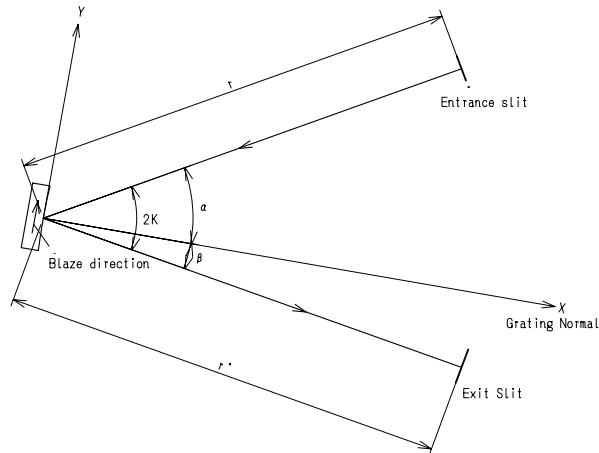


Hitachi Aberration-Corrected Concave Gratings for Monochromator



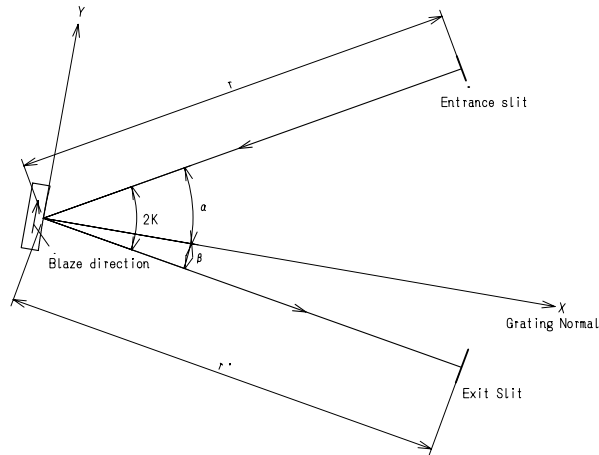
Coma-type aberration-corrected concave grating for high resolution Seya-Namioka monochromator

| Part No. | Grooves per mm | Radius of curvature (mm) | Blaze Wavelength (nm) | Blank size H×W×T (mm) | Blaze angle (degree) | Deviation angle(2K) (degree) | r (mm) | r' (mm) | Wavelength Range (nm) |
|----------|----------------|--------------------------|-----------------------|-----------------------|----------------------|------------------------------|---------|---------|-----------------------|
| 001-0420 | 1200 | 1000 | 31 | 40×40×10 | 1.3 | 70.25 | 818.295 | 817.689 | 30~100 |
| 001-0261 | 1200 | 1000 | 31 | 50×40×10 | 1.3 | 70.25 | 818.295 | 817.689 | 30~100 |
| 001-0439 | 2400 | 1000 | 31 | 40×40×10 | 2.6 | 70.25 | 818.295 | 817.689 | 30~80 |
| 001-0440 | 2400 | 1000 | 31 | 40×50×10 | 2.6 | 70.25 | 818.295 | 817.689 | 30~80 |
| 001-0262 | 2400 | 1000 | 31 | 50×40×10 | 2.6 | 70.25 | 818.295 | 817.689 | 30~80 |
| 001-0441 | 2400 | 1000 | 31 | 67×50×10 | 2.6 | 70.25 | 818.295 | 817.689 | 30~80 |
| 001-0422 | 1200 | 1000 | 78 | 40×40×10 | 3.3 | 70.25 | 818.295 | 817.689 | 80~200 |
| 001-0423 | 1200 | 1000 | 78 | 40×50×10 | 3.3 | 70.25 | 818.295 | 817.689 | 80~200 |
| 001-0424 | 1200 | 1000 | 78 | 50×40×10 | 3.3 | 70.25 | 818.295 | 817.689 | 80~200 |
| 001-0271 | 1200 | 1000 | 78 | 68.6×68.6×10 | 3.3 | 70.25 | 818.295 | 817.689 | 80~200 |
| 001-0425 | 1200 | 1000 | 78 | 76×80×15 | 3.3 | 70.25 | 818.295 | 817.689 | 80~200 |
| 001-0443 | 2400 | 1000 | 78 | 40×40×10 | 6.6 | 70.25 | 818.295 | 817.689 | 80~150 |
| 001-0444 | 2400 | 1000 | 78 | 40×50×10 | 6.6 | 70.25 | 818.295 | 817.689 | 80~150 |
| 001-0445 | 2400 | 1000 | 78 | 50×40×10 | 6.6 | 70.25 | 818.295 | 817.689 | 80~150 |
| 001-0446 | 2400 | 1000 | 78 | 60×70×15 | 6.6 | 70.25 | 818.295 | 817.689 | 80~150 |
| 001-0272 | 2400 | 1000 | 78 | 68.6×68.6×10 | 6.6 | 70.25 | 818.295 | 817.689 | 80~150 |
| 001-0299 | 1200 | 500 | 124 | 40×40×10 | 5.2 | 70.25 | 409.01 | 408.86 | 120~200 |
| 001-0265 | 1200 | 500 | 124 | 40×50×10 | 5.2 | 70.25 | 409.01 | 408.86 | 120~200 |
| 001-0288 | 600 | 400 | 200 | 40×63×10 | 4.2 | 70.167 | 327.33 | 327.29 | 190~900 |
| 001-0278 | 600 | 200 | 204 | 25×20×5 | 4.3 | 70.25 | 163.659 | 163.538 | 190~900 |
| 001-0290 | 600 | 400 | 409 | 28×38×10 | 8.6 | 70.25 | 327.32 | 327.08 | 400~800 |

