MountainSource Hyperchromator

A highly efficient monochromator for laser pumped plasma sources

The Hyperchromator is a high throughput monochromator designed for the ISTEQ XWS sources.
With fast optics, up to f/1.5, it efficiently collects the light directly from the small plasma spot of the light source without an entrance slit. This monochromator is optimized for monochromatic illumination applications where a tunable output from a point source is required. Additionally, white light output is available (zero order reflection).
The output port has been designed with a very flexible opto-mechanical interface.

This allows for a multitude of illumination or light coupling options using standard catalog components, rendering the integration of the Hyperchromator into your setup hassle free and straight-forward. Possible configurations include fiber coupling, collimated or free-beam output. The Hyperchromator is motorized and may be controlled via USB and an intuitive GUI. Options for external control include LabVIEW, Python and others – your inquiries are welcome!

Key Features

- Different configurations available
- Fast optics, up to f/1.5 for highest throughput
- Homogenous output distribution due to a proprietary design
- Etendue-matched to ISTEQ XWS-30
- Broad tunable range from DUV to NIR
- No input slit
- Built-In Shutter
- Easy to use Software, Windows GUI, LabView on request

Monochromator for laser pumped plasma light source

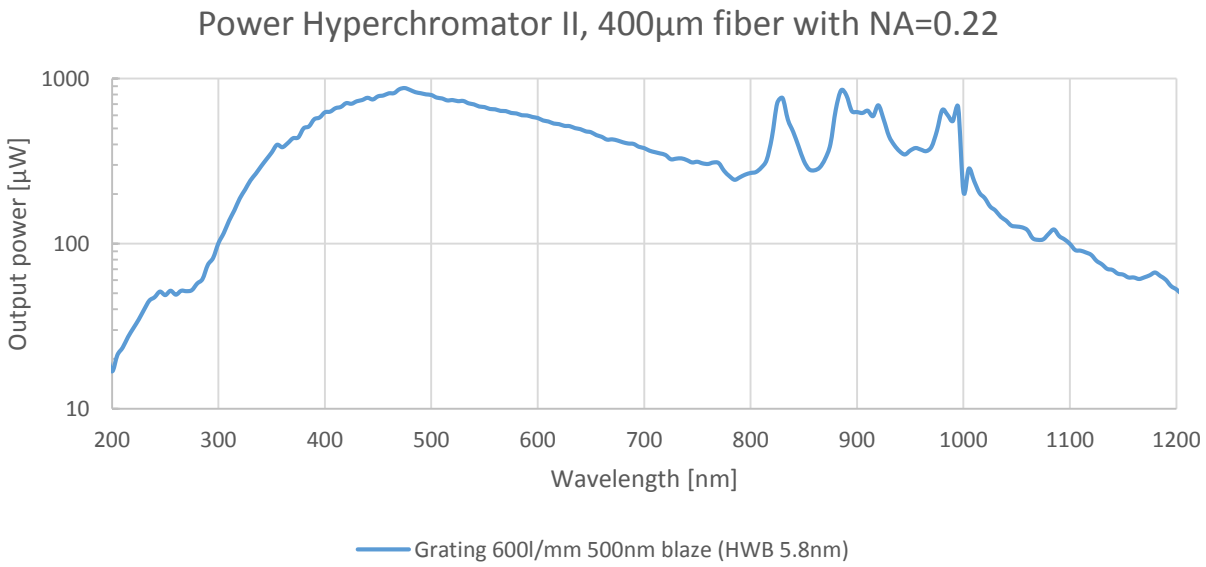
Datasheet

Technical data:

Optical Input	ISTEQ XWS-30 light source, directly coupled (optionally many other light sources)
Optical output	Fused silica fiber, SMA or FC, 100-600 µm core, or free beam output with adjustable slit or various collimator options. Spectral power monitoring on request.
Wavelength range	185 – 2500nm *
Aperture	f/1.5 or f/2, depending on required resolution and light output
Bandwidth	1-10 nm FWHM *
Output power	Up to 800 µW @ grating blaze wavelengths, 6nm bandwidth and 400 µm fiber
Reproducibility	Typ. 0.1 nm
Scanning speed	40-100 nm/s *
Control interface	USB/RS-232, LabVIEW™-based GUI, various external control options
Dimensions and Weight	47 x 45 x 25cm (WxDxH); 16kg

*depends on choice of grating and other requirements.

Our tunable light source consists of the Hyperchromator plus an ultra broadband, free-beam plasma source.
The XWS-30 laser pumped plasma light source from ISTEQ utilizes a diode laser to drive a high-intensity plasma, which emits light from 170 nm through visible into near infrared. It provides life-time an order of magnitude longer than traditional lamps. Its supreme stability allows to work without an input slit.



About us

Mountain Instruments is a brand of Mountain Photonics GmbH, a well established distribution company located in Landsberg, Germany. We aim at adding value to our customers by offering technical service, product development and in-house products.

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