Tydex supplies passive optical elements for different kinds of radiation sources lasing from 200 nm to 11 mm. Here are some examples of optical elements demonstrating the range of our products and coatings.

Ar-ion laser

- UV Fused Silica cylindrical lens, AR/AR (R<=0.25%)@244nm
- UV Fused Silica Lloyd mirror, R>95% @ 244 nm, AOI=73° +/-5°, S-polarization, laser parameters - 1.25W/cm^2 @ 244 nm, CW
- UV Fused Silica mirror, R >= 99.5% @ 470-520 nm

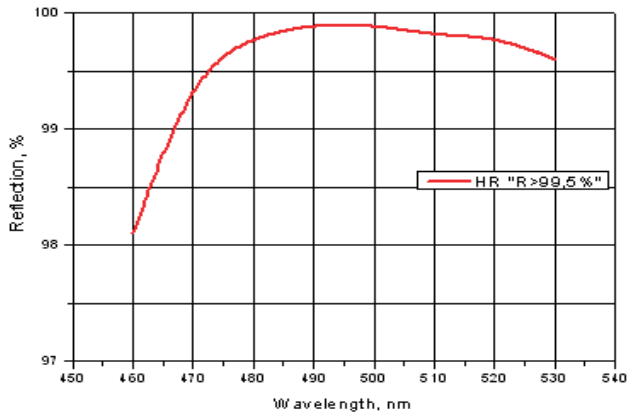

Fig.1. Reflection vs wavelength for HR coating from 470 to 520 nm

- UV Fused Silica beamsplitter, R=50% +/-5%/ R=70% +/-4% @ 470-520 nm, laser parameters - 50 mW/cm^2, CW @ 488 nm & 514.5 nm

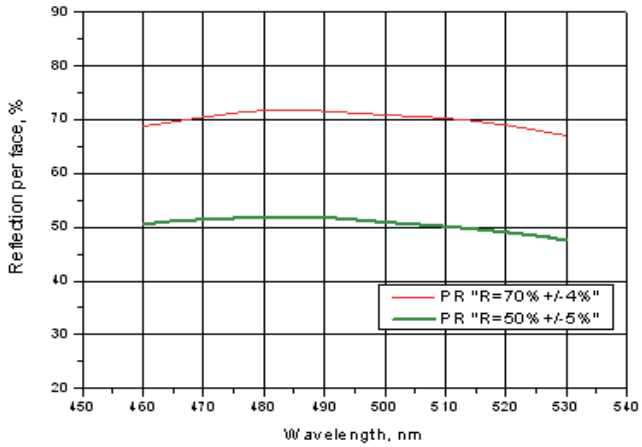

Fig.2. Reflection vs wavelength for PR coating from 470 to 520 nm

- UV Fused Silica cylindrical lens for fiber Bragg gratings engraving, AR/AR (R <= 0.25%) @ 244 nm, laser parameters - 1.7 W/cm^2, CW

Excimer lasers

- UV Fused Silica prism for XeCl laser, AR/AR (R<=0.25%) @308 nm
- UV Fused Silica output laser cavity mirror for XeCl laser, AR (R <= 0.25%) @ 280-308 nm /R=50.0 +/-5% @ 280-308 nm, AOI=0°

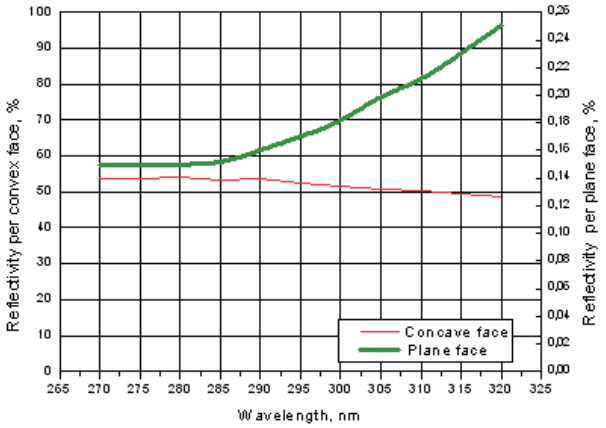

Fig.3. Reflection vs wavelength for concave face (PR coating-50%) and plane face (BBAR coating)

- UV Fused Silica mirror for XeCl laser, R>=99.0%@ 308 nm, AOI=45°, laser parameters - 4 J/cm^2, 20 ns, 10 Hz
- UV Fused Silica plano-convex lens for KrF laser, AR/AR (R<=0.5%) @ 248-355 nm, laser parameters - 4 J/cm^2, 6 ns, 10 Hz

