

Request for Quotation:  
2009 Oct 2

This is a request for a quote for two sets of dichroics, with coatings that are nearly identical to those done in 2007 by your company for us.

The main difference in this quote is that we need to reduce the wedge of the substrates. [I don't usually specify wedge's this precisely, so let me know if this causes a large increase in substrate pricing. I would like it small but not zero.]

See below for specifications. Please let me know if you have any problems with specifications since we have some flexibility.

Looking forward to hearing from you,  
-John Monnier (monnier@umich.edu)  
Univ. Michigan  
734-763-5822

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Substrates:

7 pieces of Infrasil 302, 7 pieces of CaF2  
Shape: circular slab, polished front and back  
Size: Diameter: 25.4+/-0.25mm  
Central Thickness: 4.0+/- 0.1mm  
Clear aperture: > 23mm (90%)  
Surface Flatness:  $\lambda/10$  (P-V) at 633nm (Note A)  
Surface Quality: 60/40 over clear aperture  
Bevel: Nominal; both edges  
Wedge Angle: 2+/-0.5 arcmin

**Note A: Interferograms of all pieces, front and back, are required. Application of coatings should not degrade wavefront flatness below the above specification.**

**Note B: Identify Wedge by arrow at thickest point of piece pointing to the unwedged side with the dichroic coating.**

(Description of Coatings on next page)

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Coatings:

The 7 Infrasil pieces should have Coating #1 on the non-wedged side and the Anti-reflective coating on the back.

The 7 CaF2 pieces should have Coating #2 on the non-wedged side and the Anti-reflective coating on the back.

**\*\* We will need verification measurements of the .5-2.5 micron reflectance and transmission for both sets at the design AOI 3 degrees.**

Anti-Reflective Coating:

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Average Transmission >98%, Wavelengths: 1.0-2.35 microns.  
AOI: 3 degrees

Coating #1: Short Pass. Dichroic Split: Transmit HJ, Reflect K on wedged side

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Substrate: Infrasil  
Average Transmission: > 94% from 1.0-1.9 microns  
Maintain Transmission >90% within wavelengths 1.1-1.80 microns  
Average Reflection: >94% 1.9-2.50 microns  
Maintain Reflection >90% within wavelengths 1.95-2.35 microns  
AOI: 3 degrees

Best Effort: Transmission > 25% and < 75% at both 633nm and 532nm

Coating #2: Long Pass. Dichroic Split: Transmit K, Reflect JH on wedged side

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Substrate: CaF2  
Average Transmission: > 94% from 1.9-2.50 microns  
Maintain Transmission >90% from 1.95-2.35 microns  
Average Reflection: >94% from 1.0-1.9 microns  
Maintain Reflection: >90% from wavelengths 1.10-1.80 microns  
AOI: 3 degrees

Best Effort: Transmission > 25% and < 75% at both 633nm and 532nm