



UltraMAX R

for ultra-high performance on optoSiC+ mirrors

optoSiC® UltraMAX R is a high reflectivity coating with an enhancing dielectric stack and is a NON-RADIOACTIVE ThF₄-free product.

UltraMAX R retains ultra-high reflectivity for both P- and S-Polarisation when used with angles of incidence common in galvano scanning.

UltraMAX R shows near zero phase shift to meet the toughest demands required for high power CO₂ laser applications.

UltraMAX R coated optoSiC+ mirrors can withstand laser powers > 5kW with a measured CW laser induced damage threshold (LIDT) of typically 500 Watts per linear millimetre of beam diameter (1/e² intensity points) ±10% at 45° Angle of Incidence.

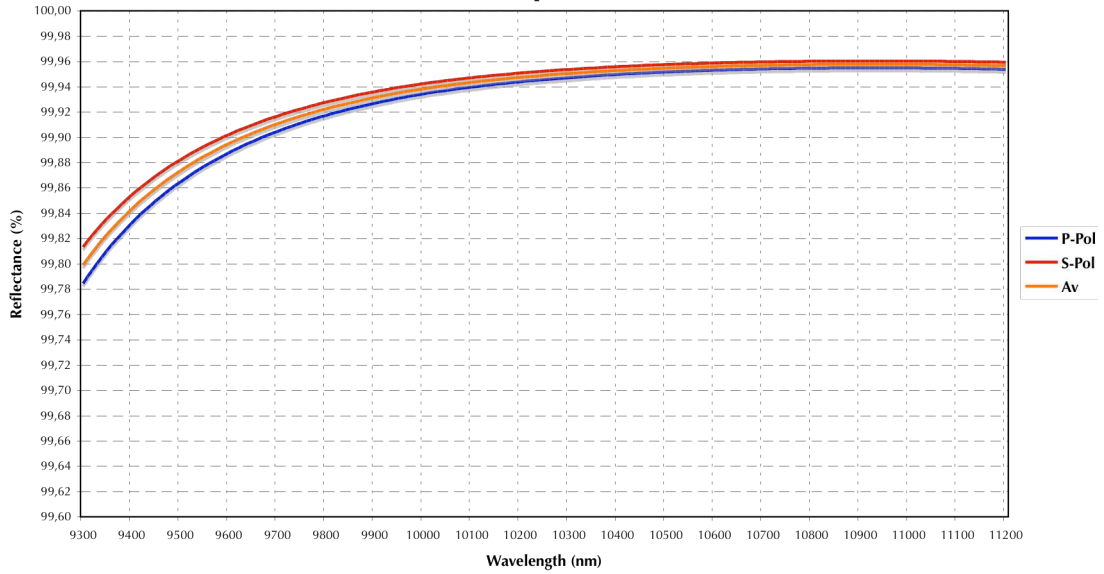
UltraMAX R on optoSiC+ Specifications:

Surface Form Accuracy	< $\lambda/20$ over 90% diameter (10600nm)
Surface Roughness	< 50Å RMS (Rq <0.00005)
Phase Shift	< ±2% (10600nm)
Reflectivity @633nm	High (for HeNe laser alignment)
CW LIDT	500W/mm ±10% (1/e ²)
Density	4.506g/cm ³
Thickness	7.8µ ±2.5%
Minimum Jig Lip	500µ
Maximum Size	within ø200mm
Adhesion and Durability	To MIL-C-48497A Extremely hard coating Passes severe abrasion test

