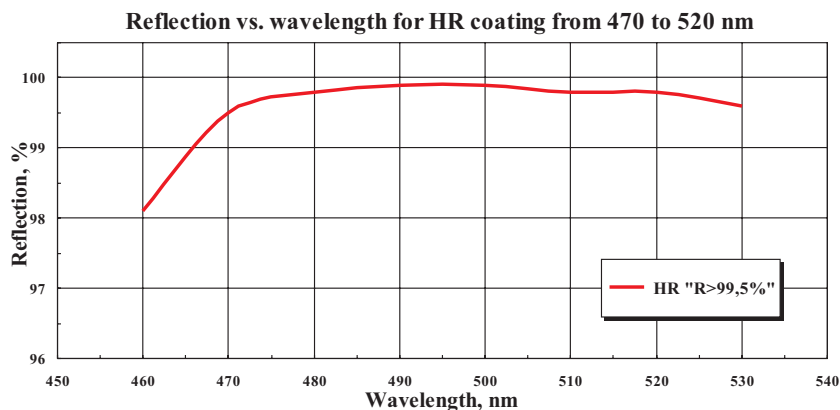


PASSIVE OPTICS for UV-, VIS-, IR-LASERS, and LASER DIODES

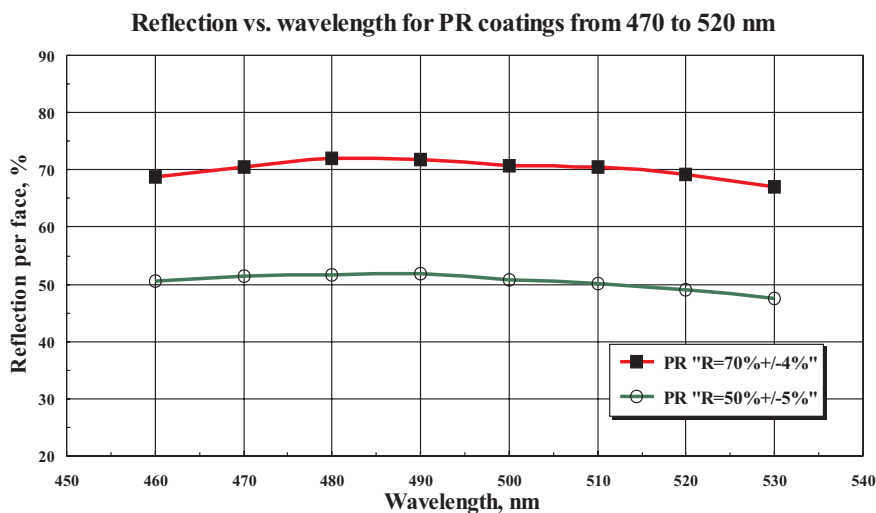
Tydex supplies passive optical elements for different kinds of radiation sources lasing from 200 nm to 11 mm. Here are some examples of optical elements demonstrating the range of our products and coatings.

Ar-ion laser

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



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



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

Excimer lasers

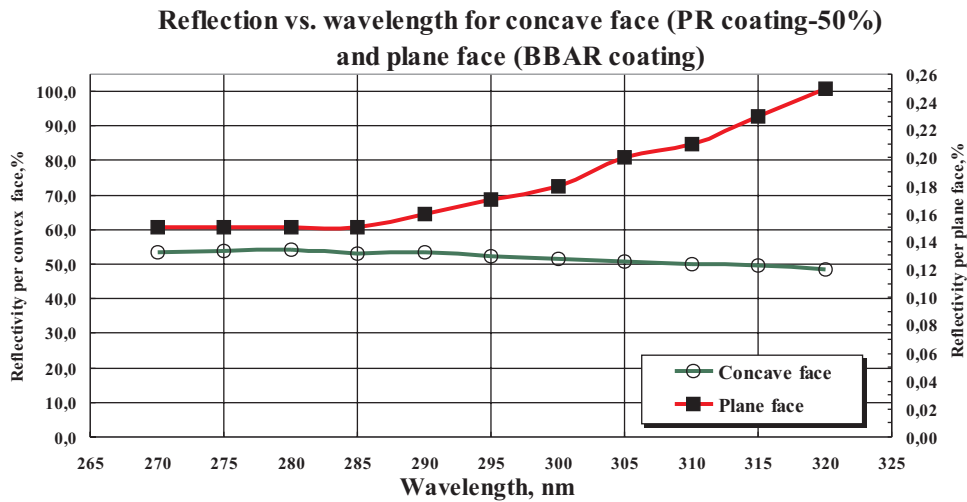
- UV Fused Silica prism for XeCl laser, AR/AR ($R \leq 0.25\%$) @ 308 nm



