



राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान, भुवनेश्वर
(परमाणु उर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान)
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
(AN AUTONOMOUS INSTITUTE UNDER DEPT. OF ATOMIC ENERGY, GOVT. OF INDIA)

Notice Inviting E-Tender No. NIT-04/2019-NC-001991-CHE-18-19 (2 Part Tender)

Nd:YAG Laser and IR OPO

Cost of Tender is 1500.00 (Non Refundable)

Tender Notice



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH
JATNI CAMPUS, P.O. - JATNI
KHURDA – 752050, ODISHA, INDIA**

Notice Inviting E-Tender No. NIT-04/2019-NC-001991-CHE-18-19 (2 Part Tender)

E-Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Jatni from the manufacturers(Indian or Foreign) and their authorised reseller/Indian agent only for supply & installation of the following items:-

Sl. No.	Name of the Items	Tender No.	Name of Department	Indent No.	Qty.	EMD in INR
01	ND YAG LASER AND IR OPO	NIT-04/2019	School of Chemical Science	NC-001991-CHE-18-19	01	180000/-

Tender can be downloaded and bided from website address: www.tenderwizard.com/NISER. Tender documents for viewing only are also available in NISER web-site address: www.niser.ac.in. further all corrigendum and addendum will be published on NISER website and tenderwizard portal.

NISER is publishing all its public and limited tender on NISER website.

FIC (Stores & Purchase)



NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH
JATNI CAMPUS, P.O. –BHIMPUR-PADANPUR, VIA-JATNI
KHURDA – 752050, ODISHA, INDIA
Notice Inviting E-Tender No. NIT-04/2019-NC-001991-CHE-18-19
(2 Part Tender)

Sl. No.	Name of the Items	Tender No.	Name of Department	Indent No.	Qty.	EMD in INR
01	ND YAG LASER AND IR OPO	NIT-04/2019	School of Chemical Science	NC-001991-CHE-18-19	01	180000/-

E- Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Jatni from the manufacturers(Indian or Foreign) and their authorised reseller/Indian agent only for supply & installation of the following items:-

NB: PARTIES REGISTERED WITH SSI/MSME/NSIC/DAE/MSME/NSIC AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD and Tender Fee.

Standard e-Tender Terms & Conditions

1. The details of tender notification can be downloaded from www.tenderwizard.com/NISER under "Tender Free View" link.
2. Vendors should obtain the USER ID and PASSWORD from www.tenderwizard.com/NISER by clicking on "REGISTER ME" link in the homepage.
3. The Vendor registration fee has to be paid to ITI Ltd for Rs. 1180/- including GST using the e-payment link provided at the time of registration, and the mode of payments are Credit Card, Debit Card and Internet Banking. Vendor Registration is Valid for 01year.
4. For further details on e-Tender participation, please contact ITI Help desk on
 - Telephone: 080-49352000/9686115318
 - Email: harishkumar.kb@etenderwizard.com, ambasa@etenderwizard.com.
5. Tenders should be submitted only through E-Tender portal and obtain the Tender Acknowledgement copy as a proof of successful submission.
6. **For any query regarding tender terms & conditions please sent email to spo@niser.ac.in.**

FIC (Stores & Purchase)



**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
NIT OPEN DOCUMENT (2 PART BID)
SUPPLY & INSTALLATION
OF
ND YAG LASER AND IR OPO
Notice Inviting E-Tender No. NIT-04/2019-NC-001991-CHE-18-19**

(2 Part Tender)

National Institute of Science Education & Research (NISER), Jatni is an Autonomous Institute under Dept of Atomic Energy. NISER would like to procure the following equipment. The Technical Specifications Schedule of Requirements and Allied Technical details are given in Part-1 of tender document.

•Item: ND YAG LASER AND IR OPO

• Tender Enquiry No: NIT-04/2019-NC-001991-CHE-18-19

• Last date of submission of E-bid : 14/06/2019 up to 10.00 A.M.

