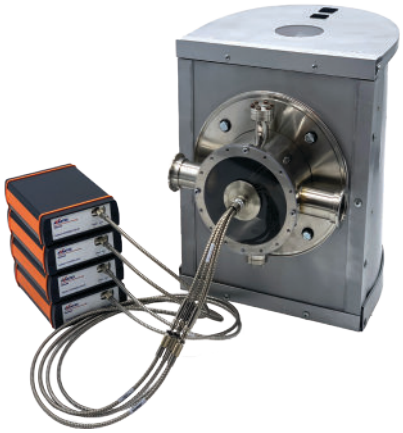
Plasma OES Configurations

Data Sheet

Optical Emission Spectroscopy

Plasma measurements generate numerous spectral peaks, requiring precise separation. Avantes offers a cost-effective solution with its modular, multi-channel design, providing superior performance compared to traditional OES systems.



Key Features:

Multi-channel array: Each instrument is fine-tuned for a specific wavelength range, ensuring high resolution.
Fiber optic connectivity: Instruments are connected via fiber optics, converging at a single collection terminal
Modular design: Flexible setup options tailored to meet diverse application needs.

Spectrometer Model Recommendations

StarLine Instruments
AvaSpec-VARIUS™
AvaSpec-ULS4096CL-EVO

Compactline Instruments
AvaSpec-NEXOS™
AvaSpec-Mini-NIR

Fibers Optics and Collection

Fiber Optics
Multi-Furcated Fibers
Multiple Jacketing Options

Collection Accessories
Vacuum Feedthroughs
Collimating Lenses

Multi-Channel Housing Configurations Examples

Dual Channel Housing
For ULS Spectrometers

4-Channel Desktop Housing
for ULS Spectrometers

8-Channel Rackmount for
ULS Spectrometers

Single Channel Configurations

Broadband Example			
Grating	**Spectral Range**	**Resolution w/ 10µm slit**	**Resolution w/ 25µm slit**
300 line/mm UA or VA	200-1100nm or 300-1100nm	2048: 1.0nm; 4096: 0.50-0.70nm	2048: 1.4nm; 4096: 1.20-1.30nm

UV/VIS Example *Using 'off-menu' L2 Grating			
Grating	**Spectral Range**	**Resolution w/ 10µm slit**	**Resolution w/ 25µm slit**
500 line/mm L2	200-850nm	2048: 0.50-0.55nm; 4096: 0.36-0.41nm	2048: 0.8nm; 4096: 0.8nm

UV Onlu			
Grating	**Spectral Range**	**Resolution w/ 10µm slit**	**Resolution w/ 25µm slit**
1200 line/mm UC	200-450nm	2048: 0.20-28nm; 4096: 0.14-0.18nm	2048: 0.30nm; 4096: 0.30nm

Dual Channel Configurations

Broadband Full Range 200-1100nm				
	Grating	**Spectral Range**	**Resolution w/ 10µm slit**	**Resolution w/ 25µm slit**
Channel 1	600 line/mm UB grating	200-600nm	2048: 0.40-0.53nm; 4096: 0.30-0.36nm	2048: 0.7nm; 4096: 0.7nm
Channel 2	600 line/mm NB grating	600-1100nm	2048: 0.40-0.53nm; 4096: 0.30-0.36nm	2048: 0.7nm; 4096: 0.7nm

Targeted Range Example 320-909nm				
	Grating	**Spectral Range**	**Resolution w/ 10µm slit**	**Resolution w/ 25µm slit**
Channel 1	1200 line/mm VC grating	320-567nm	2048: 0.20-0.28nm; 4096: 0.14-0.18nm	2048: 0.30nm; 4096: 0.30nm
Channel 2	830 line/mm SI grating	565-909nm	2048: 0.32nm; 4096: 0.25	2048: 0.48nm; 4096: 0.48nm

Four-Channel Configuration Example

4-Channel Desktop Housing Example				
	Grating	**Spectral Range**	**Resolution w/ 10µm slit**	**Resolution w/ 25µm slit**
Channel 1	1200 line/mm UC grating	200-466nm	2048: 0.2-0.28nm; 4096: 0.14-0.18nm	2048: 0.30nm; 4096: 0.30nm
Channel 2	1200 line/mm VC grating	460-694nm	2048: 0.2-0.28nm; 4096: 0.14-0.18nm	2048: 0.30nm; 4096: 0.30nm
Channel 3	1200 line/mm NC grating	690-890nm	2048: 0.2-0.28nm; 4096: 0.14-0.18nm	2048: 0.30nm; 4096: 0.30nm
Channel 4	1200 line/mm NC grating	885-1050nm	2048: 0.2-0.28nm; 4096: 0.14-0.18nm	2048: 0.30nm; 4096: 0.30nm

Eight-Channel Configuration Example

4-Channel Desktop Housing Example				
	Grating	**Spectral Range**	**Resolution w/ 10µm slit**	**Resolution w/ 25µm slit**
Channel 1	2400 line/mm UE grating	200-319nm	2048: 0.09-0.13nm; 4096: 0.07-0.09nm	2048: 0.13-0.17nm; 4096: 0.13-0.15nm
Channel 2	2400 line/mm UE grating	315-418nm	2048: 0.09-0.13nm; 4096: 0.07-0.09nm	2048: 0.13-0.17nm; 4096: 0.13-0.15nm
Channel 3	2400 line/mm VE grating	415-501nm	2048: 0.09-0.13nm; 4096: 0.07-0.09nm	2048: 0.13-0.17nm; 4096: 0.13-0.15nm
Channel 4	2400 line/mm VE grating	496-566nm	2048: 0.09-0.13nm; 4096: 0.07-0.09nm	2048: 0.13-0.17nm; 4096: 0.13-0.15nm
Channel 5	2400 line/mm VE grating	562-617nm	2048: 0.09-0.13nm; 4096: 0.07-0.09nm	2048: 0.13-0.17nm; 4096: 0.13-0.15nm
Channel 6	1800 line/mm VD grating	615-718nm	2048: 0.10-0.18nm; 4096: 0.09-0.11nm	2048: 0.20-0.29nm; 4096: 0.18nm
Channel 7	1200 line/mm NC grating	715-906nm	2048: 0.20-0.28nm; 4096: 0.14-0.18nm	2048: 0.30nm; 4096: 0.30nm
Channel 8	1200 line/mm NC grating	900-1050nm	2048: 0.20-0.28nm; 4096: 0.14-0.18nm	2048: 0.30nm; 4096: 0.30nm