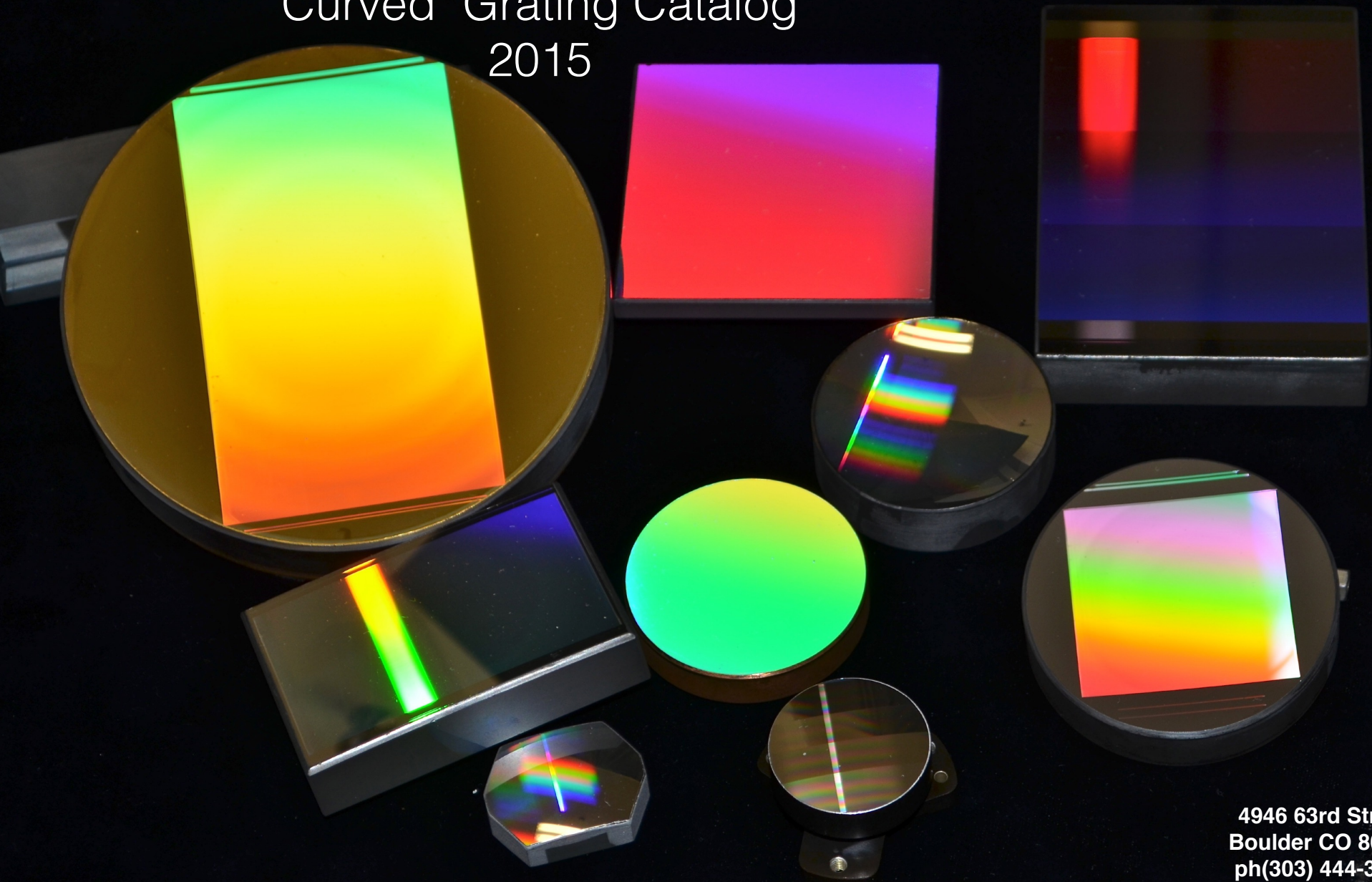


Bach Research Corporation

Curved Grating Catalog 2015



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Specifications

All Bach Research standard Diffraction Gratings are produced to the following specifications:

- (1) First order blazed wavelength +/- 10%
- (2) Thickness of substrate =/ - 0.5mm (center thickness concave/convex gratings)
- (3) Length & width of substrate +/- 0.1mm
- (4) Diameter of round substrate +/- 0.2mm
- (5) Radius of concave/convex grating +/- 0.1%
- (6) Centering of ruled area +/- 1mm
- (7) Temperature resistance 125° F. (higher temperatures on request)

Substrate Materials

Reflection gratings are supplied on precision annealed BK-7 but can also be available on Fused Silica, or ZeroDur on request. Transmission gratings are supplied on BK-7. Fused Silica is optional at extra cost

Substrate Dimensions

We can make the grating in any size that you require as long as it is smaller than the master size.

Reflectance Materials

Al Reflection gratings listed are aluminum replicas. Overcoating with Al MgF₂, gold or platinum is optional at extra cost. Price quoted on request for Osmium, Iridium and Rhodium.

Availability

All gratings are available from stock. Please contact us whenever availability is crucial.

Special Orders

Our selection of standard gratings is constantly being increased. If you don't find a particular grating listed, contact us to see whether it can be manufactured.

OEM Prices

Original Equipment Manufacturers are invited to send us their requirements. We are happy to quote special OEM pricing on request.

Cleaning of Gratings

Gratings must be handled with extreme care. Under no circumstances should the surface ever be touched. Dust or a film of oil can destroy the performance of the grating. Dust and oil can sometimes be removed but this calls for expert handling. Bach Research gratings may be returned to the factory for cleaning for a fee. However, we can give no assurances of success in cleaning the grating.

Shipment

In the United States shipment is FOB Boulder CO via UPS or Federal Express. Shipment outside of continental limits of the United States is made by Federal Express or UPS or as requested by the customer.

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Concave gratings

Catalog #	Radius mm	Wavelength	Line Spacing	Nominal Blaze Angle	Master Size (mm)	Maximum Ruled Area
BR-01-180	115 cc	1200 A°	1800	6.2°	34 x 38 x 10	30 x 32
BR-02-060	250 cc	400 A°	600	7°	76.2 x 44.5 x 12	30 x 65
BR-02-300	250 cc	1216 A°	3000	12.6°	45 x 45 x 10	36 x 40
BR-03-300	300 cc	1000 A °	3000	8.6°	Ø 203 x 35	90 x 140
BR-03-120	300 Cylinder	1000 A°	1200	3.5°	85 x 85 x 16	45 x 70
BR-03-240	300 cc	500 A°	2400	3.5°	Ø 63.5 x 12.5	40 x 40
BR-07-060	400.7 cc	300 A°	600	0.8°	Ø 50.8 x 10	20 z 15
BR-07-180	400.7 cc	300 A °	1800	1°52'	Ø 50.8 x 10	15 x 10
BR-07-100	400.7 cc	1000 A°	1800	5.5°	50.8 x 10	34 x 34
BR-07-240	400.7 cc	600 A°	2400	4°8'	Ø 50.8 x 10	31 x 38
BR-07-360	400.7 cc	1400 A°	3600	14.6°	Ø 160 x 25	105 x 110
BR-45-300	450 cc	1216 A°	3000	10.5°	58 x 40 x 14	45 x 30
BR-49-120	498.1 cc	400 A°	1200	1.3°	Ø82 x 16	52 x 52
BR-05-730	500 cc	4860 A°	738.46	10.3°	Ø 160 x 25	105 x 110
BR-05-110	500 cc	980 A°	1125	3.17°	152.4 x 30	100 x 115
BR-05-160	500 cc	1500 A°	1600	4.95°	Ø 160 x 25	100 x 110
BR-05-170	500 cc	2100 A°	1714	10.3°	Ø 160 x 25	105 x 110
BR-06-240	600 cc	900 A°	2400	6°12'	93 x 93 x 16	90 x 84
BR-06-360	600 cc	1216 A°	3600	12.6°	93 x 93 x 16	40 x 40

