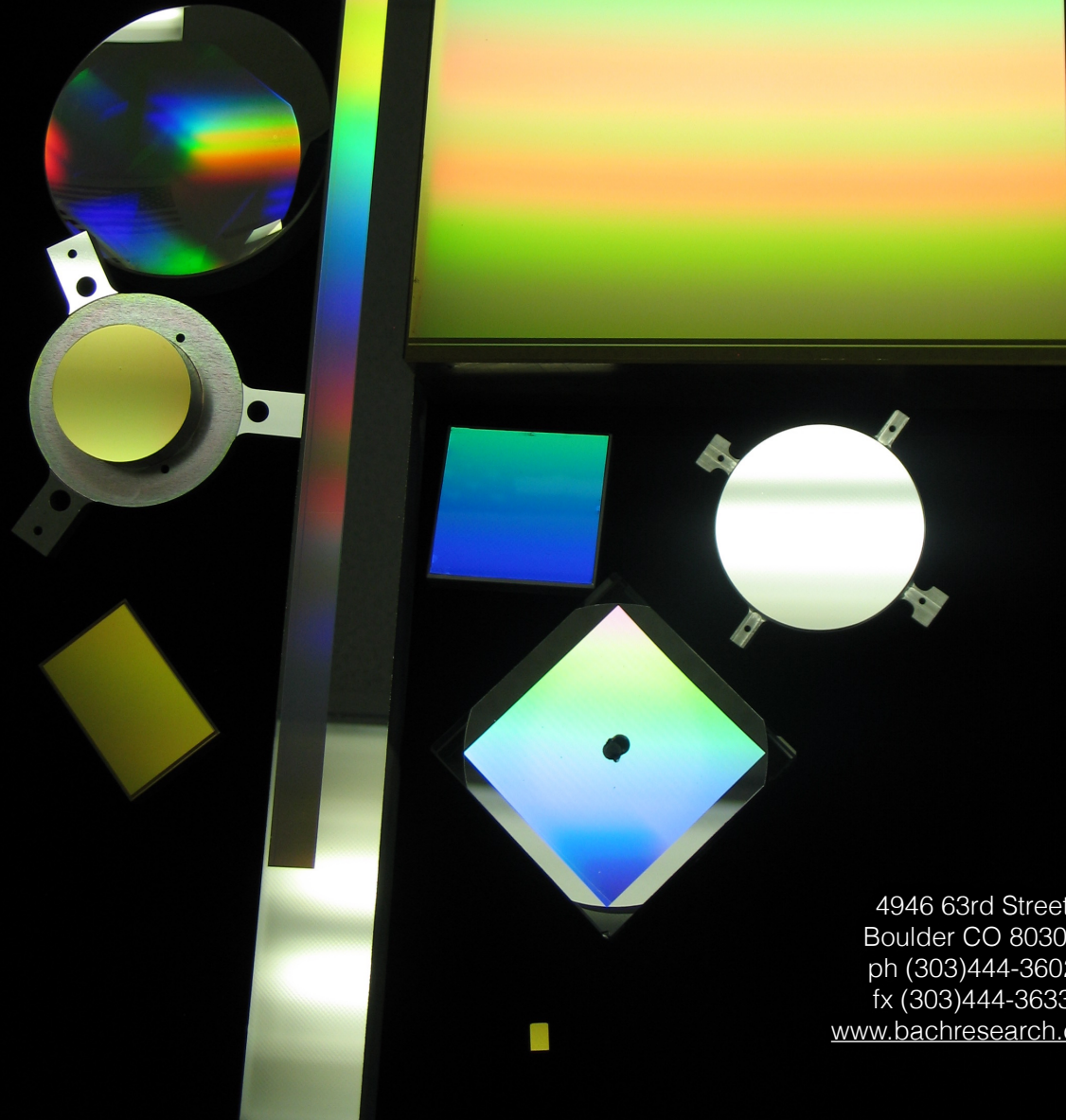


# Bach Research Corporation

## Plane 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 +/- 0.1mm
- (5) Radius of concave/convex grating +/- 0.1%
- (6) Centering of ruled area +/- 1mm
- (7) Temperature resistance 125° F. (higher temperature resistance on request)

## Substrate Materials

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

## Substrate Dimensions

The grating dimensions can be customized to fit your specific requirement.