• Opening of Technical Bid : 14/06/2019 at 11.00 A.M.

Contact Person – Dr. Himansu Sekhar Biswal <himansu@niser.ac.in>

FIC (Stores & Purchase)

The Institute can provide following documents.

- 1. Custom Duty exemption certificate (for custom duty @5.15%)**
- 2. GST Exemption Certificate (for GST @ 5%)**

COST OF TENDER IS RS.1500/- (NON REFUNDABLE).

This is payable in cash or Demand Draft of a scheduled Bank in favour of Director, NISER payable at Bhubaneswar/Jatni



PART - 1
TERMS & CONDITIONS
FOR SUPPLY AND INSTALLATION OF
ND YAG LASER AND IR OPO
FOR
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI
Notice Inviting E-Tender No. NIT-04/2019-NC-001991-CHE-18-19 (2 Part Tender)

1. Director, National Institute of Science Education & Research, Jatni (NISER) invites E-Tenders for **ND YAG LASER AND IR OPO** from the Manufacturer and their authorised reseller only having following credentials.
 - A. Should have satisfactorily completed **03 similar supplies** (at least one of them in Central Government/Central Autonomous Body/Central PSU) in last 05 years.
 - B. Similar or Similar Nature of work means** Supply & Installation of **ND YAG LASER AND IR OPO** for any of the following :
 - a) **Government/Autonomous Institutions**
 - b) **Government Research Centres**
 - c) **Universities**
 - d) **Autonomous/Reputed Private Research Centres**
 - e) **Purchase Orders / Completion certificates if any, for supporting above requirements.**

The Bidders are requested to give detailed tender in the prescribed forms in two Bids
i.e. Part - I Technical Bid.
Part - II Commercial Bid.

2. **Contact for information** :(Only E-mail enquiries will be entertained)

For Technical Information of ND YAG LASER AND IR OPO

Dr. H. S. Biswal

School of Chemical Science

E-Mail – Himansu Sekhar Biswal <himansu@niser.ac.in>

For Information regarding Commercial& all other Terms & Conditions:

FIC (Stores & Purchase)

National Institute of Science Education & Research, Jatni

E-Mail-spo@niser.ac.in, FIC Purchase NISER <fic_purchase@niser.ac.in>

3. Supply means:

“Supply, Installation, Commissioning and satisfactory demonstration of the whole equipment”.

4. Tender Document:

The Technical Offer should comprise of the following:

- a) Tenders, which are submitted without following the Two-Bid Offer System, will summarily be rejected.
- b) The technical offer should be complete to indicate that all products and services asked for are quoted.

c) The purpose of certain specific conditions is to get or procure best product/service etc. for NISER. The opinion of Technical Committee shall be the guiding factor for technical short listing.

d) The earnest money deposit as indicated against the item should be sent by post so that it reaches on or before the opening of the technical bid of e-tender system in the form of Account Payee Bank Draft payable on any branch of Nationalised/Schedule Bank at Bhubaneswar/ Jatni in favour of “Director, National Institute of Science Education & Research, Jatni”, in a separate sealed envelope. All tenders submitted without requisite amount of earnest money shall be rejected and their technical and financial bids shall not be opened. No interest is payable on EMD.

The EMD will be returned to the bidders(s)/Agents whose offer is not accepted by NISER within one month from the date of the placing of the final order(s) on the selected bidder(s). In case of the bidder(s) whose offer is accepted the EMD will be returned on submission of Performance Bank Guarantee (if applicable). However, if the return of EMD is delayed for any reason, no interest /penalty shall be payable to the bidders.

EMD EXEMPTION:

PARTIES REGISTERED WITH MSME/NSIC/SSI/DAE AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD & TENDER COST. FOREIGN PARTIES QUOTING DIRECTLY UNDER ORIGINAL SEAL AND SIGNATURE (NOT SCANNED) WILL GET THE EXEMPTION.