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



- UV Fused Silica mirror for XeCl laser, $R \geq 99.0\%$ @ 308 nm, AOI=45°, laser parameters - 4 J/cm², 20 ns, 10 Hz
- UV Fused Silica plano-convex lens for KrF laser, AR/AR ($R \leq 0.5\%$) @ 248-355 nm, laser parameters - 4 J/cm², 6 ns, 10 Hz

N2 - laser

- UV Fused Silica lens, AR/AR ($R \leq 0.2\%$) @ 337.1 nm

Cu-vapour laser

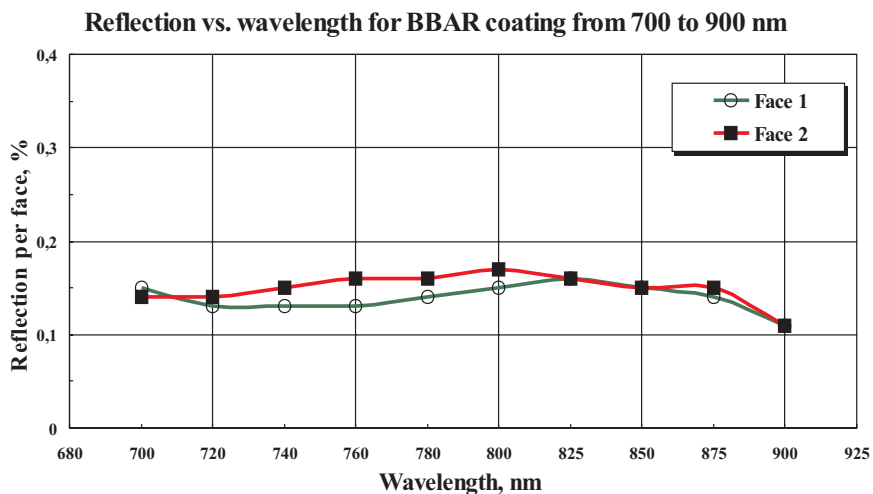
- Sapphire window, AR/AR ($R \leq 0.3\%$) @ 511 nm & 578 nm, laser parameters - 100 W/cm², 50 ns

He-Ne laser

- BK7 mirror, $R \geq 99\%$ @ 632.8 nm, AOI=45°, unpolarized, laser parameters - 100 mW/cm², CW

