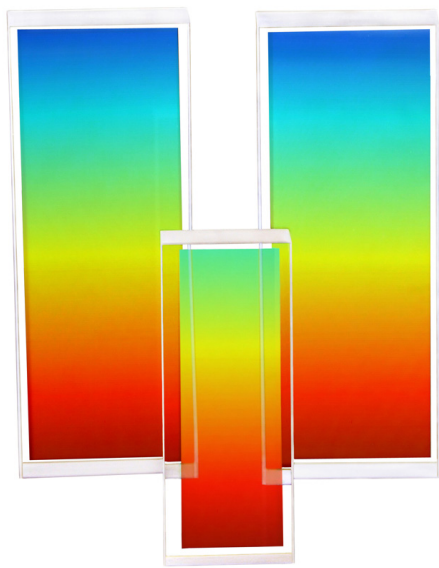


# VPH Gratings for Pulse Compression

Create shorter, more powerful pulses



## FEATURES AND BENEFITS

High uniformity over the full spectral band for exceptional 1st order diffraction efficiency

Low wavefront distortion, minimal scatter

Uniform diffraction efficiency over the full clear aperture for minimal beam distortion

Ideal for high pulse energy applications

Robust design allows easy cleaning

Maximum optical design flexibility

**Our efficiency & uniformity can take you to higher power.** Wasatch Photonics' enhanced volume phase holographic (VPH) gratings are exceptional for pulse compression and pulse stretching of high power ultrafast lasers. These gratings have the highest efficiency on the market, because getting more photons is what we do best. Unlike surface relief gratings, our gratings can be easily cleaned and handled. Choose from our range of off-the-shelf gratings, or contact us for full OEM customization, from small quantity prototyping through to volume production.

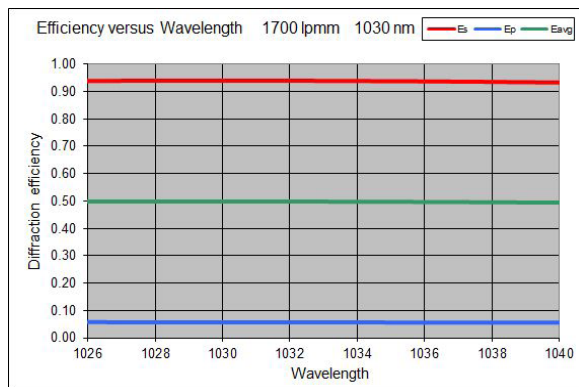
Wasatch Photonics can customize a VPH grating to your exact size, wavelength, and dispersion needs.

Contact us to get started!

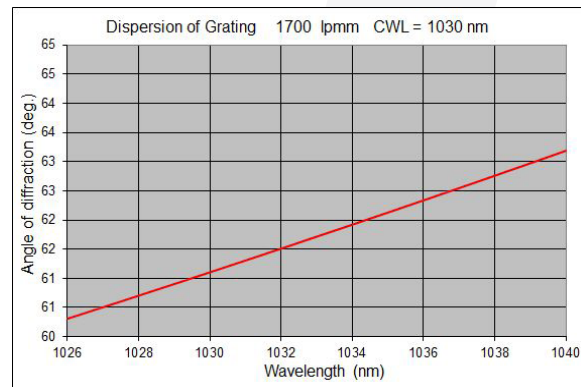
## Our VPH gratings deliver the efficiency, uniformity, and low wavefront distortion you need.

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. The transmissive design of our VPH gratings also allows more flexibility in the geometric layout of your pulse compression cavity, enabling more compact, folded designs.

|                             | WP-800/1030-30x45   | WP-1250/1030-28x92  | WP-1700/1030-30x90  |
|-----------------------------|---|---------------------|---------------------|
| <b>Operating Wavelength</b> | 980 - 1080 nm   | 1020 - 1040 nm      | 1026 - 1040 nm      |
| <b>Nominal Efficiency</b>   | 93-96%, s-pol   | 92-93%, s-pol       | 92-93%, s-pol       |
| <b>Spatial Frequency</b>    | 800 ± 0.5 lines/mm  | 1250 ± 0.5 lines/mm | 1700 ± 0.5 lines/mm |
| <b>Angle of Incidence</b>   | 24.3° @ 1030 nm   | 40.1° @ 1030 nm     | 61.1° @ 1030 nm     |
| <b>Dimensions</b>           | 30 x 45 mm  | 28 x 92 mm          | 30 x 90 mm          |
| <b>Clear Aperture</b>       | 24 x 39 mm  | 22 x 88 mm          | 24 x 84 mm          |
| <b>Wavefront Distortion</b> | Standard: <math>\lambda/5</math> rms   Enhanced: <math>\lambda/10</math> rms (@ 632.8 nm) |                     |                     |
| <b>Thickness</b>            | 6.00 ± 0.25 mm  |                     |                     |
| <b>Surface Quality</b>      | 60-40 scratch-dig   |                     |                     |



We measure every transmissive VPH grating to ensure exceptional first order diffraction efficiency uniformity over the specified operating band.



Typical dispersion for a 1700 line/mm VPH grating designed for use at 1030 nm. Custom OEM designs available upon request.

With over 130 years of combined experience, our skilled staff is ready to meet the needs of your most demanding projects.