The EMD shall be forfeited:

If the bidder withdraws the bid during the period of bid validity specified in the tender. In case a successful bidder fails to furnish the Performance Bank Guarantee.

a) Undertaking that the successful bidder agrees to give a Performance Bank Guaranty of 10% of the purchase order value in favour of “Director, National Institute of Science Education & Research, Jatni valid till warranty period.

Performance Bank Guarantee:

Within ten (10) days of the award of contract, the vendor shall furnish a Performance Bank Guarantee amounting to 10% of the purchase order value in the form of Bank Guarantee in favour of “The Director, National Institute of Science Education & Research”, Jatni valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. BG should be from any Nationalised/Scheduled bank in India.

Following documents needs to be uploaded on E-Tender portal.

a) If the bid is for branded makes, authorization letter from principals clearly indicating that the vendor is the competent authority to sell and provide services towards the items mentioned in the scope of supply given in this tender document.

b) Copy of GST No. and PAN No. allotted by the concerned authorities.

c) List of deliverables / Bill of materials and services.

d) Compliance sheet with any deviation with reference to the terms and specifications.

e) The item should be supplied with manuals and the manuals including technical drawings should be complete in all respects to operate the system without any problem.

“Commercial Bid” shall contain:

a) Price schedule shall complete in all respects. **Tender with any condition including conditional rebate shall be rejected forthwith.**

b) The combined price offered by the party will be taken in to consideration for placing order.

c) **The Bidders are requested to quote for Educational/Institutional Price for Machine/ Equipment and, since we are eligible for the same.**

d) **Printed conditions of the vendor submitted with the tender will not be binding on NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH.**

5. Tender process & award of contract.

The technical bids will be evaluated to shortlist the eligible bidders. The commercial bids of only the short listed bidders shall be considered for further processing. Bidders whose technical offer is found acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the commercial bid.

- (a) NISER will open commercial bids of only the short listed bidders, The Date and Time of opening the Commercial Bid will be intimated only to pre-qualified and technically acceptable Bidders for the item at a later date.
- (b) ONLY TECHNICALLY accepted competitive bids will be considered for placing Purchase Order.
- (c) **Purchaser's Right to vary Quantities at the time of Award:** NISER reserves the right at the time of award of Contract to increase or decrease the quantity of items specified in the Schedule of Requirements without any change in price or other terms and conditions.

6. The Director NISER reserves the right to accept the offer in full or in parts or reject summarily or partly.

7. Delivery Period / Timeliness

The deliveries, installation must be completed within 120 days, after placement of purchase order. The time is the essence of the contract. It is mandatory for the bidders who respond to this bid to meet these expectations, as they are tightly linked to NISER's plans of completing the project within the time frame.

8. Locations for the Supply / Services

The Laboratory Equipment covered by this document is required to be supplied and installed at School of Chemical Science of NISER, Jatni.

9. Order Placement and Release of Payment

The Purchase Order and payment shall be processed by –

**FIC (Stores & Purchase)
National Institute of Science Education & Research,
Jatni Campus, P.O. – Bhimpur-Padanpur, Via-Jatni,
Khurda – 752050, Odisha, INDIA**

Payment for the items to be supplied by the vendor against the purchase order shall be made by National Institute of Science Education & Research as follows:-

Foreign Currency payment:-

Subject to submission of performance bank guarantee for 10% of P.O. value, 100% payment will be made through Letter of Credit. 80% will be paid after submission original shipping documents & balance 20% will be released after satisfactory installation, commissioning and warranty certificate.

INR payment:-

Subject to submission of performance bank guarantee for 10% of P.O. value, 80% will be released after receipt of material in good condition & balance 20% will be released after satisfactory installation, commissioning and against warranty certificate.

Agency Commission: Agency Commission to be paid to Indian Agent should be specified separately and same will be paid in INR.

The tenderers who are not agreeing to above payment terms are requested not to submit their tender otherwise their EMD will be forfeited.

10. NISER will not provide any accommodation/transportation for the engineers/ representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the Principal Supplier/Indian Agent to make their own arrangements.

