Ref. No.: IISc/AE/Tender/2026/Local/NdYAG Date: 27th February 2026

Tender Notification for the Procurement of a pulsed Nd:YAG laser (Last Date for Submission: 20th March 2026)

This is a Request for quote (RFQ) from domestic (India-based) manufacturers only for procurement of a pulsed Nd:YAG laser at the department of Aerospace Engineering, Indian Institute of Science, Bangalore. With respect to this tender, the rules laid out by the Government of India in order No. P45021/2/2017-pp-BE-II issued by the Public Procurement Section, Department or Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, dated 4th June 2020 will be followed. As per this order, the government has defined a 'Class-I local supplier' as "a supplier or service provider whose goods, services or work offered for procurement, has local content equal to or more than 50%". A 'Class-II local supplier' is "a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%". Only Class-I and Class-II local suppliers are eligible to participate in this open domestic tender. Any "Non-local supplier" i.e., "a supplier or service provider, whose goods, services or works offered for procurement, has local content less than 20%" is ineligible to participate in this tender. The tender should be submitted in two separate sealed envelopes: one containing the technical bid and the other containing the commercial bid, both of which should reach us, duly signed on or before 5 PM on 20th March 2026.

The bids should be addressed to:

The Chairman,
Department of Aerospace Engineering
Indian Institute of Science
Bangalore 560012, India.
Kind attention: Dr. Irfan Mulla
email: irfanmulla@iisc.ac.in, chair.aero@iisc.ac.in

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Section 1: Bid Schedule

1.	Tender No	IISc/AE/Tender/2021/Local/NdYAG
2.	Tender date	27th February 2026
3.	Instrument	A pulsed Nd:YAG laser
4.	Tender type	i) Technical bid (Part A) ii) Commercial bid (Part B)
5.	Place of tender submission	The Chairman, Department of Aerospace Engineering Indian Institute of Science Bangalore 560012, India. Kind attention: Dr. Irfan Mulla
6.	Last date and time of tender submission	20th March 2026, 5 PM
7.	Contact for further clarification	Dr. Irfan Mulla Department of Aerospace Engineering Indian Institute of Science Bangalore 560012, India. Ph: +91-80-2293-2875 email: irfanmulla@iisc.ac.in

Section 2: Eligibility Criteria

Prequalification criteria:

1. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
2. The quotations should be on FOR-IISc Bangalore basis in INR only.
3. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.
4. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details.
5. The Bidder's firm should have existence for a minimum of 5 years (Enclose Company Registration Certificate).
6. The Bidder should have supplied at least 3 similar equipment in India in the past.
7. The Bidder should belong to either Class 1 or Class 2 supplier distinguished by their "local content" as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter.
    a. Class 1 supplier: Goods and services should have local content of equal to or more than 50%.
    b. Class 2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.
8. Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to Class-1 supplier.
9. The Bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per - Annexure 4.
10. The Bidder must be not blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.

Section 3: Technical Specification for a pulsed Nd:YAG laser

Submit quote for one pulsed Nd:YAG laser with following specifications.

T1. Mandatory specifications:

