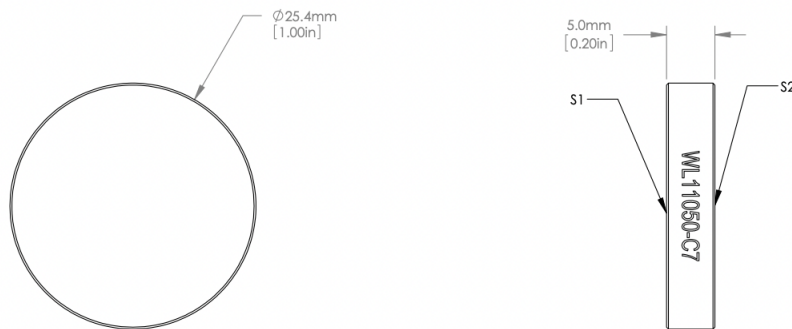


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Monday, Oct 17, 2022
BEC1 mask fabrication proposal
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1. Purpose

2. Procedure

- (a) Acquire Thorlabs' **WL11050-C7** glass window. Material N-BK7. Diameter: 1 inch. The glass window is AR-coated, suitable for 400-700 nm. The mask will be created on this glass window blank.



Other specifications:

- Surface flatness: $\leq \lambda/10$ at 633 nm
 - Surface quality: 10-5 scratch-dig
 - Thickness tolerance: ± 0.3 mm
 - Parallelism: ≤ 5 arcsec
- (b) Clean the N-BK7 window with acetone, followed by methanol, followed by IPA. Blow dry with N_2 .
- (c) Spin AZ3312 (positive) photoresist to approximately 400 nm thickness.
- (d) Expose pattern with the MLA150 machine.
- (e) Develop substrate. Time and temperature: to be determined.
- (f) Deposit a layer of silver (Ag) with thickness of 150 nm.
- (g) Silver liftoff: remove the photoresist and the silver that was deposited on the resist in the Microposit Remover 1165 overnight.
- (h) Solvent clean using acetone, followed by methanol, followed by IPA. Blow dry with N_2 .
- (i) Deposit a 20 nm-thick layer of SiO_2 on the entire substrate using CVD.