11. The successful bidder, on award of contract / order, must send the contract / order acceptance in writing, within 7 days of award of contract / order failing which the EMD will be forfeited.

12. Period of validity of bids

- (a) Bids shall be valid for a period of 90 days from the date of opening the Technical bid.
- (b) NISER may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD. A bidder agreeing to the request for extension will not be permitted to modify his bid.
- (c) Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

13. Corrupt or Fraudulent Practices

NISER requires that the bidders who wish to bid for this project have highest standards of ethics. NISER will reject a bid if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract. NISER may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the execution of contract.

14. Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity / dispute in the interpretation of any of the clauses in this Tender Document, Director, NISER's interpretation of the clauses shall be final and binding on all parties.

15. Price

- (a) The price quoted shall be considered firm and no price escalation will be permitted at any time. The quotation should be in Indian Rupees or any known foreign currency. Packing, forwarding, freight, insurance, **Agency commission** and commissioning charges, if any extra may be quoted separately in Commercial Bid.
- (b) In case of INR bids the price criteria should be on delivered at NISER, Jatni including Free onsite comprehensive **03 years** warranty, installation, commissioning, Training, demonstration, packing, transportation, insurance, loading & unloading (At NISER) etc. charges. Govt. Levies like GST, etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, GST, etc., if any.
- (c) Please provide GST No. of the firm allotted by the concerned authorities in your quotation.
- (d) In case of Foreign Currency bid: - Price criteria will be FOB nearest International Airport/Sea Port including Free onsite comprehensive **03 years** warranty, installation, commissioning & Training & demonstration charges. Agency Commission if any is required to be quoted separately in Financial bid which will be paid directly to Indian agent in INR.

16. Pre-installation:

Pre-installation facilities required for installation may please be intimated in the technical bid. Subsequently, before the consignment lands in NISER, Jatni the bidder shall confirm that the pre-installation requirements are sufficient for installation of the equipments. In other words the bidder should continuously monitor the pre-installation requirements and see that everything is ready before the consignment is taken to the site for installation.

17. Installation, Warranty & Support

- Bidder shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty and thereafter.
- The items covered by the schedule of requirement shall carry minimum ***Three (03) years free comprehensive warranty from the date of installation of the equipment*** by NISER. Warranty shall include free maintenance of the whole equipment supplied including free replacement of parts. The defects, if any, shall be attended to on immediate basis but in no case any defect should prolong for more than 24 hours. The comprehensive warranty includes onsite warranty with parts.
- ***The defects, if any, during the guarantee/warranty period are to be rectified free of charge by arranging free replacement wherever necessary. This includes cost, insurance, freight, custom duty, GST, local taxes if any should be borne by the beneficiary or his agent. A clear confirmation should be given for this item.***
- The OEM/bidder shall assure the supply of spare parts after warranty is over for maintenance of the equipment supplied if and when required for a period of 7 years from the date of supply of equipment on payment on approved price list basis.
- The equipment must be supported by a Service Centre manned by the principal vendor's technical support engineers. The support through this Centre must be available 24 hours in a day, seven days a week and 365 days a year. Also it should be possible to contract the Principal's vendor support Centre on a toll free number/web/mail.
- The vendor will have to arrange for all the tools required for installation, testing & maintenance etc.

18. Indemnity

- The vendor shall indemnify, protect and save NISER against all claims, losses, costs, damages, expenses, action suits and other proceeding, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc. or such other statutory infringements in respect of all the equipment's supplied by him.
- The successful bidder will be fully responsible for payment of wages and other dues as prescribed and compliance of various Labour Laws.
- The successful tenderer should give an undertaking that the staff deployed at the centre in terms of this contract at all time will be employees of the agency exclusively and they shall not be entitled to any claim of employment or permanency of job with NISER.
- NISER reserves the right to forfeit whole or part of the security money towards any damage/lose caused due to the negligence on the part of the agency engaged.

