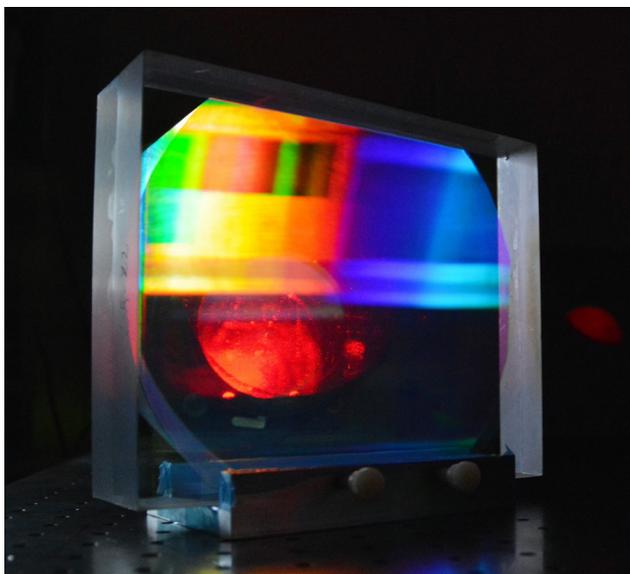


# VPH Gratings for Astronomy

See the universe in exquisite spectral detail



## FEATURES AND BENEFITS

Excellent 1<sup>st</sup> order diffraction efficiency

Broad operational bandwidth with angle tuning

Customizable in wavelength (350-2500 nm)  
and dispersion (150-6000 lines/mm)

Dimensions up to 300 mm; larger upon request

Multiple patented design technologies

Low polarization sensitivity, uniform efficiency

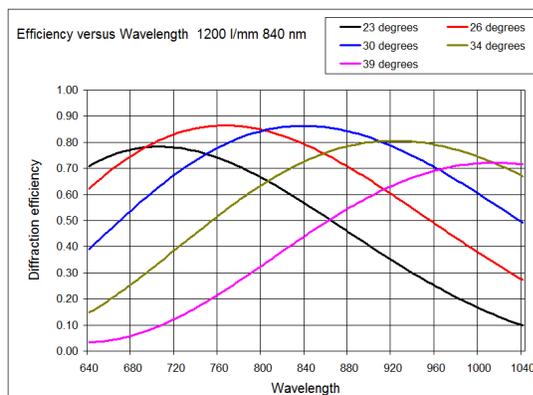
Robust design facilitates cleaning & handling

**A good partner helps you make the most of every photon.** Just as every star is unique, so are the needs of every spectroscopic telescope. At Wasatch Photonics, we work with you from the earliest stages of your project, drawing on our multiple design technologies and experience to create high throughput medium- to large-format volume phase holographic (VPH) gratings customized to your astronomical spectrograph. Our robust, durable gratings provide the broadband operation and tunability you need for maximum flexibility, and years of performance you can depend on.

Wasatch Photonics can customize a transmissive VPH grating to your exact size, wavelength, and dispersion needs. Contact us to get started!

## Service & performance to take you beyond the stars.

Our volume phase holographic gratings are unmatched in performance, and offer many advantages over conventional surface relief gratings. Our proprietary process encapsulates the grating structure in a robust package, facilitating handling and easy cleaning. We've developed and patented multiple design technologies to optimize VPH gratings for bandwidth, polarization insensitivity & transmission, adapting them to the needs of astronomy gratings through years of accumulated expertise in our on-site large-format imaging lab. Whether you're studying chemical composition, distance, velocity, density, or temperature of celestial objects, we can create the gratings you need.

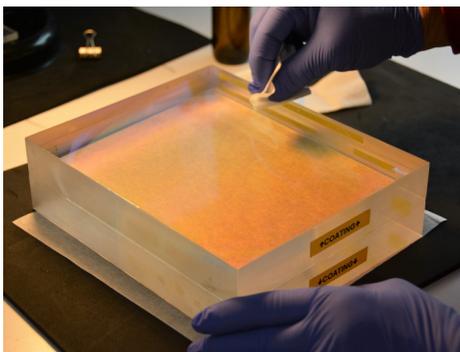


Wavelength tuning allows a single VPH grating to be used at multiple AOIs to span a larger region of the spectrum, reducing the cost and complexity of your broadband spectrographic system design.

### Spanning the full spectrum

Transmissive VPH gratings operate on the principle of diffraction of light, allowing the grating efficiency curve to be “tuned” in center wavelength simply by varying the angle of incidence (AOI) for the study of different spectral features of interest. We can also design a series of gratings to overlap in wavelength, covering regions from 350-2500 nm with your desired dispersion. These approaches may also be combined, using multiple VPH gratings and tuning each individually to cover the full visible and/or NIR with very high resolution.

### ATTENTION TO DETAIL



At Wasatch Photonics, we understand the processes and metrology needed to manufacture & test high quality gratings for use in spectroscopic telescopes, and have contributed gratings for many multi-object spectrographs. Each individual VPH grating is an original, allowing us to customize its performance to your exact specifications. Our engineers personally oversee your gratings from design to shipment, providing dedication and focus commensurate with the scale of your project.

With over 150 years of combined experience, our skilled staff is ready to meet the needs of your most demanding projects.