



NTAS/08/2017

PHOTONIC SCIENCE NEWS . . .

Jost's has been partnering growth over a range of business verticals across the country for over a hundred years now.

Keeping in mind the requirements of research to design mechanisms that have been carefully built from nanoscale components, Jost's has tied up with leading global companies for products like CCD / ICCD Cameras, CMOS Cameras, High Speed Cameras etc. We are glad to introduce our new products, scientific camera for fluid flow diagnostics and research in fluid in combustion, chemiluminescence, from Photonic Science Limited, UK in our product line.

PHOTONIC SCIENCE LIMITED was formed in 1985 for the purpose of designing and developing scientific camera systems. The company is a high technology independent manufacturer of scientific detector systems covering the range of visible to x-ray and neutron detection. The camera technology offered is wide ranging, from CCD, EMCCD, CMOS to image intensified systems. Their products are used in scientific, industrial, medical and military activity domains.

▪ Cooled High Resolution Intensified Digital CCD camera :

The CoolView IDI series features a high resolution megapixel pixel CCD fibre optically coupled to a specially- developed high resolution image intensifier. The spectral response can be optimized for red, green or blue light down to UV peak response. The intensifier offers luminous gain in excess of 4,000:1 with very fast shuttering options down to 5ns with 10kHz repetition rate.



Cooled High Resolution Intensified Digital CCD

The camera can be used for two dimensional imaging of plasma / combustion chambers or combustors as well as for spectroscopic applications where the camera can sustain fast one dimensional line scan acquisition rate as well. Up to 16 cameras can be synchronized together in order to deliver an ultra-fast sequence by carefully adjusting the delay on the images 2 dimensional imaging for standard spectroscopy applications.

Applications:

- Fluorescence lifetime imaging
- Particle Image Velocimetry (PIV)
- Spray imaging & Combustion diagnostics
- Flame analysis & Fusion plasma
- Bioluminescence / chemiluminescence

▪ Cooled High Resolution Genicam compliant sCMOS second generation Camera for visible spectrum (350nm to 1100nm)

PSL is offering a new range of scientific CMOS (sCMOS) Cameras with different resolutions of 1280x1024, 1920x1080 and 2048x2048 pixels adapted to high end needs of industrial and scientific end users. Selection of high responsivity sCMOS sensors with intrinsic noise floor down to Single Electron enables optimum photonic collection with best possible signal to noise ratio. The camera offers very high Quantum Efficiency. It is capable of delivering 30 frames per second using Gigabit Ethernet interface enabling very fast acquisition. TEC Cooling down to -30 degrees C makes very stable image acquisition possible.



Full HDTV Low Noise cooled sCMOS Camera

Applications:

1. Astronomy & Single molecule imaging
2. Fluorescence imaging & Chemiluminescence
3. Confocal microscopy / cell screening
4. Cell motility / live cell recording
5. TIRF / Super resolution microscopy

▪ High Resolution InGaAs / SWIR camera

The high resolution SWIR camera can be used for a very wide variety of applications including laser beam profiling, semiconductor inspection, hyperspectral imaging, online process control, Low-light level imaging, and screening solar cells. The camera captures faint electroluminescence (EL) and photoluminescence (PL) emissions from individual photovoltaic cells that are directly proportional to their efficiency.



PSL high resolution SWIR cameras are supplied with state of art SWIR optics which will deliver superior resolution / contrast modulation and lower distortion than conventional NIR optics that are used with conventional CCD cameras.

A selection of high responsivity InGaAs sensors, combined with low noise electronics and deep cooling, enables optimum photonic collection with best possible signal to noise ratio. Special read whilst expose mode allows 100% shutterless duty cycle and high sensitivity operation in low light conditions.

Applications:

1. Semiconductor failure inspection & Astronomy
2. Deep tissue imaging & Temperature furnace monitoring
3. Multispectral imaging and spectroscopy
4. Singlet oxygen imaging & Single-walled nanotubes (SWNTs)
5. Photoluminescence imaging of photovoltaic material
6. Laser Profiling/telecom



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