5/31/2021 Laser Mirrors



Collaboration | Engineering | Performance

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Laser Mirrors

Advanced Thin Films offers laser mirrors and custom coatings covering the spectrum from ultraviolet through the near infrared (257nm to 3µm wavelength). These coatings are available on a variety of flat and curved substrates, and also on a wide variety of glass and crystal materials.

Laser Mirrors

IBS-coated mirrors can be manufactured to your specifications, covering a wide array of sizes, shapes, and wavelengths. When deposited on ATF's precision polished substrates, mirrors made with IBS coatings are ideal for ultra-high power and intra-cavity applications, with the ability to survive fluences present in the most cutting edge laser design applications.

Broadband Mirrors

The tight spectral control afforded by our IBS technology allows for the design and manufacture of custom broadband reflective mirrors covering the UV, visible, and near-IR wavelength ranges, with reflectivity > 99%, independent of angle and polarization. IBS-coated broadband mirrors are superior to metallic broadband mirrors in terms of absolute reflectivity, durability, while still capable of handling high laser fluence.

CRD Mirrors

Combined with ATF's ability to make super-polished substrates with surface roughness < 1Å RMS, IBS-coated optics can offer reflectivities of 99.999% or more, with losses due to scatter and absorption measured in the ppm range. Plano and concave mirrors can be manufactured to support cavity finesse of 100,000 or more, dependent on the specific wavelength or wavelengths in use. Primary uses include high-power CW lasers for defense and industrial markets, as well as environmental sensing applications.

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