

**Neutron and X-ray Physics Section
Technical Physics Division
PURNIMA Laboratories**

Ref: TPD/NXPS/MF/143

Date: 03-08-2018

Due Date: 10-08-2018

Sub : Minor Fabrication - invitation of quotations.

1. Quotations are invited for the minor fabrication job, as per the enclosed specifications.
2. Bidder shall quote for fabrication of these components with material.
3. Taxes and excise duties shall be quoted separately.
4. The quotations must reach to the Head, Neutron and X-ray Physics Section, Technical Physics Division, Purnima Labs, BARC within 7 days of the date of this letter and must be sent by **Indian Speed post / Indian Post** only in a sealed envelope superscripted with the above reference number and due date given above
5. The address on the envelope should read :
**Head
Neutron and X-ray Physics Section
Technical Physics Division
Bhabha Atomic Research Centre
PURNIMA Labs., Trombay, Mumbai 400085.**
6. The bidder shall have to take an insurance policy against any material issued to him by the purchaser
7. The fabrication work shall be subject to inspection by our representative. The finished components shall not be dispatched prior to approval by our representative at the bidder's works. Necessary inspection facilities should be provided to our engineers during fabrication at bidder's premises.
8. The bidder shall deliver the finished components and install it after approval by our representative, within **60days** from the date the firm purchase order issued to the bidder. The finished components and the scrap from the free issue material shall be delivered by the bidder at PURNIMA Laboratory, Neutron and X-ray Physics Section, Technical Physics Division (Near Plutonium Plant), Bhabha Atomic Research Centre, Trombay, Mumbai 400085.
9. Head, Neutron and X-ray Physics Section, Technical Physics Division, BARC, reserves the right to accept/reject any or all quotations without assigning any reason.
10. The bidder should furnish the GST, PAN numbers in their quotations without which the quotations will be rejected.
11. Quote for each part separately.
12. Detailed drawing will be made available after issue of order.
13. Clarifications for executing the order can be sought after issue of order.

Head,
NXPS/TPD

Description and specification of different items of

Ref: TPD/NXPS/MF/143

Fabrication & supply of light tight detector box (3sets) for imaging detectors with accessories

Specifications:

1. Item No- 1. L shape Light Tight box for holding Imaging detector

1. Quantity – 3nos
2. Material – Aluminum 6061T6 or 6063T6
3. Sheet thickness – ~2.5mm
4. Dimension ~ 270mmx 220x 350mm with 15mm extension and opening on opposite surface (PI refer to the Fig-1) Removable cover of aluminum should be provided for view-2 opening. Dimensional tolerance (± 1 mm). M3 or M4 threaded holes either in the sheet or using aluminum or brass inserts (bush) to be provided in the 15mm extension for fixing Item 2/Item 3/ Item4
5. The box should be Non reflective powder coated in black color from both inside and outside – Matte Finish
6. The edges should have zero light leakage at the edges