19. Insurance

The equipment to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at NISER site or as per agreed terms, in case of Rupee/Foreign currency transaction.

20. Penalty for delayed Services / LD

As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise the EMD/SD will be forfeited and also LD clause will be applicable /enforced.

If the supplier fails to Supply, Install and Commission the equipment as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of 1% of order value per every week of delay subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier.

NISER reserves the right to cancel the order in case the delay is more than 30 days Penalties, if any, will be deducted from the EMD.

21. Jurisdiction

If a dispute arises out of or in connection with the contract, or in respect of any defined legal relationship associated therewith or derived there from, the parties agree to submit that dispute to arbitration under the ICADR Arbitration Rules, 1996.

The authority to appoint the arbitrator(S) shall be the International Centre for alternative dispute resolution.

The International Centre for Alternative Dispute Resolution will provide administrative services in accordance with the ICADR arbitration Rules, 1996.

**FIC (Stores & Purchase)
NISER, Jatni**

DECLARATION BY THE VENDOR

It is hereby declared that I/We the undersigned, have read and examined all the terms and conditions etc. of the tender document for which I/We have signed and submitted the tender under proper lawful Power of Attorney. It is also certified that all the terms and conditions of the tender document are fully acceptable to me/us and I/We will abide by the conditions from serial no. 1 to 21 and we have not given any printed conditions beyond the scope of this tender. This is also certified that I/We/Our principal manufacturing firm has no objection in signing the purchase contract if the opportunity for the supply of the items against this tender is given to me/us.

Date:

Signature:

Address:

Name:

(Company Seal)

Designation:

On behalf of:

**SUPPLY AND INSTALLATION
OF
ND YAG LASER AND IR OPO
FOR
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI
Notice Inviting E-Tender No. NIT-04/2019-NC-001991-CHE-18-19**

General Information –Self Attested

www.tendewizard.com/NISER

Vendor Name			
Sl. No.	Basic Information	Please fill details	Page No. with name of the documents attached in support of information required
1	Name of the Company		
2	Full address of company along with Telephone no. Fax no. E-mail address :		
3	Local address of company for communication, if any		
4	Are you a manufacturer or dealer/reseller		
5	If dealer please attach certificate from your principal company clearly showing validity of the certificate		

6	<p>If foreign supplier : Please give details of your Indian authorised partner if any</p>		
7	<p>Annual turn over in last 3 financial years in Rs. Crores. (i) Year 2015-2016 (ii) Year 2016-2017 (iii) Year 2017-2018 Please attach balance sheet</p>		
8	<p>Supply & Installation of ND YAG LASER AND IR OPO to our tendered of last 3 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value) (Please attach list of clients) (i) Year 2015-2016 (ii) Year 2016-2017 (iii) Year 2017-2018 Please attach copy of Purchase Order/ Completion Certificate</p>		
9	<p>GST Registration no. with Place</p>		
10	<p>Income Tax Registration no. with place</p>		
11	<p>Photocopy of EMD (If Applicable)</p>		
12	<p>Name and address on whom purchase order will be placed</p>		

13	Bank details of the supplier on which order will be placed		
14	If you are claiming exemption certificate under SSI/MSME/NSIC/DAE, Please attach self attested copy of certificate which should be valid during the tender process		
15	Service centre details & principal vendor support centre		
16	Delivery period :Please mention time of delivery & Installation		
17	Declaration to be submitted by Vendor		
18	Warranty :- 03 year		