## Reflectance Materials

All reflection gratings listed are aluminum replicas. Overcoating with Al MgF<sub>2</sub>, 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. A fingerprint, 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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## Plane gratings

Catalog #	Wavelength	Line Spacing	Nominal Blaze Angle	Master Size (mm)	Maximum Ruled Area (mm)
BRC-216	750 A°	1200	2.6°	110 x 110 x 25	102 x 102
BRC-217	1000 A°	1800	5.5°	Ø 50 x 10	30 x 32
BRC-218	1216 A°	1200	4.2°	Ø 50 x 12	30 x 32
BRC-219	1216 A°	3600	12.6°	68.6 x 68.6 x 16	64 x 64
BRC-220	1216 A°	3600	12°	58 x 58 x 16	52 x 52
BRC-221	1216 A°	6000	21.3°	Ø 50 x 10mm	50 x 32
BRC-222	1400 A°	3600	14.7°	68.6 x 68.6 x 20	64 x 64
BRC-223	1400 A°	3600	14.7°	68.6 x 68.6 x 20	64 x 64
BRC-224	1500 A°	300	1.33°	68.6 x 68.6 x 25	64 x 64
BRC-225	1500 A°	600	2.5°	110 x 110 x 29	102 x 102
BRC-226	1500 A°	1200	5.1°	68.6 x 68.6 x 20	64 x 64
BRC-227	1500 A°	1200	5.1°	110 x 110 x 25	102 x 102
BRC-228	1500 A°	1200	5.1°	135 x 110 x 25	102 x 128
BRC-229	1500 A°	1800	7.75°	Ø 50 x 10	30 x 32
BRC-230	1500 A°	2400	10.3°	110 x 110 x 22	102 x 102
BRC-231	1900 A°	600	2.6°	58 x 58 x 16	54 x 54
BRC-232	2000 A°	254.117	1.45°	60 x 60 x 10	58 x 58
BRC-233	2000 A°	1200	6.8°	110 x 110 x 20	102 x 102
BRC-234	2262 A°	240	1.56°	110 x 110 x 20	102 x 102

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## Plane gratings

Catalog #	Wavelength	Line Spacing	Nominal Blaze Angle	Master Size (mm)	Maximum Ruled Area (mm)
BRC-235	2300 A°	240	1.59°	Ø 50 x 10	32 x 32
BRC-236	2300 A°	240	1.6 °	Ø 50 x 10	32 x 32
BRC-237	2400 A°	2400	16.7°	110 x 110 x 25	102 x 102
BRC-238	2400 A°	3600	25.5°	110 x 110 x 20	102 x 102
BRC-239	2500A°	1800	13°	110 x 110 x 25	102 x 102
BRC-240	2500 A°	600	symmetrical	Ø 101.6 x 10	70 x 70
BRC-241	2700 A°	480	3.7°	58 x 58 x 16	52 x 52
BRC-242	3000 A°	150	1.2°	110 x 110 x20	102 x 102
BRC-243	3000 A°	180	1.5°	110 x 110 x 20	102 x 102
BRC-244	3000 A°	300	2.35°	68.6 x 68.6 x 20	64 x 64
BRC-245	3000 A°	480	4.1°	110 x 110 x 20	102 x 102
BRC-246	3000 A°	600	5.1°	68.6 x 68.6	64 x 64
BRC-247	3000 A°	600	5.1°	110 x 110 x 20	102 x 102
BRC-248	3000 A°	900	7.7°	44 x 50 x 12	45 x 40
BRC-249	3000 A°	1200	10.2°	110 x 110 x 20	102 x102
BRC-250	4000 A°	225	2.5°	110 x 110 x16	102 x 102
BRC-251	4000 A° (trans)	600	22°	Ø 160 x 20	105 x 105
BRC-252	4000 A°	600	6.8°	110 x 110 x 25	102 x102
BRC-253	4000 A°	818.18	9.4°	110 x 110 x 20	102 x102