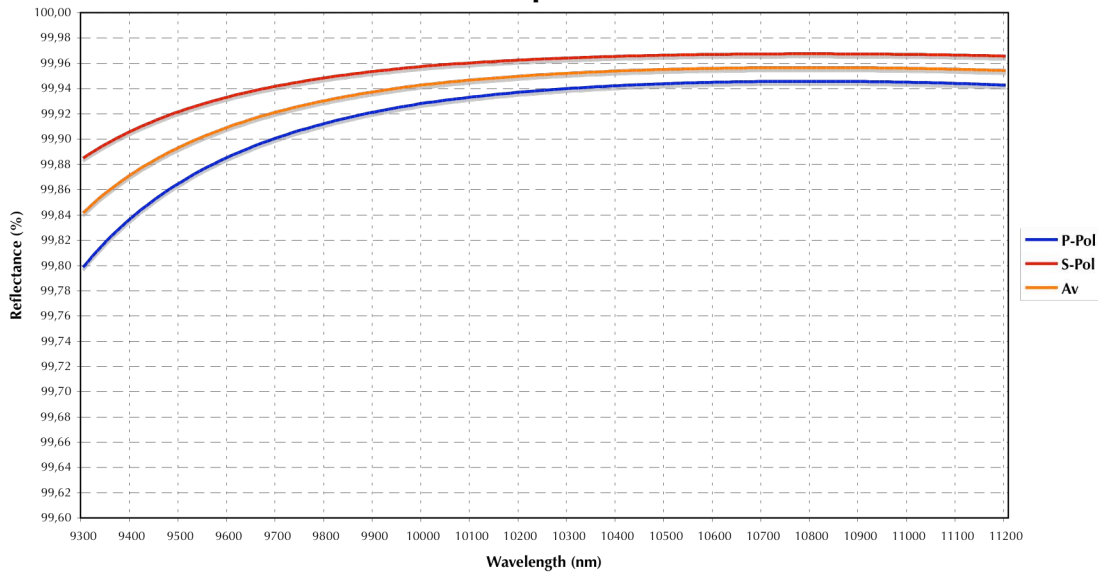
The reflectivity shown in the following graphs are the guaranteed values

