NIST-SS26-CHIPS-16

6640 / 334516 – PSC/NAICS

Title: **CW OPO Laser System**

BACKGROUND

NIST is seeking information from sources that may be capable of providing a commercial item solution that meets or exceeds the following draft minimum specifications:

1. **System shall comprise a pump laser source, signal laser output, idler laser output, laser system control electronics, wavelength meter, an wavelength stabilization controls**
2. **Pump laser source specifications**
   - **2.1. Fiber-coupled pump laser output pickoff port with power greater than 0.5 mW**
3. **Signal laser output specifications**
   - **3.1. Tunable range inclusive of 1500 nm to 2000 nm**
   - **3.2. Optical power greater than 1 mW for all signal wavelengths**
   - **3.3. Peak signal output power greater than 200 mW**
   - **3.4. Free running laser linewidth less than 1 MHz**
4. **Idler laser output specifications**
   - **4.1. Tunable range inclusive of 2300 nm to 4000 nm**
   - **4.2. Optical power greater than 1 mW for all idler wavelengths**
   - **4.3. Peak idler output power greater than 200 mW**
   - **4.4. Free running laser linewidth less than 1 MHz**
   - **4.5. Mode-hop-free tuning range greater than 15 GHz**
5. **Laser system control electronics specifications**
   - **5.1. Power supply compatible with standard US electrical outlets, 110 V**
   - **5.2. Communication with a Windows-based personal computer possible over ethernet, USB, and/or GBIP**
   - **5.3. Fast frequency modulation and frequency locking tools provided for frequency stabilization of the pump laser source**
6. **Wavelength meter specifications**
   - **6.1. Measurement range inclusive of 1000 nm to 2000 nm**
   - **6.2. Absolute accuracy better than or equal to 200 MHz**
   - **6.3. Measurement speed greater than or equal to 500 Hz**
   - **6.4. Multichannel fiber optic input**
   - **6.5. Software based proportional-integral-derivative controller**
7. **Wavelength stabilization controls specifications**
   - **7.1. User interface (hardware and/or software) for precision idler laser output wavelength control and stabilization via the wavelength meter**
8. **All optical fibers, switches, connectors, and cables required to operate the CW OPO Laser System as specificized shall be included**
9. **All electronic cables, switches, and connectors required to operate the CW OPO Laser System as specified shall be included**
10. **All power supply cables required to operate the CW OPO Laser System as specified shall be inclued**

HOW TO RESPOND TO THIS NOTICE

In responding to this notice, please DO NOT PROVIDE PROPRIETARY INFORRMATION. Please include only the following information, readable in either Microsoft Word 365, Microsoft Excel 365, or .pdf format, in the response: Submit the response by email to the Primary Point of Contact and, if specified, to the Secondary Point of Contact specialist listed at the bottom of this notice as soon as possible, and preferably before the closing date and time of this notice.

- Provide the complete name of your company, address, name of contact for follow-up questions, their email, their phone number and, if your company has an active registration in https://sam.gov, your company's Unique Entity ID (UEI).

- Identify laboratory equipment that your company sells that is of the nature addressed in the BACKGROUND section of this notice. Include brand name, make, model, and/or other distinguishing information.

- State if your company is the manufacturer of the identified equipment or is a retailer or wholesaler that normally sells the identified equipment. If the latter, indicate whether the manufacturer authorized in writing for your company to sell the identified equipment on behalf of the manufacturer.

- Describe performance capabilities and relevant or beneficial physical and functional features for any equipment you identified to satisfy the NIST-identified minimum specifications described in this notice.

- Identify any aspects of the NIST market research notice, including instructions, and draft minimum specifications in the BACKGROUND section above that could be viewed as unduly restrictive or contain unnecessary barriers that adversely affect your ability to fully participate and indicate why. In such a scenario, please offer suggestions for how the market research notice and draft minimum specifications could be made more inclusive and competitive.

- Discuss whether the equipment that your company sells and which you describe in your response to this notice may be customized to specifications and indicate any limits to customization.

- For the NAICS code listed in this notice:

    - Indicate whether your company is (a) a small business or (b) other than small business. See the Table of Small Business Size Standards and the associated .pdf download file for small business size standards and additional information.

    - If you believe the NAICS code listed in this notice is not the best NAICS code for the type of product addressed in this notice, identify an alternative NAICS code that you believe would be more appropriate for the planned procurement.

- Describe services that are available with the purchase of the aforementioned equipment from your company such as installation, training, and equipment maintenance.

- Describe standard terms and conditions of sale offered by your company for the aforementioned equipment such as: delivery time after your company accepts the order; FOB shipping terms: manufacturer warranty (including details regarding nature and duration); if available, description(s) of available extended warranty; equipment setup and test; operator and service instruction manual(s); cleanup after installation; and if applicable, other offered services. Provide a copy of manufacturer standard terms and conditions that typically relate to the sale of the specified equipment, if available.

- State whether your company offers facility renovation services related to installation of the aforementioned equipment at its delivery destination, if required per the NIST-identified minimum specifications, and provide description of services. Indicate if your company performs the facility renovation services or typically subcontracts the work to another company. Indicate if your company would be interested inspecting the intended installation site during the market research phase.

- State published price, discount or rebate arrangements for aforementioned equipment and/or provide link to access company's published prices for equipment and services.

- State whether the aforementioned equipment is manufactured in the United States and, if not, state the name of the country where the equipment is manufactured.

- Identify any plans/possibilities for changes in manufacturing location of the aforementioned equipment and provide relevant details.

- If the aforementioned equipment and related services are available for purchase on any existing Federal Supply Schedule contract(s) or other contracts against which NIST may be able place orders, identify the contract number(s) and other relevant information.

- Identify any customers in the public or private sectors in which you provided the aforementioned or similar equipment. Include customer(s) information: company name, phone number, point of contact, email address.

- Provide any other information that you believe would be valuable for NIST to know as part of its market research for this requirement.

- State if you require NIST to provide additional information to improve your understanding of the government's requirement and/or would like to meet with NIST representatives to discuss the requirement and the capabilities of the identified equipment.

QUESTIONS REGARDING THIS NOTICE

Questions regarding this notice may be submitted via email to the Primary Point of Contact and the Secondary Point of Contact listed in this notice. Questions should be submitted so that they are received by **11:00 a.m. Eastern Time on October 31, 2022**. Questions will be anonymized and answered via sources sought notice amendment following the question submission deadline.

IMPORTANT NOTES

The information received in response to this notice will be reviewed and considered so that NIST may appropriately solicit for its requirements in the near future.

This notice should not be construed as a commitment by NIST to issue a solicitation or ultimately award a contract.

Responses will not be considered as proposals or quotations.

No award will be made as a result of this notice.

NIST is not responsible for any costs incurred by the respondents to this notice.

NIST reserves the right to use information provided by respondents for any purpose deemed necessary and appropriate.

Thank you for taking the time to submit a response to this request!