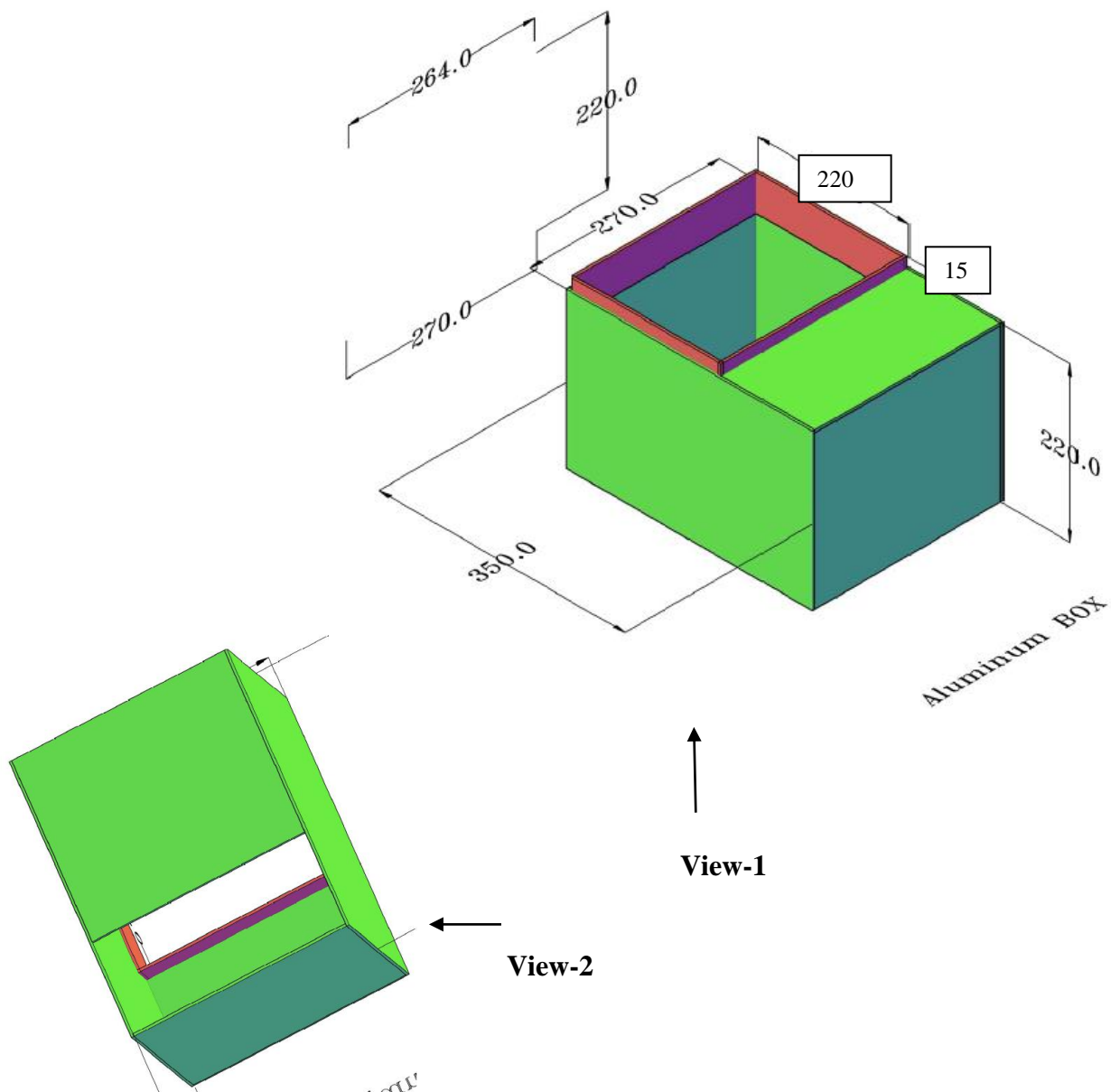


Fig-1 – Item No 1 : L shape Light tight box

2. Item No-2. Rectangular extender Type –A

1. Quantity – 3nos
2. Material – Aluminum 6061T6 or 6063T6
3. Sheet thickness – ~2.5mm
4. Dimension ~ 270mmx220mmx 400mm. This extender has to be slide fit on extension of Item -1 with the help of Screw made of 6061T6 or 6063T6 aluminum only. Dimensional tolerance (± 1 mm) (Pl refer to the Fig-2). Suitable counter sunk matching holes to be provided on one end of (270x220) surface for fixing on Item No-1. Fixing to be done using CSK screws made from 6061 T6/ 6063T6 Aluminum material only. Screws to be provided to be provided by the supplier.
5. The extender should be Non reflective powder coated in black color from both inside and outside – Matte Finish. The joining edges should be welded throughout the length and filled with high strength epoxy to avoid any light leakage before powder coating
6. The edges should have zero light leakage at the edges

