

ANNEXURE – 1

Terms and conditions

Combining prism with Yttrium Fluoride Coating

A. Material for combining prism

Fused Silica : Corning HPFS 7980 (ArF grade)

Homogeneity : $+1 \times 10$

Inclusion grade : class 0

B. Coating Specification

Coating material	Thickness	Position
Yttrium fluoride	$1+0.1\mu\text{m}$	As per drawing

1. The material certificates for the prism shall be submitted in the form of COC from supplier.
2. The confirmation of all the metrological parameters in the drawing and the surface and the critical edge requirement shall be conformed for each prism. The critical edge of the combining prism shall not have any defects in the form of chippings, etc., when inspected under 20 x.
3. The material certificate for Yttrium fluoride (99.99% purity) has to be furnished.
4. Final clearance criteria will be based on the confirmation of all metrological parameters in the drawing and the surface and the critical edge requirement for each prism. This inspection can be done at supplier site and / or customer site.
5. Identification number shall be engraved on each prism.
6. Initially the witness samples of coated prisms shall be provided and coating process shall be qualified before proceeding for coating further numbers. This will firm up the coating process.
7. Qualification of coating process on witness coupons will be carried out based on the approved document IISU/TR/1772/2016.
8. Ten prisms shall be submitted before coating and clearance shall be obtained before coating further nos. The coating shall not get optically contacted with optical flat surface. This shall be ensured during the coating process qualification. The clearance for prisms may take a maximum of two weeks.
9. The process of loading the prisms for coating and subsequent measurement shall not introduce any defects on any of the prisms once cleared for coating.
10. After getting the clearance for coating, ten coated prisms shall be submitted for inspection and clearance shall be obtained to proceed for further numbers. The clearance of these coated prisms may take a maximum of 30 days. The clearance may be done at supplier site and /or at customer site. In any case the final clearance will be based on the conformance of metrological parameters, defect free critical edge, the coating uniformity and quality and coating thickness value and its uniformity.
11. The coating thickness measurement shall be carried out only by non-contact method and the measured value of coating thickness shall be provided for each prism/witness sample in every case.

12. The 3 witness coupons for each batch of coating shall be submitted for verification and qualification.
13. Batch identification of different coated prisms shall be maintained for batch acceptance test.
14. The coating batch acceptance also will be done by following test :
 - I. Physical inspection under 20X
 - II. Coating adherence : as per MIL standard
 - III. Acetone cleanability: cleaning of coated area about 25 times by cotton wad dipped in acetone and do physical inspection.
15. Final coating acceptance on each prism will have the following tests.
 - a. Physical inspection under 20 x
 - b. Acetone cleanability: cleaning of coated area about 25 times by cotton wad dipped in acetone and do physical inspection.
16. Each prism will be inspected after coating at the supplier site and /or customer site for acceptance and shall be rejected if non- conforming to be drawing and requirement.
17. After clearance of the first 10 nos. of coated prism, the party may supply the remaining quantity as lumpsum or in lots of 15 per month. Delivery schedule shall be clearly spelt out the quotation.