S.N.	**Parameter** (unit)	**Specification**
1.	Nominal pulse repetition rate (Hz)	10
2.	Adjustable pulse repetition rates (Hz)	0 – 10 Hz (F/1…. n (n = integer))
3.	Fundamental laser wavelength (nm)	1064
4.	Laser cavity design	*As described below*
4a.		Nd:YAG active medium that is flash lamp pumped
4b.		Nd:YAG rod should be removable for ease of servicing
4c.		Oscillator should be of single Nd: YAG rod design for robust alignment
4d.		Oscillator should have ceramic reflectors for long life.
5.	Energy per pulse (mJ)	*As described below*
5a.		≥ 850 @ 1064 nm
5b.		≥ 430 @ 532 nm
5c.		≥ 100 @ 266 nm
6.	Pulse duration (ns), FWHM	6 to 7 @ 1064 nm
7.	Beam diameter (mm)	8 to 10
8.	Beam divergence (mrad), full angle at $1/e^2$ of the peak	≤ 0.5 @ 1064 nm
10.	Spatial beam profile @ 1064 nm (fit to gaussian)	*As described below*
10a.		> 0.7 for near field
10b.		> 0.9 for far field
11.	Polarization ratio (%)	> 80 @ 1064 nm
12.	Pulse to pulse energy stability (%). Peak to peak value for 100% of the shots [and RMS based value]	*As described below*
12a.		≤ ± 2 [0.6] @ 1064 nm
12b.		≤ ± 4 [1.3] @ 532 nm
12c.		≤ ± 8 [2.6] @ 266 nm
13.	Power drift (%) over 8 hours without any readjustment of phase-matching, considering ambient temperature fluctuate between 18°C to 28°C	*As described below*
13a.		≤ ± 3 @ 1064 nm

13b.		≤ ± 5 @ 532 nm
13c.		≤ ± 10 @ 266 nm
14.	Pointing stability, full angle value at all harmonics (μrad)	≤ 40 @ 1064 nm, 532 nm, 266 nm
15.	Jitter with respect to Q-switch trigger input (ns)	≤ ± 0.5
16.	Linewidth (cm^{-1}) measured at FWHM	≤ 0.7 @ 1064 nm
17.	Beam quality M^2 value, at $1/e^2$ of the peak	≤ 2 @ 1064 nm
18.	Flash Lamp lifetime of a single unit (million shots)	≥ 100
19.	Power input	220-240 VAC, 50 Hz, single phase
20a.	Chiller	Integrated within the power supply unit of laser without any need of external chiller
20b.	Internal coolant	Deionized water
21.	Operating temperature	18 to 28˚C
22.	Storage temperature	15 to 45˚C
23.	Sync-In signal: External trigger input to the laser	5V TTL for both Q-switch and Flash lamp
24.	Sync-Out signal: External trigger output from the laser	5V TTL for both Q-switch and Flash lamp. TTL pulse should be standard positive going (i.e., rising edge).

T2. Mandatory requirements/features:

1. Product warranty from the date of installation:
    a. At least 1 year for flashlamp.
    b. At least 2 years for the remaining system, including optics, opto-mechanics, and electronics, but excluding the DI cartridge.
2. Delivery: Within 3 months from the date of purchase order.
3. The YAG laser must be suitable for pumping a dye laser.
4. Provide near-field and far-field beam profiles.
5. Laser should have interlock feature to prevent laser damage (e.g., from high laser-rod temperature or failure of coolant flow) and for safety of the user (e.g., when laser cover is removed).
6. Laser warmup feature: In-built standby heating (when flashlamp is off) to reduce warm up time as well as to keep the temperature stability of the cavity.
7. Adjustable delay (by using internal delay generator) of the Q-Switch output synchronization signal of 5V TTL pulse with respect to opening of the Q-Switch is required to synchronize the laser with other equipment. TTL pulse adjustable delay range should at least be –500 to +500 ns with 1 ns step. If a laser unit does not have this feature, then do provide a delay pulse generator with at least 1 ns resolution and accuracy, and at least 6 independent channels.
8. User should be able to change the flash lamp without any requirement of cavity optics re-alignment.
9. It should be possible to control the output energy by varying the delay between the flash lamp and Q-Switch and not just by adjusting the flash lamp voltage.
10. Detachable pump chamber and rod assembly for easy serviceability.