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Concave gratings

Catalog #	Radius mm	Wavelength	Line Spacing	Nominal Blaze Angle	Master Size (mm)	Maximum Ruled Area
BR-71-170	710 cc	700 A°	1714.2	3.4°	86.3 x 86.3 x 16	75 x 75
BR-74-240	740 cc	1216	2400	8.3°	Ø 160 x 25	105 x 80
BR-08-240	850 cc	1350 A°	2400	9.33°	110 x 90 x 20	80 x 100
BR-09-300	900 cc	1216	3000	10.5°	78 x 102 x 20	70 x 90
BR-09-030	995.4cc	9000 A°	300	7.75°	Ø 114.3 x 20	95 x 55
BR-09-060	995.4 cc	1600 A°	600	2.75	Ø114.3 x 20	54 x 94
BR-09-061	998.9 cc	1600 A°	600	2.75°	Ø 63.5 x12	32 x 50
BR-09-127	998.8 cc	700 A°	1200	2°24'	Ø 63.5 x 12	30 x 50
BR-09-125	998.8 cc	1500 A°	1200	5°10'	Ø 63.5 x16	32 x 50
BR-09-180	998.8 cc	1150 A°	1800	5.9°	Ø110 x 20	70 x 80
BR-09-240	998.8 cc	1350 A°	2400	9.33°	60 x 65 x 16	58 x 62
BR-09-360	998.8 cc	4300 A°	3600	5°10'	Ø 110 x 20	70 x 75
BR-10-020	1003 cc	6000A°	20	0.34°	Ø 76 x 16	48 x 48
BR-10-040	1003 cc	6000 A°	40	0.68°	Ø 76.2 x16	50 x 50
BR-10-140	1003 cc	1650 A°	144	0.68°	Ø 76.2 x 16	50 x 54
BR-10-170	1003 cc	7500 A°	171.42	3.7°	Ø 76 x 16	48 x 48
BR-10-032	1003 cc	3964 A°	327	3.7°	Ø 76.2 x 16	50 x 54
BR-12-360	1200 cc	1200 A°	3600	12.4°	140 x140 x 35	120 x 120 x 35
BR-13-360	1368 cc	320 A°	3600	3.4°	25 x 50 x 10	23 x 44

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Concave gratings

Catalog #	Radius mm	Wavelength	Line Spacing	Nominal Blaze Angle	Master Size (mm)	Maximum Ruled Area
BR-13-365	1368 cc	580 A°	3600	6 °	25 x50	23 x 27
BR-13-480	1368 cc	1100 A°	4800	15°	Ø 152.4 x 25	100 x 105
BR-15-060	1500 cc	2900 A°	600	5°	Ø 80 x 16	52 x 55
BR-15-120	1500 cc	1800 A°	1200	6°	Ø 80 x 20	52 x 52
BR-15-160	1500 cc	980 A°	1600	4.5°	Ø 114 x 20	65 x 83
BR-15-240	1500 cc	300 A°	2400	2°	Ø 80 x 12	55x 35
BR-15-015	1500 cc	7000 A°	150	3°	Ø 80 x 16	52 x 52
BR-19-045	1999.5 cc	8300 A°	45	1.07°	Ø 101.6 x 20	45 x 52
BR-19-240	1999.5 cc	1216 A°	2400	8.38°	160 x 85 x30	140 x 40
BR-22-060	2217.6 cc	1870 A°	600	3°13'	Ø 100 x 16	35 x 50
BR-22-120	2217.6 cc	300 A°	1200	1°12'	Ø 100 x 16	35 x 50
BR-22-360	2217.6 cc	225 A°	3600	2.20'	Ø 63.5 x 12	30 x 50
BR-29-240	2998.3 cc	450 A°	2400	3°	49 x 25 x 15	47 x 22
BR-29-040	2998.3 cc	1216 A°	400	1.42°	101.6 x 20	60 x 70
BR-29-041	2998.3 cc	1216 A°	400	1.42°	Ø 101.6 x 16	60 x 65
BR-66-480	6650 cc	1000 A°	4800	13.87°	Ø 180 x 30	110 x 125