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Catalog #	Wavelength	Line Spacing	Nominal Blaze Angle	Master Size (mm)	Maximum Ruled Area (mm)
BRC-254	4000 A°	1200	13.8°	110 x 220 x 30	102 x 205
BRC-255	4000 A°	1800	21°	58 x 58 x 16	52 x 52
BRC-256	4114 A°	120	1.4°	110 x110 x25	102 x 102
BRC-257	4500 A°	100	1.2°	110 x 110 x 20	102 x 102
BRC-258	4500 A°	1800	25°	58 x 58 x 10	52 x 52
BRC-260	5000 A°	150	2.1°	113 x 103 x 20	80 x 90
BRC-261	5000 A°	150	2.1°	110 x 110 x20	102 x 102
BRC-262	5000 A°	300	4.1°	68.6 x68.6 x16	64 x64
BRC-263	5000 A°	300	4.3°	110 x 110 x 20	102 x 102
BRC-264	5000 A°	600	8.6°	110 x 110 x 20	102 x 102
BRC-265	5000 A°	720	10.37°	Ø 50 x 10	30 x 32
BRC-266	5000 A°	900	13°	110 x 110 x 25	102 x102
BRC-267	5000 A°	1200	17.45°	58 x 58 x 16	54 x 54
BRC-268	5000 A°	1200	17.45°	110 x 110 x 20	102 x 102
BRC 269	5000 A°	1800	26.7°	110 x 110 x 20	102 x 102
BRC-270	6000 A°	50	0.8°	110 x 110 x 25	102 x 102
BRC-271	6000 A°	1200	21.1)	110 x 110 x 20	102 x 102
BRC-272	6246	600	10.8°	Ø 50 x 10	32 x 32
BRC-273	6700 A°	1800	36°	110 x 110 x 20	102 x 102
BRC-280	7000 A°	1800	39°	110 x 110 x 20	102 x 102

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## Plane gratings

Catalog #	Wavelength	Line Spacing	Nominal Blaze Angle	Master Size (mm)	Maximum Ruled Area (mm)
BRC-281	7416 A°	66.6	1.42°	110 x110 x25	102 x 102
BRC-282	7500 A°	300	6.4°	135 x 220 x 35	130 x 210
BRC-283	7500 A°	1200	26.75	110 x 110 x 20	102 x102
BRC-300	1.0 um	300	8.6°	110 x 110 x 20	102 x 102
BRC-301	1.0 um	600	17.45°	110 x 110 x 25	102 x 102
BRC-302	1.2 um	600	21°	110 x 110 x 25	102 x102
BRC-303	1.3um	400	15	110 x110 x 25	102 x 102
BRC-304	1.5um	100	4.3	110 x110 x25	102 x 102
BRC-305	1.5um	120	5.5°	110 x 100 x 25	102 x 102
BRC-305	1.6um	150	6.9°	110 x 110 x25	102 x 102
BRC-307	1.6um	400	18.6°	68.6 x 68.6 x 25	64 x 64
BRC-308	1.6um	600	28°	110 x 110 x 26	102 x102
BRC-309	1.7um	300	14.8°	110 x 110 x 25	102 x 102
BRC-310	1.8um	75	4°	110 x 110 x 25	102 x 102
BRC-311	1.9um	300	17°	113 x 105 x 20	110 x 95
BRC-400	2.0 um	300	17.45°	110 x 110 x 25	102 x 102
BRC-401	2um	600	36°	Ø 160 x 20	110 x 110
BRC-402	2um	600	36°	58 x 58 x 16	52 x 52
BRC-403	2um	600	36°	110 x 110 x 25	102 x102

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## Plane gratings

Catalog #	Wavelength	Line Spacing	Nominal Blaze Angle	Master Size (mm)	Maximum Ruled Area (mm)
BRC-404	2.5um	600	48.9°	68.6 x 68.6 x 16	64 x 64
BRC-405	2.7um	450	38°	110 x 110 x 20	102 x 102
BRC-500	3.0um	20	1.7°	Ø 50x10	30 x 32
BRC-501	3um	150	13°	110 x 110 x 25	102 x 102
BRC-502	3.7um	80	8.6°	110 x 135 x 25	
BRC-503	4.2um	45	5.52°	110 x 110 x20	102 x 102
BRC-600	6.2um	55.38	10°	65 x 110 x16	58 x 90
BRC-601	6.4um	30.76	5.53°	110 x 110 x 20	102 x 102
BRC-602	6.3um	33.34	6°	110 x 110 x 20	102 x 102
BRC-700	7.4um	60	13°	110 x 110 25	102 x 102
BRC-701	7.6um	225	57.1°	58 x 58 x 10	54 x 54
BRC-800	8.5um	20.68	5°	110 x 110 x20	102 x 102
BRC-801	8.5um	23.07	5.6°	110 x 110 x 20	102 x 102
BRC-900	9um	200	63.4°	135 x 165 x 30	130 x 160
BRC-901	9.1um	21.05	5.5°	135 x 165 x 30	130 x 160
BRC-902	9.3um	171.42	52.1	58 x 58 x10	54 x 54
BRC-903	9.7um	50	15.27	42x40 x 10	40 x 38
BRC-1000	10um	20	5.7°	65 x 110 x20	40 x 104
BRC-1001	10um	20	5.7°	65x 50 x20	45 x 43