11. Laser should have a user selectable control through RS232/Ethernet and handheld remote control. The vendor should provide necessary software to control the laser from a computer.
12. Quick connect electrical cable and coolant lines with at least 3 m length. Cables and coolant lines should be able to disconnect from both the power supply side and the optical head to facilitate easy transportation.
13. Installation and user training should be provided by the manufacturer or their authorized distributor.
14. Provide second and fourth harmonic generators, including the wavelength separation units. All harmonic generators should be able to attach/detach easily with minor optical adjustment.
15. All harmonic generators should have electronic temperature stabilization and automated phase-matching control for energy optimization.
16. Harmonic generators installation with the following features:
    a. Direct mechanical coupling between the fundamental module and harmonic generator for robust alignment.
    b. The insertion and removal of harmonic generators should be user friendly and without the requirement of any optical realignment.
    c. All modules should have an externally accessible dichroic mirror assembly and residual beam dump.
    d. One should be able to achieve the following beam combination from all harmonic modules easily without the requirement of opening the harmonic modules.
        i. Just the main harmonic beam.
        ii. Main harmonic beam and residual beam through different ports.
        iii. Main harmonic beam and residual beam from a single port co-axially.
        iv. For the above-mentioned requirement, it should be possible to extend the harmonic generation modules. E.g., attachment of second, third, and fourth harmonic module in a series.
        v. A diagram representing beam accessibility should be provided by the vendor.
17. Future upgradation possibilities: Injection seeding of the laser to reduce the laser pulse linewidth to ≤ 0.005 cm^{-1} @ 1064 nm. This upgrade should be made possible at the user laboratory, if requirement arises in future, without any need to ship the laser to manufacturer.
18. The vendor should have an office with qualified technical service personnel based in India and should assure a response time of less than five business days. The bidder should provide a letter indicating details of the training received and experience in years. The technician must have a minimum of 5 years of experience in Nd:YAG laser servicing.
19. The vendor shall include at least one and up to five testimonials from existing users of a similar laser system indicating the performance of the laser and maintenance satisfaction.
20. The vendor must submit a list of all Indian customers (only Government of India organizations) where similar systems have been installed. References from this list can be used to disqualify vendors with a poor track record of service, build quality, system performance, or poor availability of spares. Additionally, IISc shall have the absolute right to take the opinion of other departments/institutes for their opinion/experience about the bidder's services/sales. Based on such input, IISc may decide about the rejection of a bid of such bidder(s).

T3. Optional requirements/features:

1. An additional flash lamp set
2. Two sets of DI cartridges
3. For 1064 nm output configuration, laser head including mounting brackets should fit within: Length = 600 mm, Height = 200 mm, and Width = 200 mm. For 266 or 355 nm output configuration, laser head including mounting brackets should fit within: Length = 800 mm, Height = 200 mm, and Width = 200 mm.
4. Third harmonic generation module with the following specifications to generate 355 nm beam

S.N.	**Parameter** (unit)	**Specification**
1.	Energy per pulse (mJ)	≥ 230 @ 355 nm
2.	Pulse to pulse energy stability (%). Peak to peak value for 100% of the shots [and RMS based value]	≤ ± 6 [2] @ 355 nm
3.	Power drift (%) over 8 hours without any readjustment of phase-matching, considering ambient temperature fluctuate between 18°C to 28°C	≤ ± 5 @ 355 nm

T4. Commercial bid price break-up

In the **commercial bid**, please provide the price of individual components, preferably in the following manner. The vendor **should not** disclose prices in the technical bid.

1. Laser with only a fundamental stage of 1064 nm output
2. Second and fourth harmonic generation units
3. CIP Charges

The following optional items

1. An additional set of flashlamp units
2. Two sets of DI cartridges
3. Third harmonic generation unit
4. Extended warranty for the laser system including optics but excluding DI cartridge