Measured samples usually give slightly higher percentage reflectance values

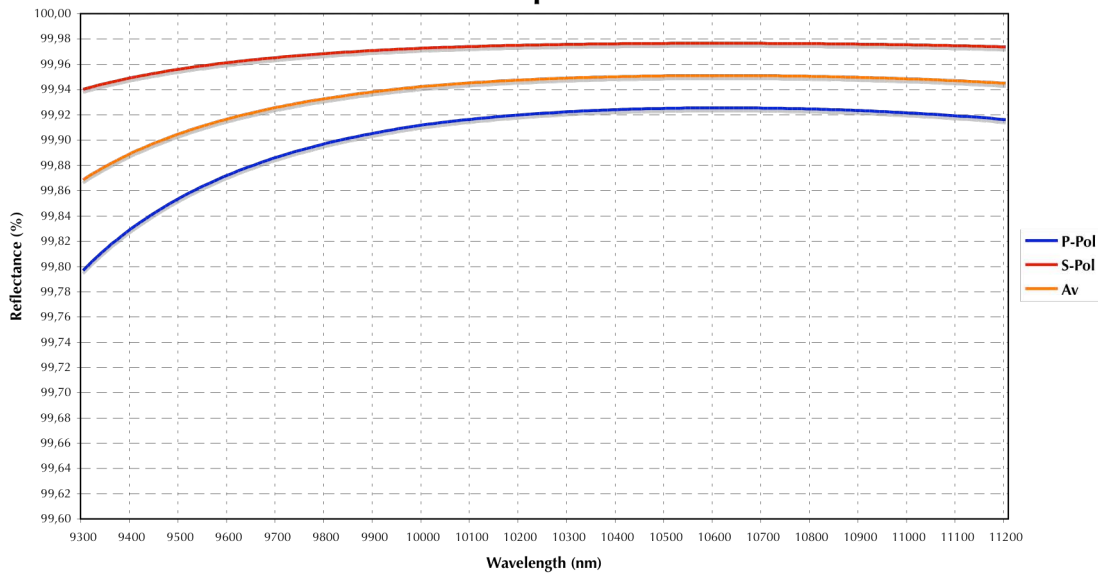
UltraMax R on optoSiC+ at 15° Aol



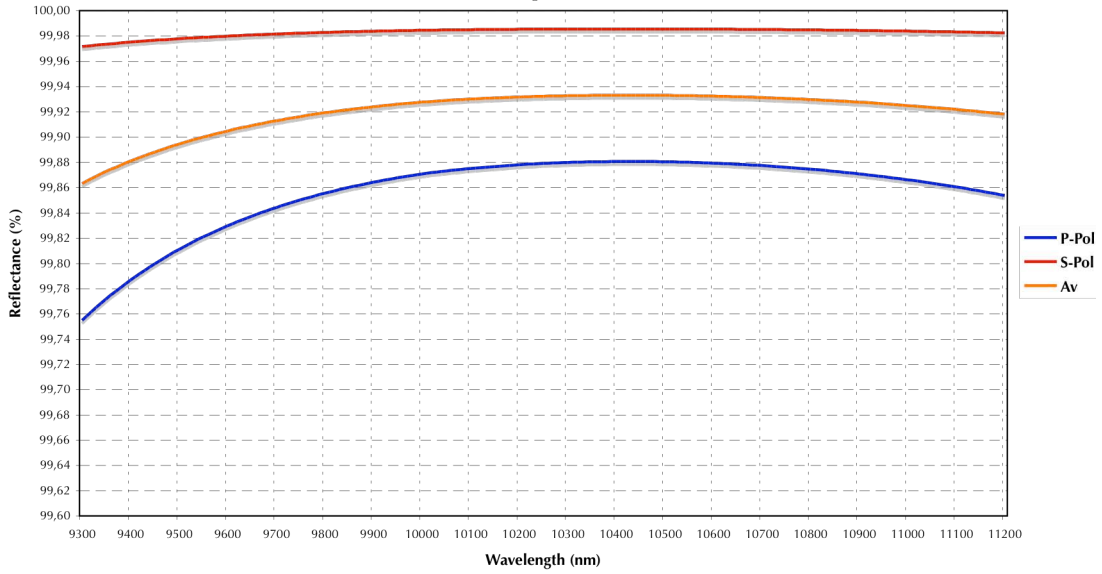
UltraMax R on optoSiC+ at 30° Aol



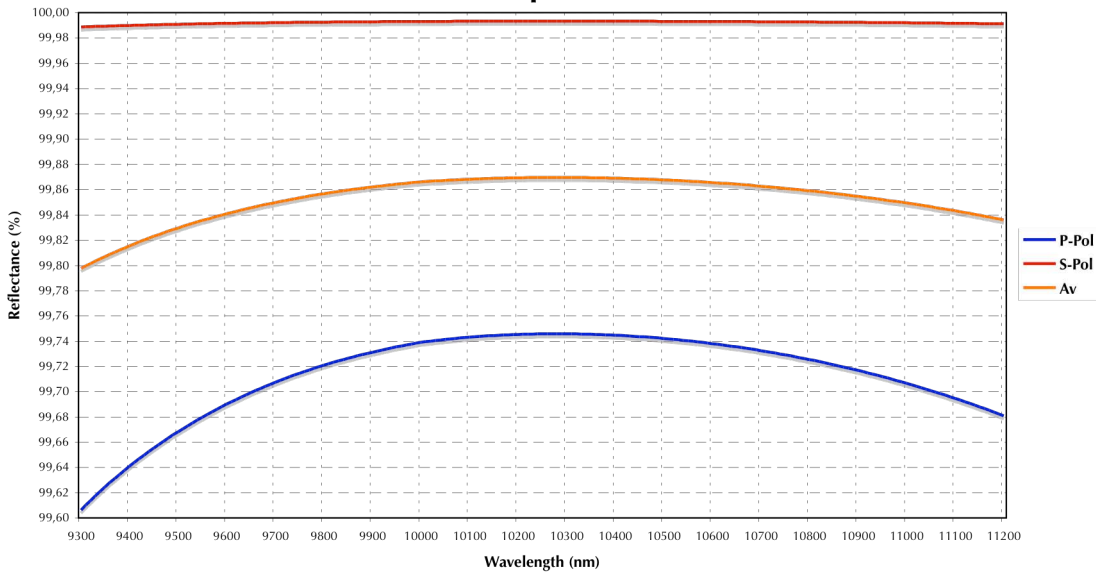
UltraMax R on optoSiC+ at 45° Aol



UltraMax R on optoSiC+ at 60° Aoi



UltraMax R on optoSiC+ at 75° Aoi



UltraMax R on optoSiC+ Phase Shift

