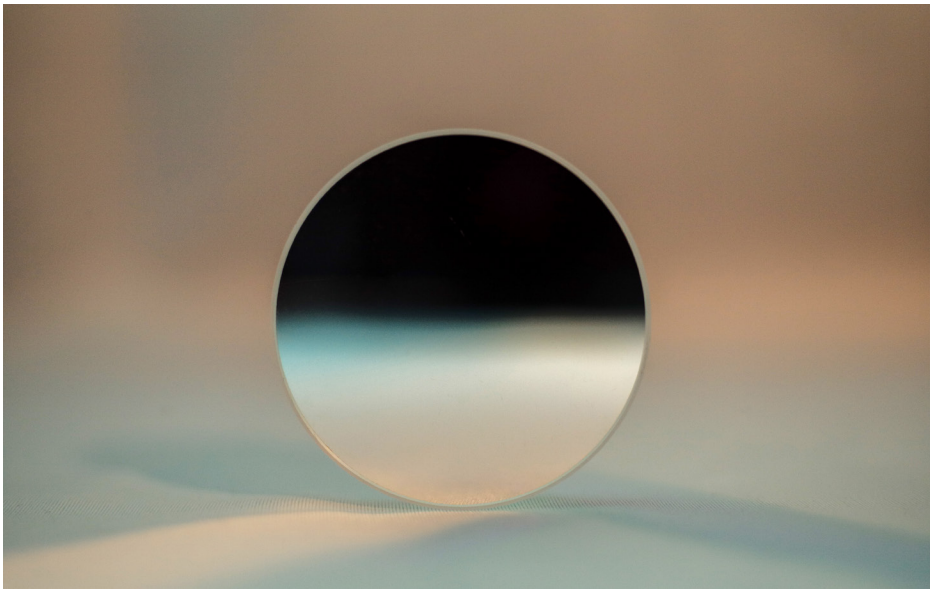

Phase Shifting Mirrors: An alternative to traditional waveplates

Laser systems are growing increasingly complex and laser intensities are becoming higher than ever before. With this, conventional quartz waveplates are beginning to approach their limits. This is because the waveplates are limited by the LIDT of the intrinsic material and the physical size of naturally occurring quartz. There are also limits to waveplate polishing, leading to imperfections on the surface, causing inhomogeneities in the phase across the diameter of the beam.

Hybrid dielectric-metal coatings specifically designed for polarisation control provide an alternative coating approach. Advantages of this method include not being limited to the size of naturally occurring material and high LIDT due to the reflection from dielectric layers. Along with this, the coating can be specifically tailored to the application through the coating design process, also allowing the manufacturing of broadband phase shifting mirrors.

Our phase shifting mirrors are capable of good performance over broad band-widths, with broadband reflectivity over 99%, low Group Delay Dispersion and broad characteristic phase delay. To find out more about how we create hybrid dielectric-metal coated phase shifting mirrors, along with how they could benefit your business, please contact sales@mpo.im

Manx Precision Optics