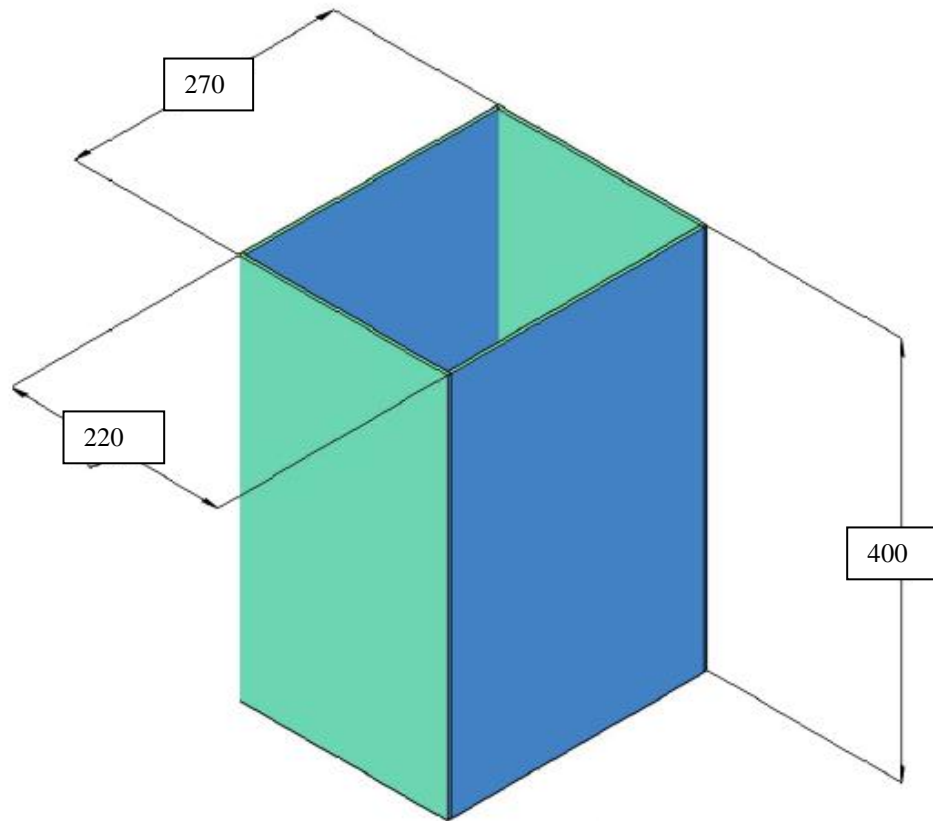


Fig-2 – Item No-2 Rectangular extender Type –A

3. Item No-3. Rectangular extender Type –B

1. Quantity – 3nos
2. Material – Aluminum 6061T6 or 6063T6
3. Sheet thickness – ~2.5mm
4. Dimension – ~ 270mmx220mmx200mm. This extender has to be slide fit on extension of Item -1 with the help of Screw made of 6061T6 or 6063T6 aluminum only. Dimensional tolerance (± 1 mm) (Pl refer to the Fig-3). Suitable counter sunk matching holes to be provided on one end of (270x220) surface for fixing on Item No-1. Fixing to be done using CSK screws made from 6061 T6/ 6063T6 Aluminum material only. Screws to be provided by the supplier.
5. The extender should be Non reflective powder coated in black color from both inside and outside – Matte Finish. The joining edges should be welded throughout the length and filled with high strength epoxy to avoid any light leakage before powder coating
6. The edges should have zero light leakage at the edges

