|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Grooves** | **Grating type** | **Blaze** | **Correction range** | **Dimensions** |
| [mm-1] | 　 | [nm] | [nm] | [mm²] |
| 2500 | blazed | 250 | 240-300 |  64x12 |
| 1900 | blazed | 400 | 250-650 |  64x12 |
| 1500 | sinus | 450 | 330-850 | 64x12 |
| 1400 | blazed | 230 | 340-800 | 50x10 |
| 1400 | blazed | 230 | 200-750 | 50x10 |
| 1300 | blazed | 230 | 200-890 | 52x10 |
| 1300 | sinus | 850 | 340-800 | 30x8 |
| 1221 | blazed | 230 | 230-1000 | 50x8 |
| 1221 | ion | 500 | 350-1000 | 50x8 |
| 1221 | blazed | 230 | 185-900 | 34x7 |
| 1200 | blazed | 230 | 180-800 | 30x8 |
| 1200 | sinus | 800 | 600-1100 | 64x12 |
| 1053 | blazed | 230 | 200-1100 | 56x10 |
| 1000 | blazed | 230 | 200-900 | 52x10 |
| 1000 | blazed | 230 | 190-1100 | 50x10 |
| 1000 | blazed | 230 | 190-850 | 64x8 |
| 950 | blazed | 230 | 200-800 | 32x7 |
| 700 | sinus | 1600 | 1000-2000 | 90x12 |
| 651 | blazed | 230 | 200-800 | 64x10 |
| 650 | blazed | 230 | 180-800 | 30x8 |
| 527 | ion | 300 | 200-1100 | 56x10 |
| 456 | sinus | 2000 | 1100-2500 | 64x10 |

**Note:**
**(1)**all imaging gratings are holographically exposed
blazed- sawtooth profile
ion- ion etched sawtooth profile
sine- sinusoidal profile
**(2)**the efficiency maximum of holographically blazed gratings can vary between 210 and 250nm
**(3)**adaptable to experimental conditions
**(4)**given thickness is the center thickness
preferred materials are NBK7 and ZKN7
l.g. - lateral grinded
**(5)** monochromator difference  = -
**(6)** D= 106 cos /(LB\*G) [nm/mm]
**(7)** for entrance slit width 50µm
**(8)** see drawing
**(9)** related to shortest waveleng

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Grooves** | **Diffravtive area** | **Blank radius** | **Monochromator difference** | **Dispersion** |
| [mm-1] | [mm] | [mm] | [deg.] | [nm/mm] |
| 2500 |  55 | 393 | 24.2 | 0.7 |
| 1900 |  56 | 207,1 | 30 | 2 |
| 1500 | 56 | 206,4 | 30 | 2,9 |
| 1400 | 46 | 136,4 | 42,1 | 2,6 |
| 1400 | 46 | 149,7 | 30 | 4,4 |
| 1300 | 25 | 175,3 | 46,4 | 4,4 |
| 1300 | 24 | 109,8 | 40,3 | 6,3 |
| 1221 | 37 | 163,1 | 35,7 | 4,6 |
| 1221 | 39 | 163,1 | 35,7 | 4,6 |
| 1221 | 27 | 116,3 | 36,5 | 5,9 |
| 1200 | 24 | 109,8 | 30 | 7,5 |
| 1200 | 56 | 204,7 | 30 | 3,6 |
| 1053 | 36x30 | 260,4 | 55 | 3,5 |
| 1000 | 36 | 94,4 | 30 | 7 |
| 1000 | 40 | 193,6 | 30 | 4,6 |
| 1000 | 50 | 192,7 | 30 | 4,6 |
| 950 | 25 | 150,7 | 40 | 6,6 |
| 700 | 80 | 181,5 | 21,1 | 7,7 |
| 651 | 56 | 214,8 | 30 | 7 |
| 650 | 24 | 109,8 | 30 | 16,1 |
| 527 | 30x34 | 141,3 | 45 | 8.4 |
| 456 | 30 | 75 | 10 | 25 |

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|  |  |  |  |
| --- | --- | --- | --- |
| Grooves | Resolution | Focal Length /nm | Order number |
| LA | LB |
| -8 | -9 |
| 2500 | 0.7 | 560 | 564.2 | 2645102953224 |
| 1900 | 0,8 | 219,3 | 200 | 2645102258824 |
| 1500 | 1 | 219,3 | 200 | 2645102257824 |
| 1400 | 4 | 98,4 | 208 | 1305962 |
| 1400 | 2 | 150 | 149,1 | 1390410 |
| 1300 | 1.5 | 181,9 | 150 | 792102 |
| 1300 | >1 | 96,8 | 95,7 | 1224543 |
| 1221 | 0,7 | 161 | 158,8 | 792005 |
| 1221 | 1 | 161 | 158,8 | 792008 |
| 1221 | 2 | 115 | 111,7 | 792012 |
| 1200 | 1,5 | 120 | 100 | 2645102951224 |
| 1200 | 1 | 219,3 | 200 | 2645102256824 |
| 1053 | 0,4 | 217,9 | 251,3 | 1321172 |
| 1000 | 2,5 | 70 | 138 | 792101001010 |
| 1000 | 2,2 | 181,9 | 197,8 | 2645102951724 |
| 1000 | 2 | 190 | 189,5 | 2645102950824 |
| 950 | 1 | 136,4 | 151,2 | 792060 |
| 700 | 6,5 | 240,1 | 157,8 | 2645102259724 |
| 651 | 1,5 | 219,3 | 200 | 2645102951124 |
| 650 | 2,2 | 120 | 97,3 | 2645102951324 |
| 527 | 7.7 | 97.9 | 200 | 792024 |
| 456 | 5 | 83.7 | 76.8 | 2645102261124 |

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