Diffraction Gratings for Monochromators, 50–3600 g/mm, 68 × 68 mm

Model Diffraction Gratings · waveqvanta.com/products/diffraction-gratings-for-monochromators

Holographic and ruled 68 × 68 mm gratings that set the wavelength range and dispersion of a monochromator or spectrograph.



This range of 68 × 68 mm diffraction gratings covers groove densities from 50 to 3600 g/mm and working ranges from 180 nm to 22 µm. Eight holographic gratings serve the UV–NIR region, while 36 ruled gratings with blaze wavelengths from 240 nm to 12 µm extend coverage into the mid-infrared. Dispersion for each groove density is tabulated for Omni-λ200i, 300i, 500i and 750i instruments.

Key features

- 44 grating models, all 68 × 68 mm
- Groove densities from 50 to 3600 g/mm
- Holographic gratings from 1200 to 3600 g/mm for 180–1200 nm
- Ruled gratings with blaze wavelengths from 240 nm to 12 µm
- Combined working range from 180 nm to 22 µm
- Working range, groove density and blaze wavelength listed for every model

Specifications

Grating Size	68 × 68 mm
Groove Density Range	50–3600 g/mm
Wavelength Coverage	180 nm to 22 µm across the range
Grating Types	Holographic (8 models) and ruled (36 models)
Holographic 1-360-180-500-NP	3600 g/mm, blaze 300 nm, 180–400 nm
Holographic 1-240-250-600-NP	2400 g/mm, blaze 300 nm, 250–600 nm
Holographic 1-240-190-800-NP	2400 g/mm, blaze 250 nm, 190–600 nm
Holographic 1-200-300-900-NP	2000 g/mm, blaze 475 nm, 300–720 nm
Holographic 1-180-350-900-NP	1800 g/mm, blaze 500 nm, 350–800 nm
Holographic 1-180-190-900-NP	1800 g/mm, blaze 250 nm, 190–800 nm
Holographic 1-120-190-800-NP	1201.6 g/mm, blaze 250 nm, 190–800 nm
Holographic 1-120-400-1200-NP	1200 g/mm, blaze 700 nm, 400–1200 nm
Mechanical Scan Range (Omni-λ)	0–400 nm (3600 g/mm) to 0–9600 nm (150 g/mm)
Reciprocal Dispersion, 3600 g/mm	1 / 0.66 / 0.43 / 0.3 nm/mm (Omni-λ200i / 300i / 500i / 750i)
Reciprocal Dispersion, 1200 g/mm	3.6 / 2.28 / 1.5 / 1 nm/mm (Omni-λ200i / 300i / 500i / 750i)
Reciprocal Dispersion, 150 g/mm	31.89 / 20.13 / 12.97 / 8.77 nm/mm (Omni-λ200i / 300i / 500i / 750i)

Model overview

Model (Ruled)	Working Range	Grooves (g/mm)	Blaze Wavelength
1-240-240-NP	190–600 nm	2400	240 nm
1-240-300-NP	250–600 nm	2400	300 nm

Model (Ruled)	Working Range	Grooves (g/mm)	Blaze Wavelength
1-180-400-NP	300–800 nm	1800	400 nm
1-180-500-NP	350–800 nm	1800	500 nm
1-120-250-NP	200–500 nm	1200	250 nm
1-120-300-NP	200–600 nm	1200	300 nm
1-120-400-NP	200–1000 nm	1200	400 nm
1-120-500-NP	350–1100 nm	1200	500 nm
1-120-750-NP	500–1200 nm	1200	750 nm
1-090-550-NP	350–1600 nm	900	550 nm
1-083-1200-NP	700–1700 nm	830	1200 nm
1-060-300-NP	200–600 nm	600	300 nm
1-060-500-NP	330–1000 nm	600	500 nm
1-060-750-NP	500–1500 nm	600	750 nm
1-060-1000-NP	650–2200 nm	600	1.0 µm
1-060-1200-NP	800–2400 nm	600	1.2 µm
1-060-1600-NP	1–2.4 µm	600	1.6 µm
1-030-300-NP	200–600 nm	300	300 nm
1-030-500-NP	300–1000 nm	300	500 nm
1-030-760-NP	450–1500 nm	300	760 nm
1-030-1000-NP	600–2000 nm	300	1000 nm
1-030-1200-NP	800–2200 nm	300	1200 nm
1-030-2000-NP	1.4–4 µm	300	2.0 µm
1-030-3000-NP	2–4.8 µm	300	3.0 µm
1-015-300-NP	200–600 nm	150	300 nm
1-015-500-NP	330–1100 nm	150	500 nm
1-015-800-NP	400–1600 nm	150	800 nm
1-015-1000-NP	600–2000 nm	150	1090 nm
1-015-1250-NP	800–2500 nm	150	1250 nm
1-015-2000-NP	1.1–4 µm	150	2 µm
1-015-3000-NP	2.2–4 µm	150	3 µm
1-015-4000-NP	2.5–8 µm	150	4 µm
1-0075-8000-NP	6–16 µm	75	8 µm
1-0075-10000-NP	6–18 µm	75	10 µm
1-0075-12000-NP	9–20 µm	75	12.0 µm
1-0050-12000-NP	8–22 µm	50	12 µm

Typical applications

- Replacement or additional gratings for monochromators and spectrographs
- UV–visible spectroscopy
- Raman and fluorescence spectroscopy
- Near- and mid-infrared spectroscopy