Custom Coating Design & Fabrication

Coatings can dramatically change the performance of your finished optical assembly. Ross Optical can recommend coating options that reduce the time, cost, and complexity of multi-element optical systems and subassemblies. We offer a full range of coatings down to 220 nm.

In-House Optical Coatings

Our expanded in-house optical coating capabilities offer customers better timeline and quality control. We can provide in-house coating for our custom and standard optical lenses, or customers' lenses, from 250 to 2400 nm in as few as 3 days.

Our coating chambers supply the best quality coating in terms of film hardness, laser damage threshold, and optical performance. We can even achieve full-surface coating of micro optics.

Coating Capabilities

- Single layer magnesium fluoride coating
- Broadband anti-reflection (BBAR)
- Single wavelength AR coating (V-coating)
- Dual-band AR coating (W-coating)
- Beam splitters (plates and cubes)
- Polarization beam splitters
- Band pass filters
- High reflection all-dielectric coating
- Metallic mirrors (aluminum, silver, gold; protected; enhanced)
- Wavelength range from UV, visible, mid-IR to far IR
- Infrared coating services between 2 and 12 microns

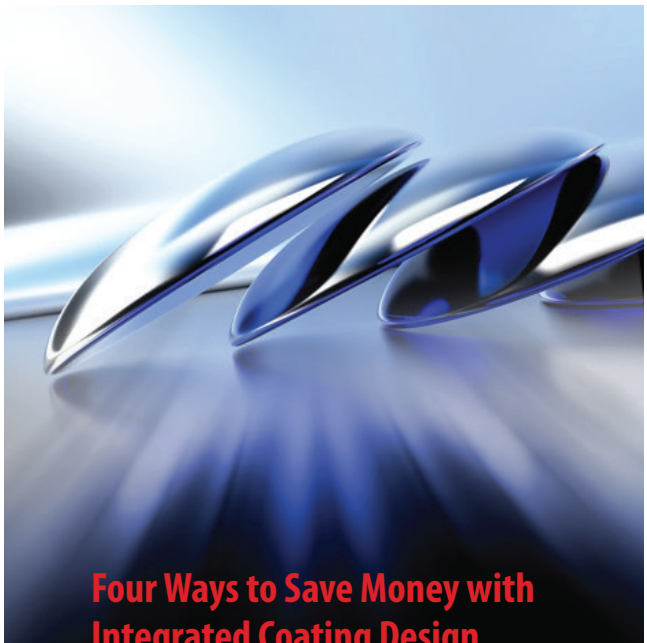
Available Substrate Materials

- Optical glass
- Sapphire
- Fused silica
- Quartz
- Silicon
- Germanium
- and more

Unparalleled Service

Ross Optical delivers with exceptional service that is well-suited to the needs of our OEM customers. Using our years of optics experience, we help customers get the best quality and performance for their optics investment. Our world-class testing and inspection team works to make sure that our optic components meet high standards for quality and reliability. Exhaustive testing and inspection means significant cost and time savings for OEM customers. And thanks to our extensive in-house coating expertise, we can offer coatings performance for even the smallest micro lenses.

At Ross Optical, service continues beyond the sale. We're particularly proud of our inventory control management processes and work to provide an ongoing flow of parts that keep our OEM customers moving, without supply chain headaches and without the added cost of maintaining huge parts inventories.



Four Ways to Save Money with Integrated Coating Design

In order to improve the final performance and cost of your optical assembly, coating choices must be an integral part of the design process.

1. Consider possible inter-wavelength effects, and optimize the sequence of coated optical elements during design.
2. Carefully choose surface locations, angles, and curvatures to maximize performance.
3. Tolerance your coatings as thoroughly as you tolerance your surfaces to avoid having to recoat.
4. Talk to a coating engineer early in the optical design process.

ROSS OPTICAL

A division of Precision Optics Corporation

Ross Optical Industries
1410 Gail Borden Place, A3
El Paso, TX 79935

800.880.5417
915.595.5417

sales@rossoptical.com
www.rossoptical.com

ITAR Registered. ISO 9001:2015 Certified.

Ross Optical Industries Coating Codes

Single Layer MgF2

Code	Wavelength / Range	Spectral Specs
100	340 nm	Depends on Substrate
101	364 nm	Depends on Substrate
102	408 nm	Depends on Substrate
105	490 nm	Depends on Substrate
110	550 nm	Depends on Substrate
112	633 nm	Depends on Substrate
120	660 nm	Depends on Substrate
125	680 nm	Depends on Substrate
127	720 nm	Depends on Substrate
129	770 nm	Depends on Substrate
130	785 nm	Depends on Substrate
135	800 nm	Depends on Substrate
140	830 nm	Depends on Substrate
141	850 nm	Depends on Substrate
145	875 nm	Depends on Substrate
150	900 / 904 nm	Depends on Substrate
152	940 nm	Depends on Substrate
160	1064 nm	Depends on Substrate
162	1200 nm	Depends on Substrate
163	1300 nm	Depends on Substrate
165	1550 nm	Depends on Substrate
166	1650 nm	Depends on Substrate
167	1800 nm	Depends on Substrate
170	2000 nm	Depends on Substrate

Broad Band AR (BBAR)