**TECHNICAL BID
SUPPLY AND INSTALLATION
OF
ND YAG LASER AND IR OPO
FOR
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI
Notice Inviting E-Tender No. NIT-04/2019-NC-001991-CHE-18-19**

www.tenderwizard.com/NISER

Vendor Name		-	
SL. No.	Item Specification	Accepted/Not Accepted/Deviation if any. Please specify your specification if deviation is there	Page No. of your specifications /Brochure/ Deviation, etc attached in support of your specification/ deviation
	<p>NISER is planning to procure a Nd:YAG Laser for pumping IR OPO and IR OPO system which are generally used in Laser spectroscopy for the measurement of vibrational spectra of organic and biomolecules in Gas phase.</p> <p>The technical quote must be accompanied by a detailed technical document of the equipment components quoted from OEMs. Description proving compliance to each of the above technical requirement must be clearly highlighted in the said technical document, and the serial number of the related technical point must be noted next to the highlighting. In case the specific information is not present in the document, it must be clearly mentioned with a web-link, where in the website of the OEM such information about the quoted equipment can be found.</p> <p>Failure to satisfy these conditions, or unavailability of information to prove the</p>		

	<p>technical features, or incomplete or unclear or false information provided in the technical quote will be grounds for summary disqualification. The onus is on the quoting party to provide all the information required for technical assessment, and such assessment will be carried out solely on the basis of the information provided to NISER in the technical quote.</p>		
	<p>Specifications for Nd:YAG Laser for pumping IR OPO system:-</p>		
1	<p>Repetition rate: 10 Hz</p>		
2	<p>Energy(unseeded): 700 mJ@1064nm 375 mJ@532 nm 220 mJ@355 nm Energy(seeded): 625 mJ@1064nm 300 mJ@532 nm</p>		
3	<p>Pulse Width: 4-6 ns @ 1064 nm ; 3-5 ns @ 532 nm</p>		
4	<p>Line width: 1cm⁻¹ (without Injection Seeding option) 0.005cm⁻¹ (with Injection Seeding option)</p>		
5	<p>Beam Divergence: 0.5mrad (Full angle for 1/e²)</p>		
6	<p>Beam Pointing Stability: ±50μrad</p>		
7	<p>Beam Diameter: 9.5mm</p>		

8	Jitter (With respect to external trigger): ± 0.5 ns (unseeded)		
9	Energy Stability: (RMS) $\pm 0.8\%$ @1064nm		
10	Power Drift (Average for 8 hrs with $\Delta T \pm 3^\circ\text{C}$): $\pm 3\%$ @1064nm		
11	Beam Spatial Profile: Near field (<1m): 0.7 Far Field (∞): 0.95		
12	Polarization: Horizontal@1064nm		
13	Lamp Life: > 50 million shots		
14	Kinematic Laser Mounts : System must include kinematic laser head mounts for quick removal and maintenance of flashlamps to help prevent damage to adjacent optics while changing flashlamps or inspecting the Nd:YAG rod		
15	Laser head : Must be equipped with the diffused reflector for uniform energy distribution across the YAG rod in order to enhance beam quality and reduce hot spots.		
16	Pumping configuration: Diffuse close coupled cavity pump chambers delivering highest efficiency		
17	Oscillator cavity: Graphite Structure Oscillator cavity with radially variable (Gaussian) reflectivity resonator optics		
18	Flashlamp Linear, discharged through negative critically damped pulse (~1.8 kV max) with duration of 200 μs		
19	Resonator Includes intra-cavity polarization spatial filtering		
20	Optical Head Size (LxWxH): 1189.2 x 457.2 x 298.4 mm		

21	Power Supply Size (LxWxH): 714.5 x 621 x 546.1 mm		
22	Electrical Service:200 - 240 VAC, single ϕ , 21A, 50/60 Hz		
23	Second harmonic (Type I and II) and third harmonic generators(for spec 532nm and 355 nm) - 1 nos		
24	Second harmonic outputs with residual fundamental - 1 nos		
25	Additional Accessories: a. Flashlamp (2 nos) 4 sets b. DI FILTER (Plug in DI filter) - 2 nos c. Laser Safety Goggles - 2 nos		
	Specifications for Custom narrowband KTP OPO		
1	Repetition Rate: 10Hz		
2	Crystals: combination of KTP, KTA, AgGaSe2, LiNBO3		
3	Tuning Range: 1.35 to 5 μ m 4.7 to 7 μ m (with frequency mixing unit)		
4	Pulse Energy: \geq 12 mJ from 1.5 to 3.5 μ m \geq 3.5 mJ @ 4 μ m \geq 1.5 mJ @ 4.5 μ m \geq 1mJ @ 5.5 μ m		
5	Line width: better than 1cm ⁻¹ (Seeded) and \sim 2cm ⁻¹ (Unseeded)		