Ti:Sapphire laser

- BK7 lens, BBAR/BBAR ($R \leq 0.3\%$) @ 700-900 nm

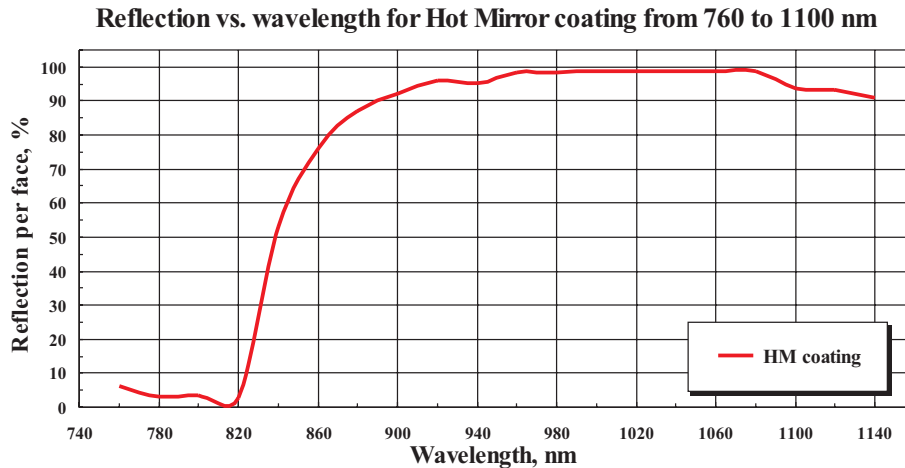


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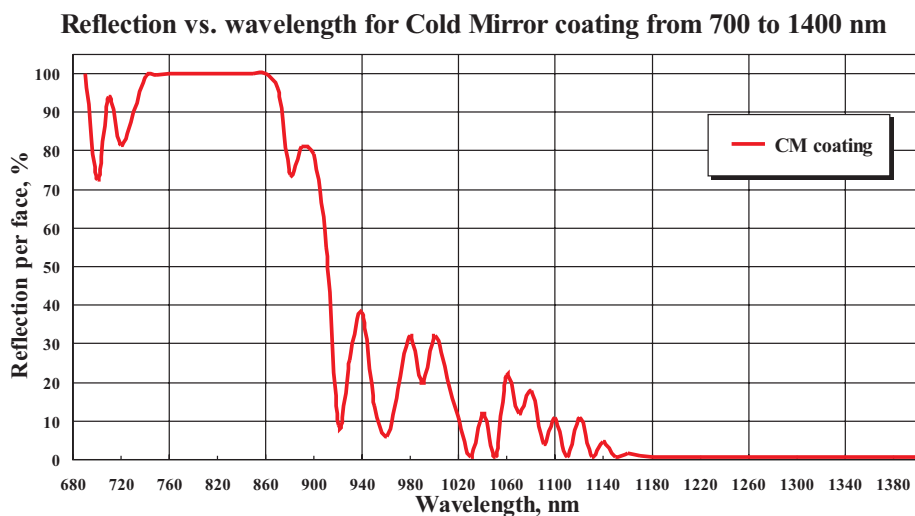
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PASSIVE OPTICS for UV-, VIS-, IR-LASERS, and LASER DIODES

- BK7 mirror, $R \geq 99.0\%$ @ 720 +/-25 nm, AOI=45°, P-polarization
- BK7 dichroic mirror (hot mirror), $R=95.0\% \pm 4\%$ @ 900-1100 nm, $T \geq 90\%$ @ 808 nm, laser parameters - 5 J/cm², 10 ns, 80 Hz



- BK7 dichroic mirror (cold mirror), $R \geq 99.5\%$ @ 800 +/-40 nm, $T \geq 85\%$ @ 950-1400 nm, AOI=45°, laser parameters - 4 J/cm², 8 ns, 20 Hz



Yb:KGW laser

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

Nd:YAG laser

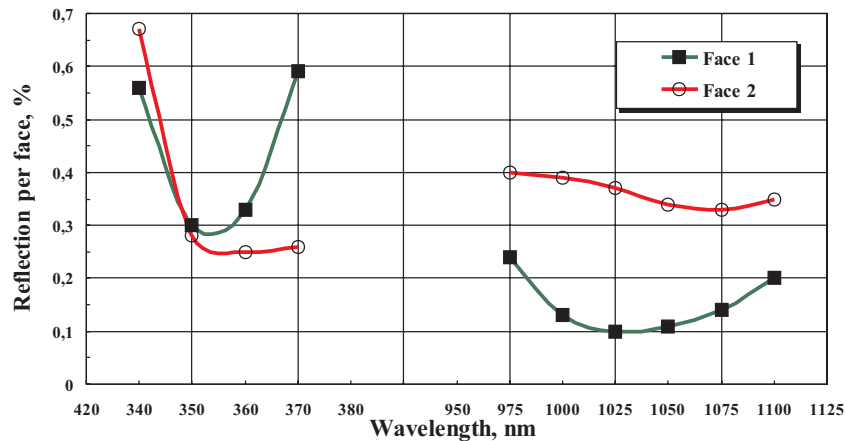
- UV Fused Silica plano window, AR/AR ($R \leq 0.2\%$) @ 1064 nm, laser parameters - 10 J/cm², 8 ns, 10 Hz
- BK7 plano window, AR/AR ($R \leq 0.2\%$) @ 532 nm
- Bk7 plano-convex lens, AR/AR ($R \leq 0.25\%$) @ 1064 nm & 355 nm, AOI=0°, laser parameters - 3 J/cm², 6 ns, 20 Hz