N2 - laser

- UV Fused Silica lens, AR/AR (R <= 0.2%) @ 337.1 nm

Cu-vapour laser

- Sapphire window, AR/AR (R <= 0.3%) @ 511 nm & 578 nm, laser parameters - 100 W/cm^2, 50 ns

He-Ne laser

- BK7 mirror, R >= 99% @ 632.8 nm, AOI=45°, unpolarized, laser parameters - 100 mW/cm^2, CW

Ti:Sapphire laser

- BK7 lens, BBAR/BBAR (R <= 0.3%) @ 700-900 nm

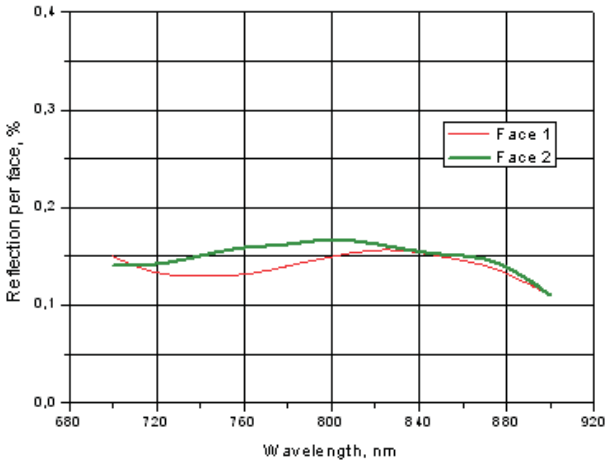

Fig.4. Reflection vs wavelength for BBAR coating from 700 to 920 nm

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- BK7 mirror, R>=99.0% @ 720+/-25 nm, AOI=45°, P-polarization
- BK7 dichroic mirror (hot mirror), R=95.0%+/-4% @ 900-1100 nm, T>=90%@808nm, laser parameters - 5 J/cm^2, 10 ns, 80 Hz

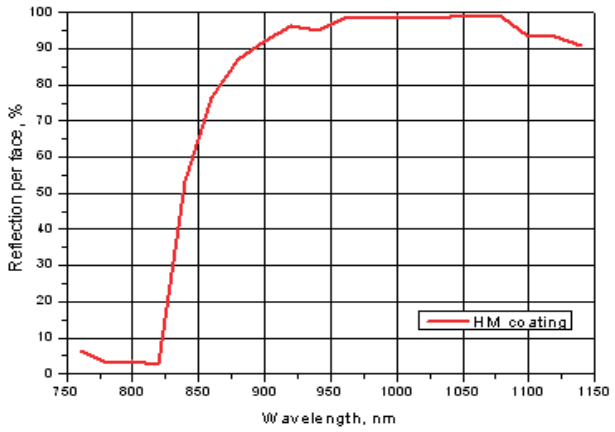

Fig.5. Reflection vs wavelength for Hot Mirror coating from 760 to 1100 nm

- BK7 dichroic mirror (cold mirror), R >= 99.5% @ 800 +/-40 nm, T >= 85% @ 950-1400 nm, AOI=45°, laser parameters - 4 J/cm^2, 8 ns, 20 Hz

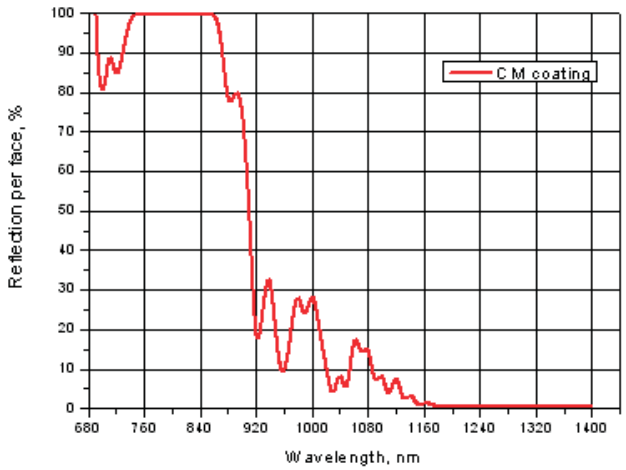

Fig.6. Reflection vs wavelength for Cold Mirror coating from 700 to 1400 nm

Yb:KGW laser

- UV Fused Silica end cavity cylindrical mirror, R >= 99.8% @ 1025-1045 nm, AOI=0°

