GRADED REFLECTIVITY MIRROR

INO is a world-class center of expertise in industrial applications for optics and photonics and is a world leading technology developer. INO's Graded Reflectivity Mirrors (GRMs), now widely used by major laser manufacturers and world-renowned laboratories, are an anti-reflection-coated transparent substrate, on which profiled dielectric layers are deposited using aproprietary vacuum technique. It is a lossless dielectric component with a high-damage treshold.

APPLICATIONS

OUTPUT COUPLING

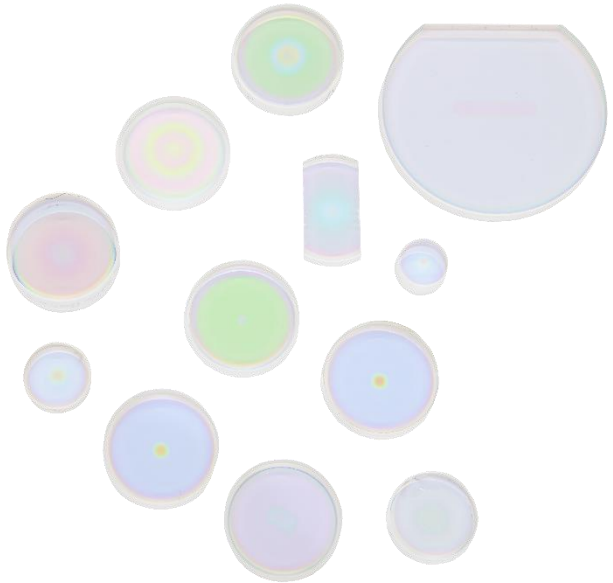
The GRM can be used as the output coupler of a laser resonator. In a stable configuration, the GRM acts as a soft aperture but with the added benefit that the induced loss also serves as useful laser output thus improving the discrimination and the pointing stability of the output beam. However, the GRM is most useful as the output coupler of an unstable resonator, ensuring fundamental mode oscillation but without any hard-edge-induced rippling of the field transverse profile.

BEAM SHAPING

A GRM can be used to tailor an already existing beam to a different shape, e.g. from Gaussian to Super-Gaussian or vice-versa. This may be done either in reflection or in transmission.

FEATURES

. Custom-designed to match each laser type
. Multi-layer design produces a high reflectivity GRM for use with lower-gain lasers
. Wavelength-specific design from the UV (250 nm) to the infrared (12 µm)
. Wideband GRMs for tunable lasers up to 80 nm bandwidth
. Circular and rectangular GRM profiles available
. Laser resonator design service available
. High-damage threshold



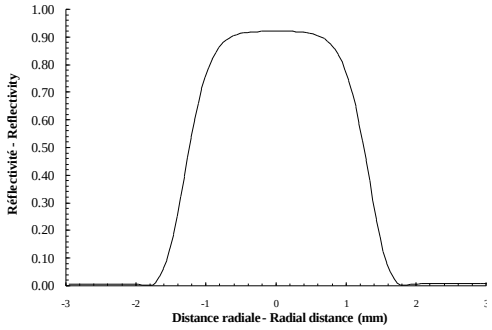
* Specifications subject to change without prior notice

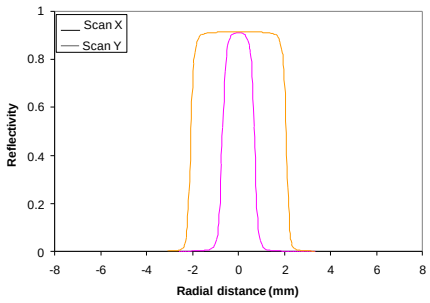
MKT-2019-VSI-11

GRADED REFLECTIVITY MIRROR

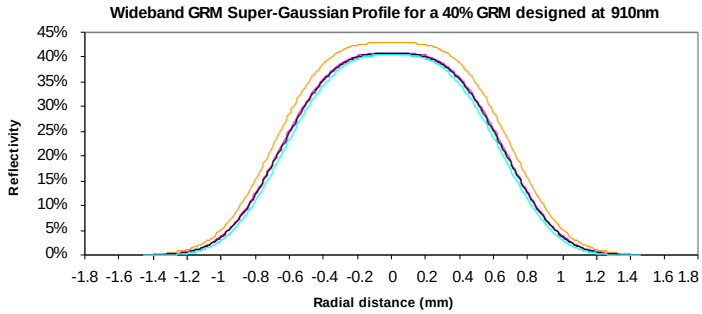
Typical Specifications

Mirror size	25.4, 50.8 mm or to user's specifications
Mirror wedge	Recommended 1° or to user's specifications
Mirror curvature	≥ 0.25 m or to user's specifications
Reflectivity profile	Gaussian, Super-Gaussian, parabolic, rectangular, apodizing function or any other arbitrary function
Substrate material	Fused silica, BK-7, germanium and zinc selenide, sapphire, MgF_2, CaF_2 (for other types, contact INO)
Dimensional tolerances	Surface figure of bare substrate: λ/10- λ/20 Diameter: +0.000"/- 0.004"
Surface quality	Scratch dig: 10-5





Our Graded Reflectivity Mirrors are designed to match each laser type. INO can also design your laser resonator.



Price is determined by the material and dimensions of the substrate, the coating required and the number of identical units.

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