Pulsed Dual Enhanced Silver for 1.06µm and 0.6328µm - PDES

COATING DATA SHEET

Application

The Pulsed Dual Enhanced Silver (PDES) coating was developed specifically for applications using pulsed YAG lasers where a moderate level of damage threshold is required. The coating reflectivity has been optimized for 1.06µm and 0.6328µm wavelengths.

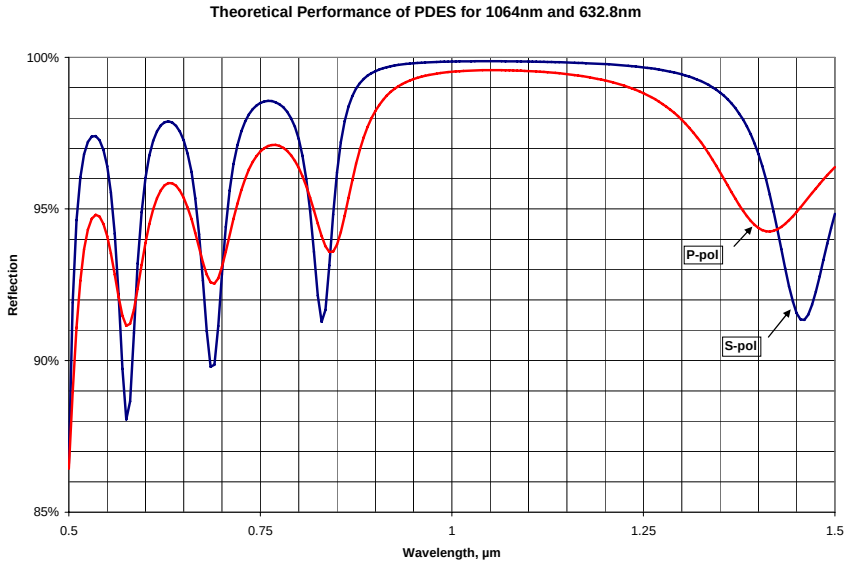
The PDES was designed for an angle of incidence (AOI) of 45˚; however, the reflectivity trace for both wavelengths is relatively flat over a large range of AOI.

The typical substrate material for the PDES is silicon, but fused silica is an alternative material where mechanical stiffness is less critical.

One of the most common commercial applications for the PDES coating is YAG laser marking. PDES coated galvo mirrors have superior efficiency due to their high reflectivity at 1.06µm. The visible reflectivity permits the system to be easily aligned, and provides a secondary level of safety to alert the user when the beam is on.

Spectral Performance

1.064µm	99.5% @ 45˚ R-Pol
0.6328µm	95.0% @ 45˚ R-Pol
0.63-0.67µm >	80.0% @ 45˚ R-Pol



Typical Damage Threshold*

<= 5J/cm2 @ 100ns @ 1.064µm

*Damage threshold certification per batch is available for a fee.