

# Spectralize

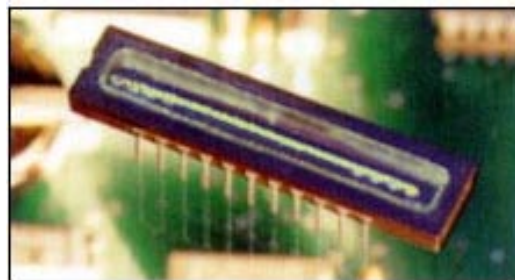
## For far ultraviolet CCD imaging

**Spectralize** is a new coating developed by AST to extend and improve the sensitivity of photodiode linear arrays, CMOS devices and CCDs into the UV and far UV wavelengths. The coating increases the spectral range of front illuminated CCDs from 350 nm down to 200 nm and significantly improves the quantum efficiency of the array in this wavelength range. At wavelengths above 400 nm the coating becomes virtually transparent and has no effect on the quantum efficiency of the CCD in the visible and IR part of the spectrum.

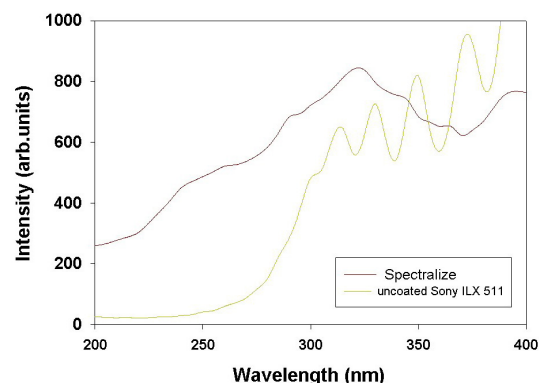
AST's flexible coating service provides a range of options including supply and coating of arrays, coating only, fitting new high transmission UV windows and full QC testing. Spectralize provides a superior alternative to anti-reflection coatings which can also be used to extend the UV sensitivity on back-illuminated CCDs.

- **New enhanced coating provides high sensitivity detection at far UV wavelengths**
- **Improved signal to noise**
- **High quality images acquired down to 200 nm**
- **Prompt delivery – common linear arrays held in stock**
- **Optional non reflecting, high transmission UV windows can be fitted**
- **Flexible coating service – select the options you require**

### Spectralize coated linear array



### Spectral response of Spectralize coated linear array in the UV enhanced region.



## Technical Specification

### Characteristics of Spectralize

Optical properties	
Excitation at wavelength < 400 nm	Emission at 540nm to 580 nm
Excitation at wavelength > 450nm	Transparent

### Services Available:

<ul style="list-style-type: none"> <li>• CCD or CMOS Array coating</li> </ul>
<ul style="list-style-type: none"> <li>• Supply and coat Linear and 2D arrays</li> </ul>
<ul style="list-style-type: none"> <li>• High Transmission UV window</li> </ul>
<ul style="list-style-type: none"> <li>• Full QC and functionality testing</li> </ul>

### Typical linear arrays supplied and coated

Manufacturer	Description
Sony	ILX 511
Sony	ILX526A
Sony	ILX 554B
Toshiba	TCD1201D

## Application Areas

**Spectralize** high performance coatings for extending the sensitivity of silicon based imaging into far UV wavelengths are used in a wide variety of scientific instrumentation. These include: UV spectrophotometers, photometers, digital cameras for microscopes and general imaging systems.

These are used in multiple applications including:

- **Materials research – metallurgical and spark analysis, QA/QC**
- **Astronomy – space observation**
- **Optical emission spectroscopy**
- **Environmental issues –eg pollution monitoring, marine biology**
- **Basic research – chemistry, biochemistry**

## Continuous Development

AST is continually developing technologies to meet the ongoing advances in CCD imaging research. New coatings are under development and AST will be launching a further range later in the year.



In the interest of product development, Applied Scintillation Technologies reserve the right to make alterations to any of its product range.

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