

COMPLETE THIS FORM TO INITIATE SUPPLIER SCOUTING

MEPNN Supplier Scouting Opportunity Synopsis

*The submitting entity agrees to notify NIST MEP of the status of actions taken as a result of this scouting instance within 30 days after receiving a results report. For instances where the submitting entity is an MEP Center submitting on behalf of a client, the MEP Center agrees to notify NIST MEP on behalf of their client. For instances where the submission is direct from federal/state agencies or is a private company, the submitting federal/state agency or private company entity agrees to notify NIST MEP. Notification should be via email to scouting@nist.gov, indicating the following:

- Contact with matches identified in report complete and supply contract awarded, process complete
- Contact with matches identified in report complete and no supply contract awarded, process complete
- Contact with matches identified in report complete and supply negotiations underway, process in progress
- Contact with matches identified in report underway; supply negotiations not yet begun; process in progress
- Contact with matches identified in report not yet begun, process in progress
- Contact with matches identified in report will not occur within the next 6-months, process complete

High-Resolution Laser Mask Writer

_____ days
Opportunities will be posted for 30 days unless specified

Item to be Scouted

Please describe the item application/ the end use of item.* Provide the item number if applicable: (N95 Mask vs Protective Mask).

The National Institute of Standards and Technology (NIST) seeks information on commercial vendors capable of providing a high-resolution laser mask writer for the fabrication of photomasks. The system will be sited and used as a shared resource accessible to researchers from industry, academia, NIST, and other government agencies in the CNST NanoFab. The NanoFab is a state-of-the-art nanofabrication laboratory and has various lithography tools that require photomasks to produce lithographic images.

2022-132

Supplier Scouting Number (NIST MEP use)

333242

Scouting customer/product NAICS Code, if known

TECHNICAL INFORMATION:	1. Supplier Information	a. Type of supplier being sought*
		<input checked="" type="checkbox"/> Manufacturer <input type="checkbox"/> Contract Manufacturer <input type="checkbox"/> Distributor <input type="checkbox"/> Other _____
	2. Summary of Technical Specifications and Performance Requirements:	b. Reason for scouting submission*
		<input type="checkbox"/> 2nd Supplier <input type="checkbox"/> Price <input type="checkbox"/> Re-shore <input type="checkbox"/> Past supplier no longer available <input type="checkbox"/> New Product Startup <input checked="" type="checkbox"/> Other _____
a. Describe the manufacturing processes (elaborate to provide as much detail as possible).*		
Item to be purchased as a standalone unit		
b. Provide dimensions / size / tolerances / performance specifications for the item.*		
<p>The NanoFab currently operates a high-resolution laser mask writer purchased in 2013 and is heavily used to make masks in support of the existing contact aligners and projection stepper lithography tools. This system will replace the existing mask writing capability in the CNST NanoFab and is intended to be used by NanoFab users to facilitate access to fast mask writing capability that provides patterning and alignment accuracy at submicron dimensions.</p> <p>1. System Configuration 1) Mask writer system shall have an environmental enclosure. 2) Mask writer system shall have a 355 nm wavelength laser for direct writing onto substrates. 3) Mask writer system shall accommodate the following substrates: a. 100 mm and 150 mm diameter semi-spec silicon wafers. b. 5-inch square, 0.090-inch-thick quartz photomasks. c. 6-inch square, 0.120-inch-thick quartz photomasks. d. 6-inch square, 0.250-inch-thick (6025) semi-spec quartz photomasks. 2. System Capabilities 1) Mask writer system shall print features down to 500 nm. 2) Mask writer system shall have overlay less than 40 nm. 3) Mask writer system shall print features onto mask plates coated with IP3500 photoresist with a line edge roughness less than 25 nm. 4) Mask writer system shall have CD uniformity less than 35 nm. 5) Mask writer system shall have a write speed greater than or equal to 325 mm²/min. 6) Mask writer system shall allow for third party GenISys Beamer conversion of GDSII patterns to the mask writer format. 7) Mask writer system shall write an entire 6 inch by 6 inch substrate in less than or equal to 75 minutes.</p>		

		<p>c. List required materials needed to make the product, including materials of product components.*</p> <p>Item to be purchased as a standalone unit</p>
2. Summary of Technical Specifications and Performance Requirements cont:		<p>d. Are there applicable certification requirements?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain</p>
		<p>e. Are there applicable regulations?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain</p>
		<p>f. Are there any other standards, requirements, etc.?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain</p>
		<p>g. Additional Comments: Is there other information that would impact the item's performance or usefulness? Please explain.</p>
BUSINESS INFORMATION:	3. Volume and Pricing	<p>3a. Estimated potential business volume (i.e., # Units Per Day, Month, Year) *:</p> <p>One unit</p>
		<p>b. Estimated target price / unit cost information (flexible and negotiable <u>not</u> accepted) *:</p> <p>Unknown</p>
	4. Delivery Requirements:	<p>a. When is it needed by? (Immediate, 30 Days, 6 months, etc.)*</p> <p>ASAP</p>
		<p>b. Describe packaging requirements (i.e., individually/group packaging)*</p> <p>Flexible</p>
		<p>c. Where will this item be shipped? *</p> <p>NIST, 100 Bureau Drive, Gaithersburg, MD 20899</p>
5. Add it:	<p>Is there other information you would like to include?</p>	

--	--	--

Photos or diagrams of the item (helpful but not required).

■