Section 4: Terms and Conditions

1. All documentations in the tender should be in English.
2. Tender should be submitted in two envelopes (two bid system).
   a) Technical Bid (Part-A) – Technical bid consisting of all technical details and checklist for conformance to technical specifications. The proposal should contain a compliance table. The compliance table should include all the items of the technical specifications in the same order and format. The first additional column should describe product specifications. The next column should indicate compliance in a "Yes" or "No" response.
   b) Commercial Bid (Part-B) – Indicating item-wise price for the items mentioned in the technical bid, as per the format of quotation provided in tender, and other commercial terms and conditions.
3. The technical bid and price bid should each be placed in separate sealed covers, superscribing on both the envelopes the tender no. and the due date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscribed with the Tender No, Tender Description & Due Date.
4. The SEALED COVER superscribing tender number and due date & should reach the office of the Chairman, Department of Aerospace Engineering Indian Institute of Science Bangalore 560012, India. Kind attention: Dr. Irfan Mulla, on or before the due date mentioned in the tender notice. In case the due date happens to be a holiday, the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
5. The covering letter should clearly state that whether the vendor is a Class-I or Class-II local supplier. Failing this the bid will be automatically rejected.
6. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
7. The vendor must provide a compliance statement in a tabular form concerning each technical specification in the tender document duly supported by the manufacturer's literature and published papers. Any other claim will not be accepted and may lead to the rejection of the bid.
8. Wherever requested, data must be supplied along with technical compliance documents. Technical bids without supporting data will be deemed as technically non-compliant.
9. The institute reserves the right to verify the accuracy and seek clarification of submitted specifications after opening the technical bids. Based on such clarification, if specifications are found to be unsuitable, the technical committee reserves the right to disqualify vendors. Any discrepancy between the promised and verified specifications will be deemed as technical non-compliance.
10. The technical bid should also contain warranty details and terms. Further, any periodic maintenance requirements for regular operation should be specified in detail, along with the extent of coverage under warranty for such maintenance activity.
11. The bidder shall provide the prerequisite installation requirement of the equipment along with the technical bid. The vendor is responsible for the installation of the system at the institute, along with the training of end-users.
12. In the commercial bid, the price should be inclusive of all discounts. The price quotation should include the cost of installation and training of potential users, if any. Please quote the price of each optional item, separately.
13. The quotations should be on FOR-IISc Bangalore basis in INR only.
14. Any statutory increase in the taxes and duties subsequent to the bidder's offer, if it takes place

within the original contractual delivery date, will be borne by IISc, Bangalore, subject to the claim being supported by documentary evidence. However, if any decrease takes place, the advantage will have to be passed on to IISc, Bangalore. Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from the bidding process.

15. Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:
    a) To accept OR reject the lowest tender or any other tender or all the tenders.
    b) To accept any tender in full or in part.
    c) To reject the tender, offer not confirming the tender terms.
16. IISc reserves the right to relax any or all of the above conditions without assigning any reason.

Annexure 1:

Details of the Bidder: The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Sr. No.	Type	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3.	Registration No/ Trade License, (attach attested copy)	
4.	Registered Office Address	
5.	Address for communication	
6.	Contact person- Name and Designation	
7.	Telephone No	
8.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

(Signature of the Bidder)
Name: Date:
Designation, Seal

Annexure 2:

Declaration regarding experience

To,

The Chairman,
Department of Aerospace Engineering
Indian Institute of Science
Bangalore 560012, India.
Kind attention: Dr. Irfan Mulla

Ref: Tender No:

Dated:

Sub: Supply and installation of a pulsed Nd:YAG laser

I have carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has ---- years of experience in supplying and installing a pulsed Nd:YAG laser. ---- number of similar systems are supplied in India by us.

(Signature of the Bidder)
Name: Date:
Designation, Seal

Annexure 3:

Declaration of track record

To,
The Chairman,
Department of Aerospace Engineering
Indian Institute of Science
Bangalore 560012, India.
Kind attention: Dr. Irfan Mulla

Ref: Tender No:

Dated:

Sub: Supply and installation of a pulsed Nd:YAG laser

Sir,

I have carefully gone through the Terms & Conditions contained in the above referred tender.

I hereby declare that my company / firm is not currently debarred / blacklisted by any Government / Semi-Government organizations / institutions in India or abroad. I further certify that I am competent officer in my company / firm to make this declaration.

