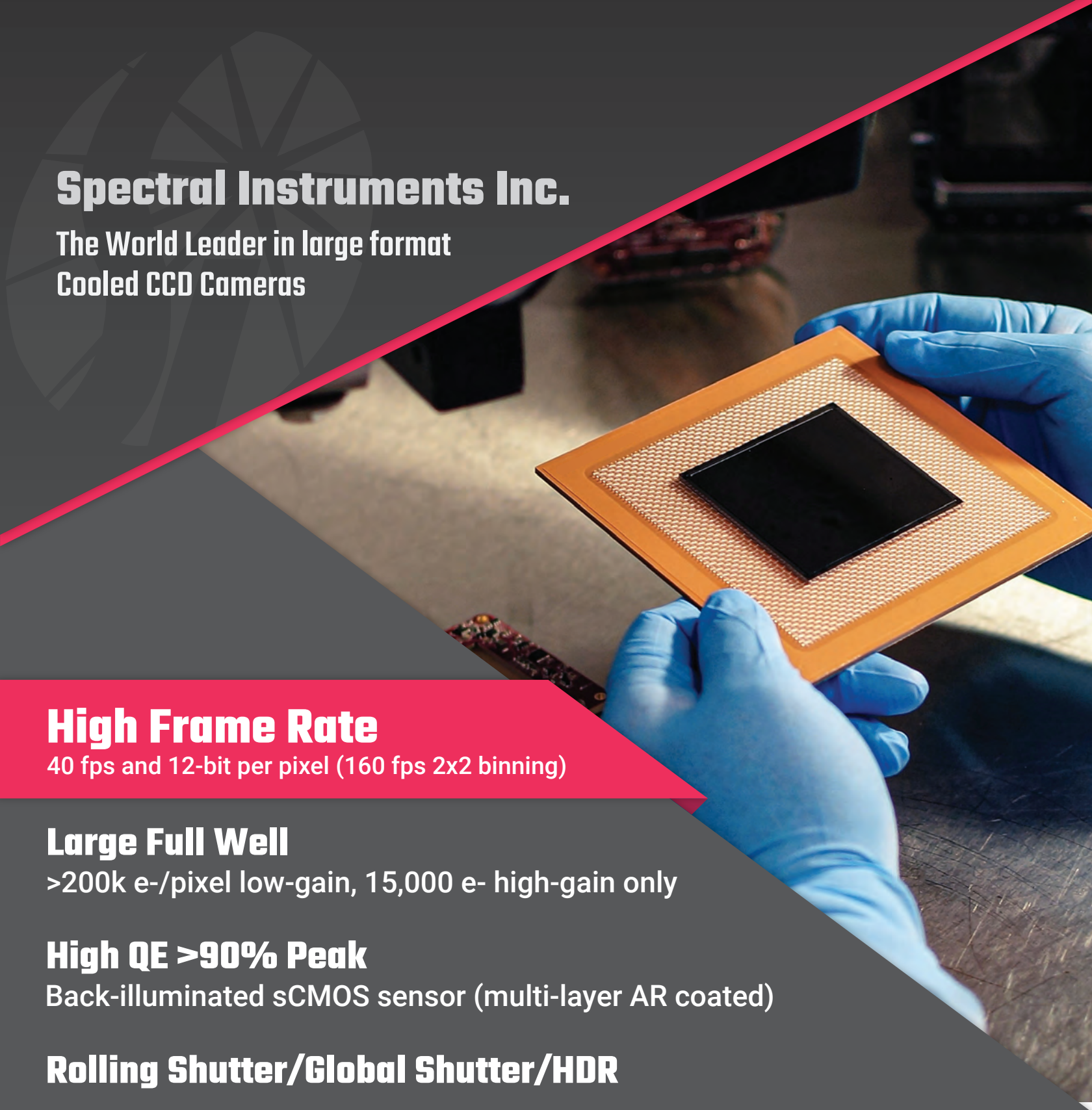
LARGE FORMAT 8K x 8K sCMOS

Spectral Instruments Inc.

The World Leader in large format
Cooled CCD Cameras



High Frame Rate

40 fps and 12-bit per pixel (160 fps 2x2 binning)

Large Full Well

>200k e-/pixel low-gain, 15,000 e- high-gain only

High QE >90% Peak

Back-illuminated sCMOS sensor (multi-layer AR coated)

Rolling Shutter/Global Shutter/HDR

TE Cooling to -25c

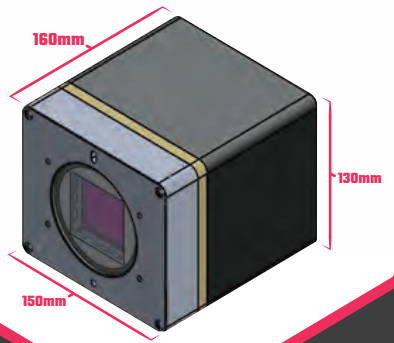
Low dark current of 0.8 e-/pixel/sec

Spectral Instruments Inc.

The World Leader in large format Cooled CCD Cameras now brings you CMOS Cameras

Announcing a new camera system for demanding optical imaging applications such as astronomy, high-energy physics, low level biological imaging, and all physical sciences. Featuring an 8K x 8K high-speed sCMOS sensor; back-thinned and AR coated. The industry-leading large format high quantum efficiency sCMOS sensor offers the highest readout speeds currently attainable and supports true simultaneous HDR and compressive sensing readout modes. The sCMOS sensor's low temperature operation reduces dark current and optimizes all sensor features, including delivery of the full sensor data-rate in single frame, burst or continuous stream modes.

Large Format	8192 X 8192 6.5μ^2 pixels (53mm x 53mm active area)
Multiple Readout Modes	HG only, LG only or HDR
High Dynamic Range	Low noise readout, <10 e-



Performance & Summary Specifications

Pixel Pitch	6.5 µm
Pixel Array Dimensions	8192 × 8192 | 67.1 megapixel
Total Active Area	53 × 53 mm
Sensor Design	Custom proprietary CMOS sensor | Back Illuminated | On-Chip Correlated- double sampling (CDS) | Low noise
Sensor Cooling	Peltier cooling | Programmable and regulated to ±0.1 °C
Frames Per Second (FPS)	User-controllable | Maximum framerate scales with binning, y-dimension, & readout mode, see associated documentation
Binning	Hardware 2×-binning | Flexible software binning
Readout Modes	Rolling shutter | Global shutter | HDR | Compressive Sensing
Read Noise	< 10 electrons
Dark Current	0.8 e-/pixel/sec @ -25C
PRNU	< 5%
Full Well	15,000 e- high-gain only, >200,000 e- low-gain / HDR
Quantum Efficiency	>90% peak
Provided Equipment	Camera head | Remote power supply | Capture card | Data cables | Water fittings
Options	Remote triggering, slave or master

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