

**GOVERNMENT OF INDIA
BHABHA ATOMIC RESEARCH CENTRE
SOLID STATE PHYSICS DIVISION**

12-2-18

30/01/2018

Ref: BARC/ SSPD/ 2018/ 315

Sub: Minor fabrication: Invitation of Quotations for fabrication and supply of Thick GEM (Gas Electron Multiplier) plates as per the dimensions and quantity mentioned below :

Quotations are invited for fabrication and supply of following:

1. Thick GEM (Gas Electron Multiplier) plates with active area 50 x 50 mm and with FR4 of thickness 0.25 mm with 100 micron clearance around a 200 micron hole with 550 microns pitch & approximately 9500 holes/foil. - 5 Nos.
2. Thick GEM 124x124 mm with active area of 100x100 mm and with FR4 of thickness 0.25 mm with 50 micron clearance around a 200 micron hole with 450 microns pitch & approximately 56000 holes/foil. - 5 Nos.
3. PCB Printed Circuit Board: Gold coated two layers with X, Y readout pads pitch 450 micron, matching to GEM structure.
i) 55 x 55 mm - PCB - 5 Nos. and ii) 100 mm x 100 mm PCB -5 no

Pre dispatch inspection of the GEM plates is essential. PDI on the basis of Insulation test, resistivity, and quality of plates will be verified. Pattern of GEM as well as readout cathode PCB designs are to be approved by us before fabrication.

Kindly submit your offers along with detailed terms and conditions to **Head, Solid State Physics Division, BARC, Mumbai-400085** on or before 28/02/ 2018 in a sealed envelope super scribed with the above reference number and due date given above by Indian post only.

The address on the envelope should read:

Head, Solid State Physics Division, BARC, Trombay, Mumbai-400085. Attn: Dr. S S. Desai

Terms and conditions:

- 1) The items should be delivered only after pre-despatch inspection carried out to the users' satisfaction for acceptance and for certification of the completion of this order, in all respects.
- 2) **Delivery:** This work order shall be executed within three months from the date of its receipt; the work order may please be acknowledged. **Material is to be delivered to address Room no. F10, Hall 4, BARC, Mumbai - 400085.**
- 3) **Guarantee:** Items supplied/work executed shall be guaranteed against quality material/workmanship for satisfactory intended operation, for a period of **12 months** from the date of execution of this order.
- 4) Taxes and excise duties shall be quoted separately.
- 5) **Payment terms:**
Payment in general is made within 30 days of the completion of the order and on production of bill in triplicate along with an advanced stamp receipt for the bill amount and guarantee certificate referred to (3) above.
- 6) Head, SSPD reserves the right to accept /reject any or all quotations without giving any reason.
- 7) **Confidentiality & Publicity Clause**
No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as "Proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub-contractor, consultants, advisers or employees engaged by a party with equal force.
- 8) **"Restricted information" categories under Section 18 of the Atomic Energy Act, 1962 and "Official Secrets" under Section 5 of the Official Secrets Act, 1923:-**Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequences under the aforesaid legislation.
- 9) **Prohibition against use of BARC's name without permission for publicity purposes:-**The contractor or sub-contractor, consultant, advisor or the employees engaged by the contractor shall not use BARC's name for any publicity purpose through any public media like Press, Radio, T.V or Internet without the prior written approval of BARC.

Head
Solid State Physics Division

Mad. Jamb
6-2-18

Malakar
5/2/18

Specifications

1. Thick GEM (Gas Electron Multiplier) plates with active area **50 x 50 mm** and with FR4 of thickness 0.25 mm with 100 micron clearance around a 200 micron hole with 550 microns pitch & approximately 9500 holes/foil. - 5 Nos.

2. Thick GEM 124x124 mm with active area of **100x100 mm** and with FR4 of thickness 0.25 mm with 50 micron clearance around a 200 micron hole with 450 microns pitch & approximately 56000 holes/foil. – 5 Nos.

3. PCB Printed Circuit Board: Gold coated two layers with X, Y readout pads pitch 450 micron, matching to GEM structure.

i) **55 x 55 mm - PCB - 5 Nos.**

ii) **100 mm x 100 mm PCB -5 no**

Pre dispatch inspection of the GEM plates is essential PDI on the basis of Insulation test, resistivity, and quality of plates will be verified.

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