



### Beam Splitters for the Mach Zehnder of the H1 Squeezer

APPROVALS	DATE	RE V	DCN NO.	BY	CHECK	DCC	DATE
AUTHOR: L. BARSOTTI	6-15-2010						
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#### 1 Description

1" Ø Flat/Flat beam splitters @ 532nm

#### 2 Material

Corning HPFS 7980 (high purity fused silica, UV grade)  
Grade 0A (Low inclusion class: <0.3 mm<sup>2</sup> cross section, 0.1 mm max. size;  
Homogeneity < 1ppm)

#### 3 Dimensions

1"Ø +.000/-0.005" X .250" ± .020" tk., Plano / Plano

#### 4 Wedge

30 arc minutes ± 5 arc minutes

#### 5 Surface Roughness

##### Side 1

Super polish  
Surface Roughness: <1Å RMS in CA  
Surface Quality: 10-5

##### Side 2

Commercial Polish  
Surface Roughness: <5Å RMS in CA  
Surface Quality: 20-10

#### 6 Surface Figure

##### Side 1

Flat < λ/10 at 632.8 over central 80%

##### Side 2

Flat < λ/10 at 632.8 over central 80%

**Beam Splitters for the Mach Zehnder of the H1 Squeezer****7 Coating**

Wavelength: 532nm

Angle of incidence: 45°

**Side 1**

Uncoated (for fused silica  $R = 8\%$  @ 45° for **s**-polarization)

**Side 2**

AR coating,  $R < 0.1\%$  (best effort) for **s**-polarization