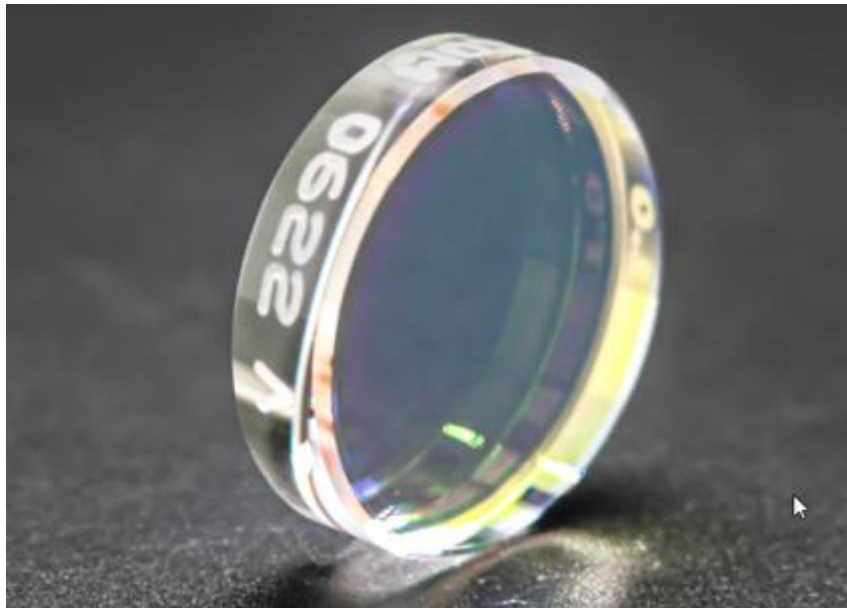


Low loss ultra-high laser reflection plane mirror 1450-1650 nm reflectivity 99.99%



● **Product Description**

For applications requiring extremely low-loss coated optics, Xiaoxiao Photonics can provide mirrors with $R > 99.995\%$ and total losses less than 10 ppm. Such super-reflective mirrors can be used in ring laser gyroscope components or in cavity ring-down applications. When processing low-absorption, low-scattering coatings on super-polished substrates, we use a modified IBS coater. To ensure cleanliness, such machines are stored in a dedicated ultra-clean room, and all production-related substrate pre-treatment and post-treatment processes are completed in this clean room. In addition, the ultra-clean room is equipped with a variety of measurement equipment, such as white light profilometers and high-resolution microscopes used in the inspection process. The customized cavity ring-down setup can determine the amount of reflection (accuracy can reach four decimal places) and loss. The above values must be determined using a super-polished substrate with a surface roughness of less than $< 1 \text{ \AA rms}$. In order to ensure the quality of the finished mirror, a white light profilometer is also used for quality inspection

● Part Number

149595

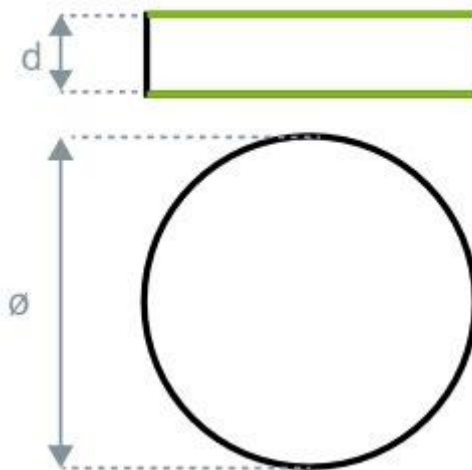
● Product features

Low loss、 Different sizes can be customized、 Incident angle: 0deg

● Application area

TDLAS、 Cavity Ring-Down

● Dimensional Drawing



Parameter :

Name	149595 Standard Laser Plane Mirror
Category	Low Loss Optical Devices
Coating material (underside)	137683
Coating material (back side)	140851

Optical parameters:

Material	Infrasil 302
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Shape	Round
Diameter (Ø)	25 mm (-0.1 mm)
Thickness (t)	6.35 mm (±0.1 mm)
Parallelism	5 ' "

Optical parameters	Front (S2)	Optical parameters	Back side (S1)
Shape	flat	Shape	flat
Chamfer	0.3 mm (±0.1 mm)	Chamfer	0.3 mm (±0.1 mm)
Test area Øe	21	Test area Øe	21
Surface shape tolerance	3/0.2(0.2) [L/10 @546.1nm]	Surface shape tolerance	3/0.2(0.2) [L/10 @546.1nm]
Cleanliness	5/1x0.04; L1x0.004	Cleanliness	5/1x0.04; L1x0.004

Coating Specifications Front (S2) (137683)	
1st working range	Highly reflective(0°,1550nm)>99.99%
Category	High reflectivity
Polarization	unpol.
Incident angle	0°
Wavelength range	1550 nm
High reflection	> 99.99 %
2nd working range	T(0°,1550nm)~0.005%
Category	Transmittance
Polarization	unpol.
Incident angle	0°
Wavelength range	1550 nm
HT	~0.005%
Coating Specifications Backside (S1) (140851)	
1st Operating Range	Anti-reflection(0°,1450-1650nm)<0.2%
Category	Anti-reflection
Polarization	unpol.
Incident Angle	0°
Wavelength Range	1450-1650 nm
AR / HT	< 0.2 %