



Mode-Cleaner Optics: Mariner40m Small Optics: 45 Degree Mirrors

APPROVALS	DATE	REV	DCN NO.	BY	CHECK
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Please quote for price and lead-time for the following order:

1 Overview

We require the following fused silica mirrors:

1. Qty 55: 2" HR mirrors for 2128nm
 - a. Diameter: 2"
 - b. Thickness: 10mm (or best effort at this thickness)
2. Qty 25: 1" HR mirrors for 2128nm
 - a. Diameter: 1"
 - b. Thickness: 6mm-10mm (whatever is cheapest in this range)

1.1 Common requirements

1. Material: Corning 7980 fused silica
2. Surface 1: HR coating
 - a. $R > 99.9\%$ for 2128nm (goal 99.97%), s-pol at 45 degrees (tolerance +/- 10 degree)
 - b. IBS coating
 - c. Polish: super-polished to $< 2\text{\AA}$ rms (goal of $< 1\text{\AA}$ rms)
 - d. Flatness: $\lambda/4$ across 80% of diameter, goal of $\lambda/10$
3. Surface 2: AR coating
 - a. $R < 0.1\%$ for 2128nm, s-pol at 45 degrees (tolerance +/- 10 degree)
 - b. IBS coating
 - c. Standard polish
 - d. Wedge: 1 degree or 30 arc minute, whichever is cheaper
 - e. Flatness: not important for this surface. Best minimal effort to get flat.
4. Coatings should cover at least 85% of clear aperture

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Small Optics: 45 Degree Mirrors****2 Flexibility on quantities**

We realize that multiple coating runs will be required to complete this order and the majority of the cost will come from the coating runs. Therefore, we are flexible on quantities in order to optimize the efficiency of the coating process. To that end:

- Please provide two quotes for an integer number of coatings runs:
 - One quote in which quantities of optics are rounded up to fill a coating run.
 - A second quote in which quantities are rounded down to an integer number of coating runs.
- Guidance for rounding quantities: use your best judgement on the number of 1" and 2" optics necessary to do so. As a rough guide, aim for a ratio of approximately 1:1 on the extra 1" and 2" optics. In rounding down, please do not subtract more than 6 of either quantity.