Nd:YAG laser

- UV Fused Silica plano window, AR/AR (R <= 0.2%) @ 1064 nm, laser parameters - 10 J/cm^2, 8 ns, 10 Hz
- BK7 plano window, AR/AR (R <= 0.2%) @ 532 nm
- BK7 prism, AR/AR (R <= 0.5%) @ 1064 nm, laser parameters - 5 J/cm^2, 10 ns, 20 Hz
- BK7 output coupler for laser cavity, AR (R <= 0.25%) @ 1064 nm/R=50% +/-5% @ 1064 nm, AOI=0°
- Bk7 plano-convex lens, AR/AR (R <= 0.25%) @ 1064 nm & 355 nm, AOI=0°, laser parameters - 3 J/cm^2, 6 ns, 20 Hz

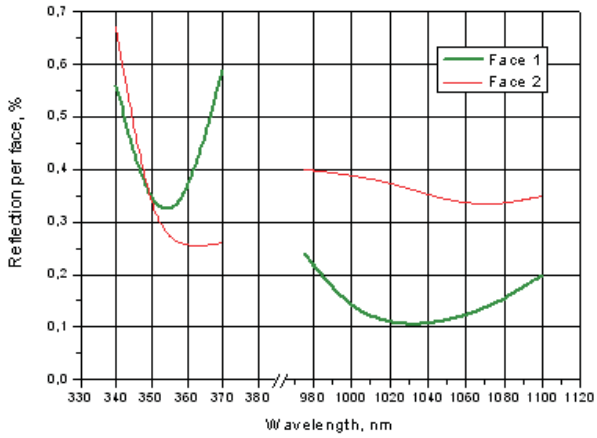

Fig.7. Reflection vs wavelength for AR/AR coating@350 nm and 1064 nm

- UV Fused Silica plano-convex lens, AR (R<=0.25%) @ 266nm
- UV Fused Silica laser mirror, R >= 99.5% @ 266 nm, AOI=45°, S-polarization, laser parameters - 3 J/cm^2, 6 ns, 10 Hz
- BK7 end cavity mirror, R >= 99.5% @ 1064 nm, AOI=0°, laser parameters - 250 J/cm^2, 3 ms, 5 Hz
- BK7 dichroic mirror, AR (R >= 0.5%) @ 266 nm/R>=99.5% @ 280-308 nm, T >= 90% @ 266 nm, AOI=0°

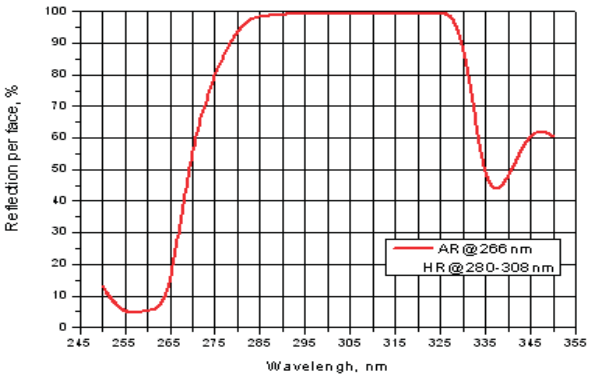

Fig.8. Reflection vs wavelength for dichroic mirror coating from 250 to 350 nm

- BK7 dichroic beam combiner, AR (R <= 0.25%) @ 1064 nm/R >= 35% +/-5% @ 670 nm, T > 90% @ 1064 nm, AOI=45°, unpolarized
- BK7 dichroic beamsplitter, AR (R <= 0.25%) @ 532 nm, P-polarization/R >= 99.5% @ 1064 nm, S-polarization, T >= 95% @ 532 nm, P-polarization, AOI=15°, laser parameters - 8 J/cm^2, 6 ns, 10 Hz

Er:Glass laser

- IR grade Fused Silica prism, AR (R <= 0.5%) @ 1500-2000 nm, laser parameters - 4 J/cm^2, @ 1540 nm, 8 ns, 10 Hz

Laser diodes

- BK7 window, AR/AR (R≥ 0.25%) @675 +/-30 nm
- BK7 scanning mirror, R>98%@675(+/-30) nm, AOI=19-61°
- BK7 mirror , R>98%@675(+/-30) nm, AOI=3-5°
- UV Fused Silica dichroic beamsplitter, AR(R≤0.25%)@800-1100 нм/ R≥99.5%@930-950 nm, T≥95%@808 nm, T≥70%@1064 nm, AOI=0°

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