OR

I declare the following:

Sr. No.	Country in which the company is debarred/ blacklisted / having pending case	Blacklisted / debarred by Government / Semi Government Organizations or Institutions / having pending case	Reason	Time Period

(Note: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

(Signature of the Bidder)
Name: Date:
Designation, Seal

Annexure 4:

Declaration of acceptance of terms and conditions

To,
The Chairman,
Department of Aerospace Engineering
Indian Institute of Science
Bangalore 560012, India.
Kind attention: Dr. Irfan Mulla

Ref: Tender No:

Dated:

Sub: Supply and installation of a pulsed Nd:YAG laser

Sir,

I have carefully gone through the Terms & Conditions contained in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I am an authorized signatory of my company and am, therefore, competent to make this declaration.

(Signature of the Bidder)
Name: Date:
Designation, Seal

Annexure 5:

Details of items quoted:

a. Company Name
b. Product Name
c. Part / Catalogue number
d. Product description / main features
e. Detailed technical specifications
f. Remarks, if applicable

Instructions to bidders:

1. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.

Annexure 6: Declaration regarding Class-I or Class-II local supplier

***(To be submitted In the company letter head by supplier)**

Declaration of Local Content by Local supplier

Subject: Public Procurement (Preference to Make In India)

References:

Preference to Make in India including counter offering will be as per the Public Procurement (Preference to Make in India), Order 2017 available in the following links https://dipp.gov.in/public-procurements
http://dipp.nic.in/sites/default/files/publicProcurement_MakeinIndia_15June2017.pdf
http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017_28052018.pdf
https://dipp.gov.in/sites/default/files/PPP-MII%20Order%20dt%2029th%20May%2019_0.pdf
https://dipp.gov.in/sites/default/files/PPP%20MII%20Order%20dated%204th%20June%202020.pdf

We hereby declare with reference to above subject and references that

M/s…….(Tick whichever is applicable as below)

"Class-I local supplier" meeting the requirement of minimum local content equal to 50% (fifty percent) or more defined in the above government notification for the goods and services
(or)
"Class-II local Supplier" meeting the requirement of local content 20% to less than 50% (fifty percent) defined in the above government notification for the goods and services
(or)

Non Local supplier (If not belonging to Class-I & Class-II)

Please mention the details against the following:

Enquiry no:…..... dated:……

Type of Supplier (Class-I/Class-II):…….

Product:…….

Project:……..

Details of location at which local value addition will be made is as follows:

We also understand that the false declarations will be in breach of the code of Integrity under rule 175(1)(i)(h) of the General financial rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Authorized Signature M/s:……
(Signature and seal)

Place:……

Date:…….

Section 5 – Commercial Bid

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

Items requested in the mandatory specification section:

1. Laser with only a fundamental stage of 1064 nm output
2. Second and fourth harmonic generation units
3. CIP Charges

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total
1.	Essential items noted in the technical specification				
2	… (details of essential items)				
3.	Warranty (years)				
4.	FOR-IISc Bangalore only				

Items requested in the optional specification section:

1. An additional set of flashlamp units
2. Two sets of DI cartridges
3. Third harmonic generation unit
4. Extended warranty for the laser system including optics but excluding DI cartridge

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total
1.	Optional items noted in the technical specification				
2	… (details of Optional items)				
3.	Warranty (years)				
4.	FOR-IISc Bangalore only				

Section 6 - Checklist

The following items must be checked before the bid is submitted.

1. Sealed Envelope "A": Technical Bid
   Technical bid (signed by the authorized signatory and sealed) with the below documents:
   a. Annexure 1: Bidders details
   b. Annexure 2: Declaration regarding experience
   c. Annexure 3: Declaration of track record
   d. Annexure 4: Declaration of acceptance of terms and conditions
   e. Annexure 5: Details of item quoted
   f. Annexure 6: Class-I or Class-II supplier declaration

2. Sealed Envelope "B": Commercial Bid

Your quotation must be submitted in two separate sealed envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) super scribing on both the envelopes with Tender No. and due date. These envelopes should be put in a bigger cover which should also be sealed and duly superscribed with Tender No., Tender description & Due Date.