Reference

T. Kita and T. Harada, "Mechanically Ruled Aberration-Corrected Concave Grating for High Resolution Seya-Namioka Monochromator", J.Spectrosc.Soc.Japan Vol.29, No.4, 256 (1980)

Hitachi Aberration-Corrected Concave Gratings for Monochromator



Diffraction gratings for compact, high efficiency monochromator

| Part No. | Grooves per mm | Radius of curvature (mm) | Blaze WL (nm) | Blank size H×W×T (mm) | Blaze angle (degree) | Deviation angle(2K) (degree) | r (mm) | r' (mm) | WL Range (nm) |
|----------|----------------|--------------------------|---------------|-----------------------|----------------------|------------------------------|---------|---------|---------------|
| 001-0427 | 1200 | 3000 | 40 | 40×40×10 | 1.4 | 10 | 3000 | 3000 | 80~190 |
| 001-0428 | 1200 | 3000 | 40 | 40×50×10 | 1.4 | 10 | 3000 | 3000 | 80~190 |
| 001-0429 | 1200 | 3000 | 40 | 50×40×10 | 1.4 | 10 | 3000 | 3000 | 80~190 |
| 001-0430 | 1200 | 3000 | 40 | 68.6×68.6×10 | 1.4 | 10 | 3000 | 3000 | 80~190 |
| 001-0431 | 1200 | 3000 | 40 | 60×100×15 | 1.4 | 10 | 3000 | 3000 | 80~190 |
| 001-0432 | 1200 | 3000 | 150 | 40×40×10 | 5.2 | 10 | 3000 | 3000 | 30~90 |
| 001-0433 | 1200 | 3000 | 150 | 40×50×10 | 5.2 | 10 | 3000 | 3000 | 30~90 |
| 001-0434 | 1200 | 3000 | 150 | 50×40×10 | 5.2 | 10 | 3000 | 3000 | 30~90 |
| 001-0435 | 1200 | 3000 | 150 | 68.6×68.6×10 | 5.2 | 10 | 3000 | 3000 | 30~90 |
| 001-0436 | 1200 | 3000 | 150 | 60×100×15 | 5.2 | 10 | 3000 | 3000 | 30~90 |
| 001-0256 | 600 | 100 | 197 | 20×20×5 | 3.4 | 12 | 100 | 100 | 195~350 |
| 001-0257 | 600 | 100 | 209 | 25×20×5 | 3.6 | 5 | 100 | 100 | 180~360 |
| 001-0260 | 600 | 149.5 | 232 | 30×30×10 | 4 | 6 | 150.645 | 150.645 | 200~800 |
| 001-0259 | 600 | 125 | 247 | 40×40×10 | 4.3 | 17 | 124.368 | 124.368 | 200~1000 |
| 001-0267 | 600 | 150 | 302 | 50×40×10 | 5.2 | 4 | 151 | 151 | 200~1000 |
| 001-0452 | 900 | 150 | 301 | 50×40×10 | 7.8 | 7 | 151 | 151 | 220~800 |
| 001-0268 | 600 | 150 | 302 | 50×40×10 | 5.2 | 4 | 151 | 151 | 200~1000 |
| 001-0255 | 600 | 80 | 397 | 28×28×5 | 6.9 | 15 | 80 | 80 | 220~730 |
| 001-0453 | 900 | 150 | 400 | 50×40×10 | 10.4 | 7 | 151 | 151 | 220~800 |
| 001-0274 | 600 | 150 | 453 | 50×40×10 | 7.8 | 4 | 151 | 151 | 200~1000 |

Reference

M.Itou, T.Harada, T.Kita, K.Hasumi, I.Koyano and K.Tanaka, "Normal incidence monochromator with an aberration-corrected concave grating for synchrotron radiation", Appl.Opt.25, 2240 (1986)