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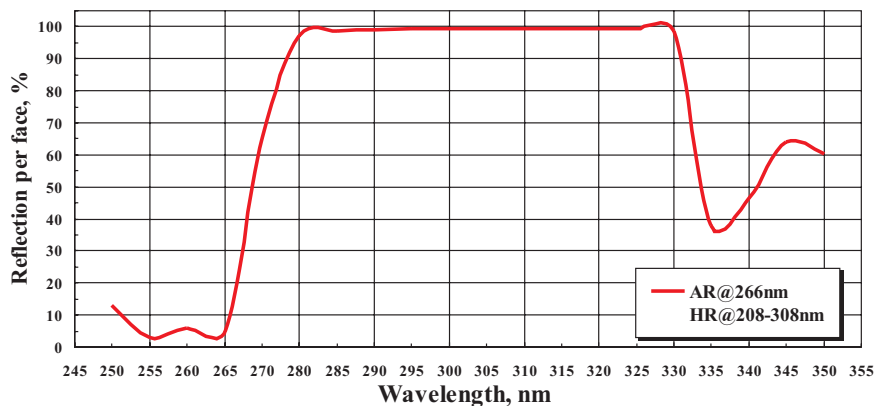
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Reflection vs. wavelength for AR/AR coating @355nm and 1064 nm



- UV Fused Silica plano-convex lens, AR ($R \leq 0.25\%$) @ 266 nm
- BK7 prism, AR/AR ($R \leq 0.5\%$) @ 1064 nm, laser parameters - 5 J/cm², 10 ns, 20 Hz
- BK7 output coupler for laser cavity, AR ($R \leq 0.25\%$) @ 1064 nm/ $R=50\% \pm 5\%$ @ 1064 nm, AOI=0°
- UV Fused Silica laser mirror, $R \geq 99.5\%$ @ 266 nm, AOI=45°, S-polarization, laser parameters - 3 J/cm², 6 ns, 10 Hz
- BK7 end cavity mirror, $R \geq 99.5\%$ @ 1064 nm, AOI=0°, laser parameters - 250 J/cm², 3 ms, 5 Hz
- Bk7 dichroic mirror, AR ($R \geq 0.5\%$) @ 266 nm/ $R \geq 99.5\%$ @ 280-308 nm, $T \geq 90\%$ @ 266 nm, AOI=0°

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



- BK7 dichroic beam combiner, AR ($R \leq 0.25\%$) @ 1064 nm/ $R \geq 35\% \pm 5\%$ @ 670 nm, $T > 90\%$ @ 1064 nm, AOI=45°, unpolarized
- BK7 dichroic beamsplitter, AR ($R \leq 0.25\%$) @ 532 nm, P-polarization/ $R \geq 99.5\%$ @ 1064 nm, S-polarization, $T \geq 95\%$ @ 532 nm, P-polarization, AOI=15°, laser parameters - 8 J/cm², 6 ns, 10 Hz

Er:Glass laser

- IR grade Fused Silica prism, AR ($R \leq 0.5\%$) @ 1500-2000 nm, laser parameters - 4 J/cm², @ 1540 nm, 8 ns, 10 Hz

Laseer diodes

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



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