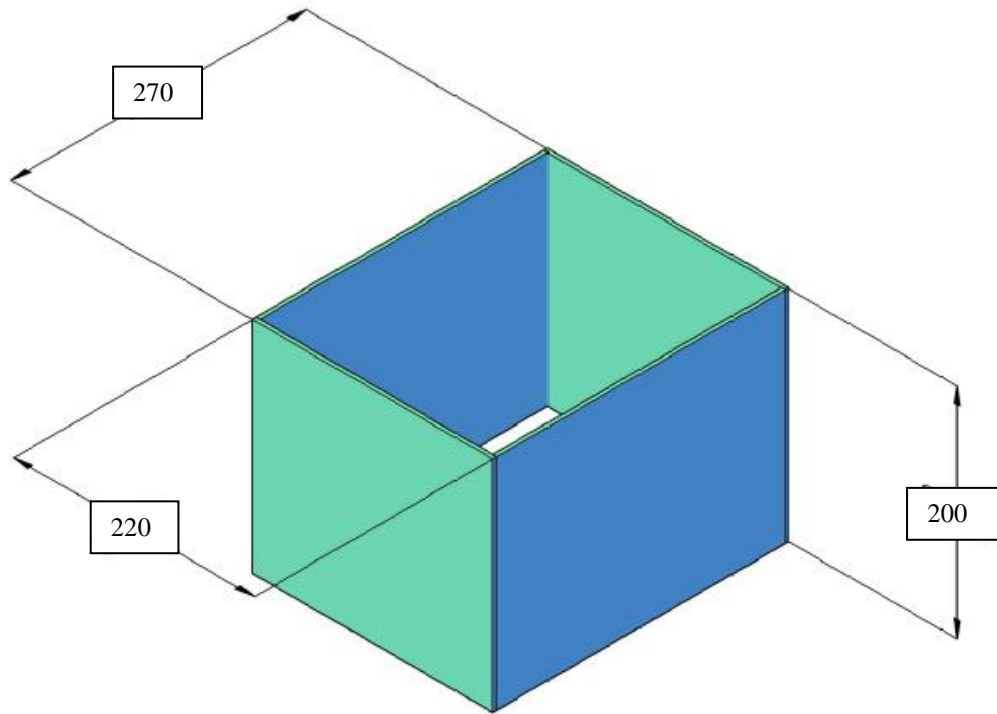


Fig3 - Item No-3 Rectangular extender Type –B

4. Item No-4. Rectangular extender Type –C

1. Quantity – 3nos
2. Material – Aluminum 6061T6 or 6063T6
3. Sheet thickness – ~2.5mm
4. Dimension ~ 270mmx220mmx25mm. This extender has to be slide fit on extension of Item -1 with the help of Screw made of 6061T6 or 6063T6 aluminum only. Dimensional tolerance ($\pm 1\text{mm}$) (Pl refer to the Fig-4). Suitable counter sunk matching holes to be provided on one end of (270x220) surface for fixing on Item No-1. Fixing to be done using CSK screws made from 6061 T6/ 6063T6 Aluminum material only. Screws to be provided to be provided by the supplier.
5. The extender should be Non reflective powder coated in black color from both inside and outside – Matte Finish. The joining edges should be welded throughout the length and filled with high strength epoxy to avoid any light leakage before powder coating
6. The edges should have zero light leakage

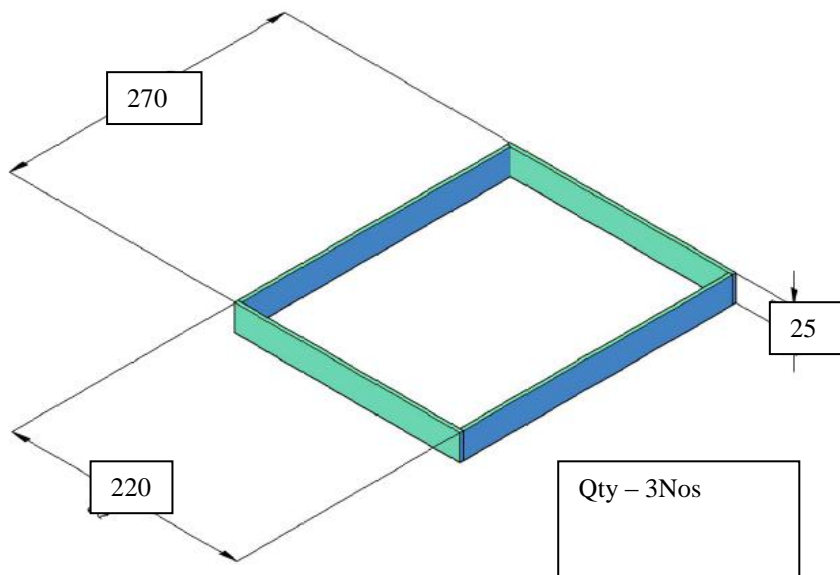


Fig4. - Item No-4 Rectangular extender Type –C

5. Item No-5. Bearing loaded tails stock assembly

1. Quantity – 1no
2. Material – Stainless steel 304
3. Dimension – Pl refer to the Fig-5.
4. Bearing should be Ceramic without any lubricant