Code	Wavelength / Range	Spectral Specs
200	245-400 nm	Ravg<0.8%
205	300-500 nm	Ravg<0.8%
210	350-650 nm	Ravg<1.0%
211	350-800 nm	Ravg<1.5%
212	380-650 nm	Ravg<0.8%
215	400-700 / 450-650 nm	Ravg<0.8%
217	380-850 nm	Ravg<1.0%
220	400-900 nm	Ravg<1.0%
222	430-660 nm	Ravg<0.7%
225	420-1100 nm	Ravg<1.5%
227	450-1500 nm	Ravg<2.0%
228	470-550 nm	Rabs<0.5%
230	550-900 nm	Ravg<1.0%
232	550-1100 nm	Ravg<1.0%
233	500-1500 nm	Ravg<1.5%
235	600-700 nm	Ravg<0.5%
240	600-850 nm	Ravg<0.5%
241	600-1000 nm	Ravg<1.0%
242	610-930 nm	Ravg<1.0%
243	630-870 nm	Ravg<0.7%
244	650-790 nm	Ravg<0.7%
245	780-850 nm	Ravg<0.5%
248	700-900 nm	Ravg<1.0%
250	700-1100 nm	Ravg<1.0%
252	700-1500 nm	Ravg<1.0%
253	800-1600 nm	Ravg<1.0%
254	700-1700 nm	Ravg<1.5%
255	875-1125 nm	Ravg<1.0%
256	900-1100 nm	Rabs<0.5%
257	900-1700 nm	Ravg<1.5%
258	1000-1600 nm	Ravg<1.0%
260	1064-1342 nm	Ravg<0.8%
265	1100-1800 nm	Ravg<1.0%
270	1200-1800 nm	Ravg<1.0%
280	1300-1600 nm	Ravg<0.7%
282	1300 -2400 nm	Ravg<1.0%
285	1500-1600 nm	Ravg<0.5%

Narrow Band AR (NBAR)

Code	Wavelength / Range	Spectral Specs
287	635-675 nm	Ravg<0.25%
288	660-690 nm	Ravg<0.25%
290	780-850 nm	Ravg<0.25%
291	800-900 nm	Ravg<0.50%
292	810-850 nm	Ravg<0.25%
293	830-850nm	Ravg<0.50%
294	970-990 nm	Ravg<0.25%
295	878-926 nm	Ravg<0.50%
296	1500-1600 nm	Ravg<0.25%
298	1530-1560 nm	Ravg<0.25%
299	1545-1565 nm	Ravg<0.25%

Single Wavelength V-coat

Code	Wavelength / Range	Spectral Specs
300	253 nm	Rabs<0.25%
305	355 nm	Rabs<0.25%
309	400 nm	Rabs<0.25%
310	405 nm	Rabs<0.25%
313	450 nm	Rabs<0.25%
315	488 nm	Rabs<0.25%
320	532 nm	Rabs<0.25%
322	589 nm	Rabs<0.25%
325	632 / 633 / 639 nm	Rabs<0.25%
326	650 nm	Rabs<0.25%
327	660 nm	Rabs<0.25%
328	670 nm	Rabs<0.25%
330	680/ 685 nm	Rabs<0.25%
333	755 nm	Rabs<0.25%
335	780 nm	Rabs<0.25%
340	810 nm	Rabs<0.25%
342	830 nm	Rabs<0.25%
345	840 nm	Rabs<0.25%
347	850 nm	Rabs<0.25%
349	860 nm	Rabs<0.25%
350	880 nm	Rabs<0.25%
355	900 / 904 nm	Rabs<0.25%
360	945 nm	Rabs<0.25%
370	1060 / 1064 nm	Rabs<0.25%
380	1300 nm	Rabs<0.25%
385	1450 nm	Rabs<0.25%
388	1535 nm	Rabs<0.25%
390	1550 nm	Rabs<0.25%
394	1582 nm	Rabs<0.25%
395	1590 nm	Rabs<0.25%
397	1600 nm	Rabs<0.25%
398	1647 nm	Rabs<0.25%

Metal-Coated Mirrors

Code	Wavelength / Range	Spectral Specs	Spectral Specs
500	Bare Aluminum Mirror	400-1200 nm	R > 90%
503	Protected Aluminum Mirror	400-800 nm	R > 85%
505	Enhanced Aluminum Mirror	450-650 nm	R > 95%
550	Silver Mirror	450-1000 nm	R > 95%
555	Protected Siliver Mirror	450-10000 nm	R > 90%
580	Bare Gold Mirror	700-10000 nm	R > 98%
585	Protected Gold Mirror	700-10000 nm	R > 95%
800	Infrared Coating	3-5 microns	Ravg < 3.0%

Dual Wavelength AR Coating

Code	Wavelength / Range	Spectral Specs
600	532 & 633 nm	R < 0.5%
605	532 & 852nm	R < 0.5%
610	533 & 1064 nm	R < 0.5%
611	532 $ 1535 nm	R < 0.5%
612	635 & 852nm	R < 0.5%
615	633 or 635 & 880 nm	R < 0.5%
620	650 & 1064 nm	R < 0.5%
630	400 & 800 nm	R < 0.5%
640	980 & 1535-1570 nm	R < 0.5%
660	1064 & 1550 nm	R < 0.5%
680	1310 & 1550 nm	R < 0.5%
690	1550 & 2025 nm	R < 0.5%

Triple Wavelength AR Coating

Code	Wavelength / Range	Spectral Specs
700	830, 1300 & 1550 nm	R < 0.5%
702	532, 1064 & 1550 nm	Ravg < 0.5%
705	830, 1064 & 1550 nm	R < 0.5%

Beam Splitter

Code	Wavelength / Range	Spectral Specs
400	400-700 nm	T/R = 95/05
410	400-700 nm	T/R = 90/10
420	400-700 nm	T/R = 80/20
430	400-700 nm	T/R = 70/30
440	400-700 nm	T/R = 50/50
450	400-700 nm	T/R = 30/70