6	The OPO must be compatible with an External Wavelength Extension Unit (quoted in item#1b). The unit and the optics are designed for operation with AgGaSe2 crystal (quoted in item#1c) to generate the light of tuning range: 5 μ m -7 μ m		
7	The Integrated, multi-stage nonlinear device must be designed in such a way to convert the fixed-frequency output of a Nd:YAG laser system into tunable radiation in the mid-infrared		
8	Using a combination of a 532 nm pumped OPO and a 1064 nm pumped OPA, the system must produce an output that is tunable from 712 to 880 nm and from 1.35 to 5.0 microns using a single set of nonlinear crystals		
9	The OPO must be computer controlled through a Windows based program. Must provide the computer configuration (basic requirements) separately (after getting PO) so that the user can arrange the same before installation		
10	Beam splitter to split the horizontally polarized 1064 nm pump into two separate beam lines		
11	One beam must be frequency doubled in KTP to provide the 532 nm pump light for the OPO while the second must be directed through a delay line before recombination with the idler output of the first stage. The combined beams must be then directed into a 1064 nm pumped OPA stage for difference-frequency mixing.		
12	Communication through RS-232 interface		
13	Electrical connections: 200-240 VAC, 50/60 Hz		

14	<p>Silver Gallium Selenite (AgGaSe₂) Crystal: (1 nos) Size: ~8 x 8 x 12mm Orientation: q = 52.0 degrees, f = 45 degrees (Type I) Coatings Single-Layer (quarter-wave stack) centered at 5.623 microns on both 8x8 faces. Parallelism: <=20" Flatness: < 1/6 @ 633 nm Surface figure: 30/20 S/D or better Orientation: +/-0.5 degrees, all axis Internal Quality: Optically clear (viewed at 900nm)</p>		
15	Laser Power and energy meter assembly		
16	<p>Installation and integration of all supplied hardware and software shall be done by the vendor.</p> <p>Inputs and outputs for synchronizing the flash lamps and Q switching with other devices.</p> <p>Minimum 3 years (from the date of successful installation) on-site comprehensive warranty for the laser system including the power supply and related electronics, supplied hardware and support including upgrades of BIOS, firmware and patches etc.</p> <p>The warranty period will commence from the date of certification of successful installation and benchmark tests.</p> <p>List of parts/spares does not cover under warranty should be provided</p> <p>Instruments must be attended within 15 days in case of breakdown. Downtime of instruments will be less than 5% of the warranty period per year. In the event of longer downtime the vendor shall increase the comprehensive maintenance period by five times of the downtime. Vendor should assure the availability of the spares for 3-5 years from date of installation</p>		
	AMC Charges after expiry of warranty (in percentage)		

**FINANCIAL BID
SUPPLY AND INSTALLATION
OF
ND YAG LASER AND IR OPO
FOR
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI
Notice Inviting E-Tender No. NIT-04/2019-NC-001991-CHE-18-19**

www.tenderwizard.com/NISER

Vendor Name							
SL. No.	Item Specification	Qty	Type of Currency	Unit Price in Foreign currency as per terms & condition no.15(d) of Tender document	Total Price in Foreign Currency as per terms & condition no.15(d) of Tender document	Unit Price in INR as per terms & condition no.15(b) of Tender document	Total Price in INR as per terms & condition no.15(b) of Tender document
1	ND YAG LASER AND IR OPO and its related accessories (Specification as per technical Bid)	1 each					
	Other Charges If Any						
	Agency Commission						
	GST Charge If Any						
	Grand Total				0.00		0.00
2	Comprehensive AMC charges after expiry of Warranty period in % of basic price only.						