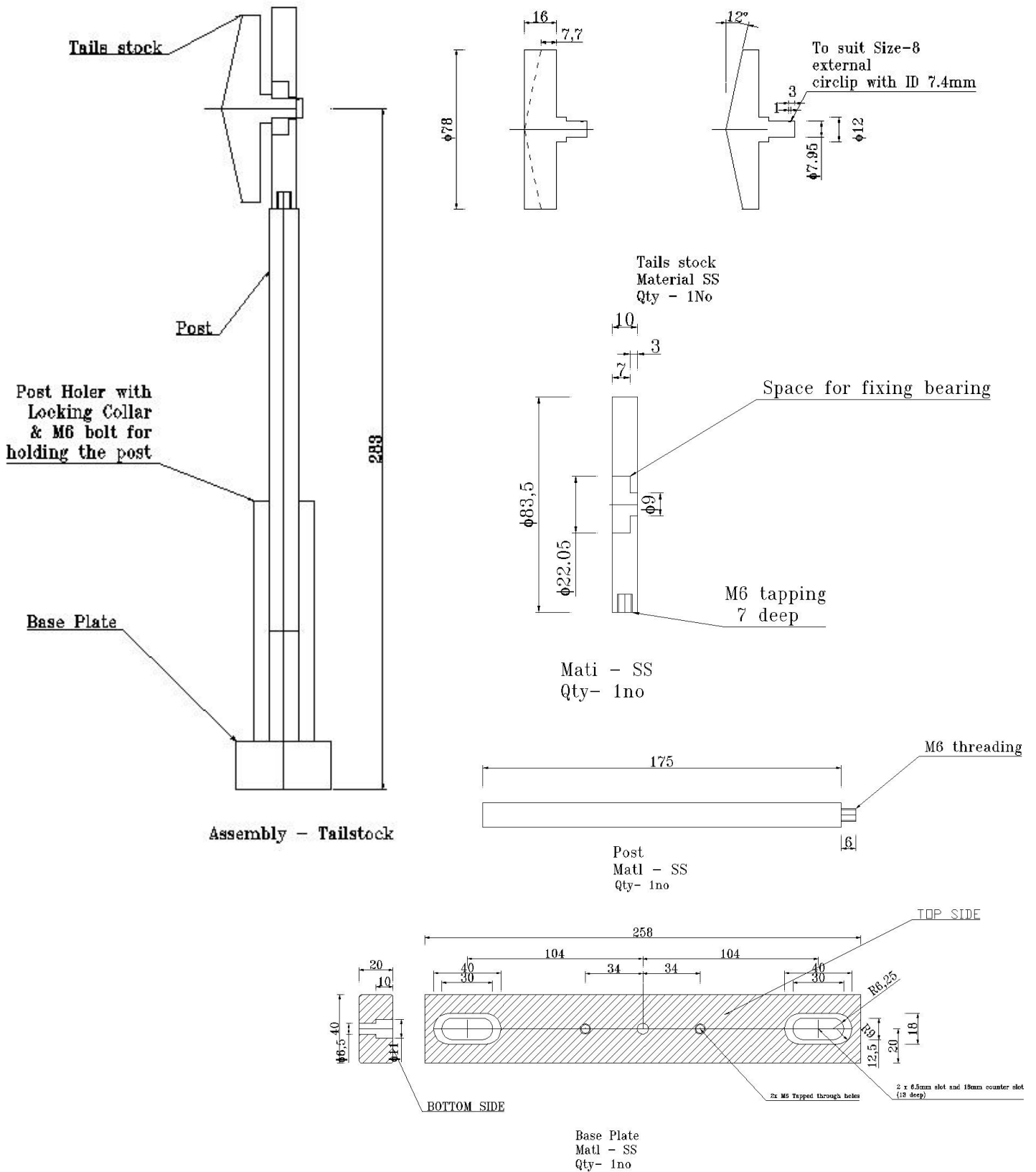


Fig5. - Item No-5 Tails Stock

6. Item No-6: Aluminum bread board plate

1. Quantity – 3nos
2. Material – Aluminum 6061T6 or 6063T6
3. Dimension – 250x100x6mm thick
4. Thickness – ~ 6mm
5. Matrix – M6 threading, 25mm pitch – Threading should be in the plate (no inserts)
6. Non reflective powder coated in black color – matte finish

Accessories-

7. Item No-7: High concentration Borated Rubber Sheet

1. Quantity – 2nos
2. Dimension – 1000mm x 1000mm x 6mm Thick
3. Boron Concentration – ~ 52% by weight
4. Color – Black

8. Item No-8 : Front Surface quoted high reflectivity Aluminum Mirror

1. Quantity – 10nos
2. Dimension – 280mm x 200mm x 3mm thick
3. Type – Front Surface Mirror
4. Reflecting material – Aluminum coated with silicon mono oxide protective coating
5. Reflectivity ~ 95% at 550nm at 45 degrees angle of incidence
6. Base Material – Soda Float Glass
Mirrors should have a protective removable plastic film to prevent damage during storage

9. Item No-9: Follow Focus Kit for 50mm Nikon F1.2 Camera Lens

1. Quantity – 3nos
Focus Kit should Consist of Gear Ring, Gear motion manual Control on mounting assembly, Speeding Crank

10. Item No-10 Stepper Motor

1. Quantity – 3nos
2. Step Angle: 1.8°
3. Number of Phase: 2
4. Rated Voltage: 3.2V
5. Rated Current: 1.4A
6. Resistance per phase: 2E
7. Inductance per phase: 2.8mH
8. Holding Torque: 4.2 kgcm
9. Length without shaft: 38mm
10. Shaft Length: 24mm
11. Width: 42.3mm

Note: All the items should be quoted simultaneously. All the items required will be tested as per desired specifications at users site before final acceptance. The dimensions shown are in mm.