

LIGO 40 meter RSE experiment, optics polishing specification summary

Quan.	Name/Serialization	Spec	Drawing	Size	Wedge (deg)	ROC S1	ROC S2	Residual error S1	Residual error S2	Microroughness S1	Coating Spec DCN E010197	Coating S1 Transmission (1064 nm)	Coating S2 Reflection (1064 nm)
2	Substrate, Power Recycling Mirror, 40M RSE Experiment PRM XX	E010099	D010101	75mm ± 0.5 x 25mm+0, -0.5	2.5 asymmetric horizontal	96.3 ± 2m	Flat >5625m	< 1 nm	< 2 nm	< 3 Å	E010192	3% ± 0.3%	<300 ppm 2.5 °P
2	Substrate, Signal Recycling Mirror, 40M RSE Experiment SRM XX	E010100	D010102	75mm ± 0.5 x 25mm+0, -0.5	2.5 asymmetric horizontal	117.1 ± 2m	Flat >5625m	< 1 nm	< 2 nm	< 3 Å	E010193	10% ± 0.5%	<300 ppm 2.5 °P
3	Substrate, Input Test Mass, 40M RSE Experiment ITM XX	E010102	D010104	75mm ± 0.5 x 25mm +0, -0.5	1 asymmetric horizontal	Flat >5625m	Flat >5625m	< 1 nm	< 2 nm	< 3 Å	E010195	1.4% ± 0.1% 60 mm diameter	600 ±100 ppm