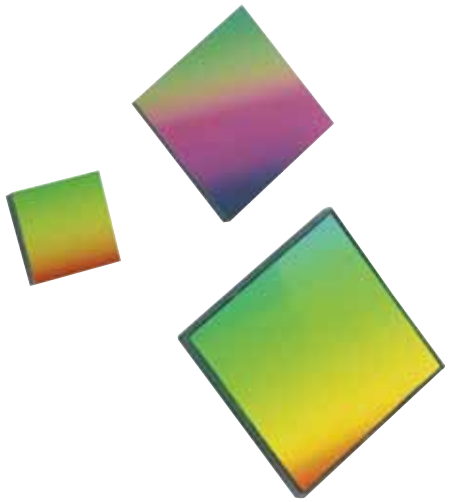
Plane Holographic Reflection Gratings



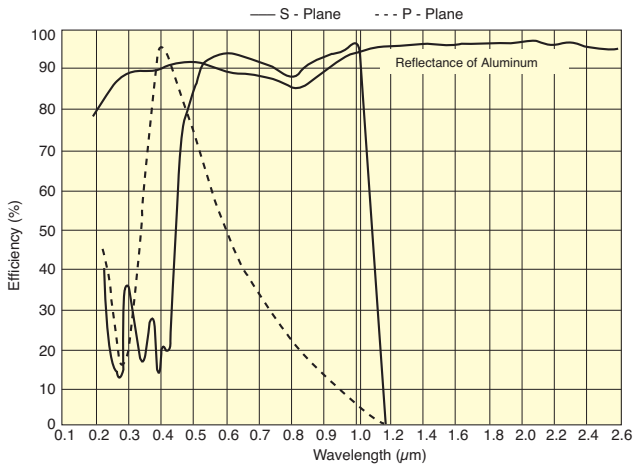
- Groove frequencies ranging from 900 to 3600 g/mm
- Blazed holographic gratings
- High and low modulation depths
- Aluminum coating
- Float glass substrate
- 12.5, 25, and 50 mm square sizes

Generated optically, holographic gratings generally do not display periodic errors or ghosts often found in ruled gratings. They typically have a sinusoidal groove profile and are generated by the recording of an interference pattern onto a photoresist-coated substrate. Newport's holographic gratings can provide excellent wavefront flatness and high efficiency in a single plane of polarization. Blazed gratings are generated by bombarding holographically recorded masters with a beam of ions. This etching process alters the groove profile from sinusoidal to triangular, which often increases the peak efficiency of the grating. Like their ruled counterparts, holographic gratings are most effective when used in the Littrow configuration.

Ordering Information

Grooves per mm	Spectral Region (nm)	Wavelength of Max Efficiency (nm)	Blazed or Modulation	Coating	Model 12.5 x 12.5 x 6 mm	Model 25 x 25 x 6 mm	Model 50 x 50 x 6 mm
3600	180-500	300	high modulation	Al	05HG3600-300-1	10HG3600-300-1	20HG3600-300-1
2400	190-800	250	blazed	Al	05HG2400-250-1	10HG2400-250-1	20HG2400-250-1
2400	250-600	400	high modulation	Al	05HG2400-400-1	10HG2400-400-1	20HG2400-400-1
2000	300-950	475	high modulation	Al	05HG2000-475-1	10HG2000-475-1	20HG2000-475-1
1800	190-900	250	blazed	Al	05HG1800-250-1	10HG1800-250-1	20HG1800-250-1
1800	200-900	300	low modulation	Al	05HG1800-300-1	10HG1800-300-1	20HG1800-300-1
1800	350-900	500	high modulation	Al	05HG1800-500-1	10HG1800-500-1	20HG1800-500-1
1500	250-1300	600	high modulation	Al	05HG1500-600-1	10HG1500-600-1	20HG1500-600-1
1201.5	190-800	250	blazed	Al	05HG1202-250-1	10HG1202-250-1	20HG1202-250-1
1200	500-1200	800	high modulation	Al	05HG1200-800-1	10HG1200-800-1	20HG1200-800-1
1100	400-1700	900	high modulation	Al	05HG1100-900-1	10HG1100-900-1	20HG1100-900-1
900	400-1700	800	high modulation	Al	05HG900-800-1	10HG900-800-1	20HG900-800-1

Shown here is an example of an efficiency curve for our plane ruled reflection gratings. A complete set of curves are available on our website. ***Note:*** *Many of these curves are relative (not absolute). They are only representative, and can vary significantly depending on use geometry and measurement technique. Two masters with the same catalog number may have different efficiency curves.*



Plane Holographic Reflection Grating, 1800 g/mm, high modulation, 350-900 nm recommended spectral range, aluminum coating