

## \*\*COMPLETE THIS FORM TO INITIATE SUPPLIER SCOUTING\*\*

## **MEPNN Supplier Scouting Opportunity Synopsis**

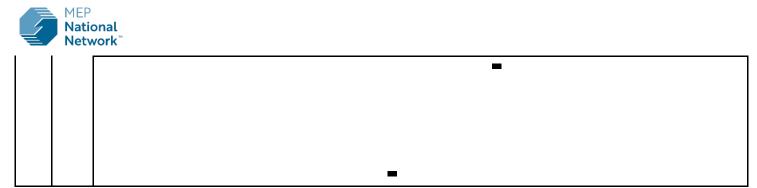
- □ \*The submitting entity agrees to notify NIST MEP of the status of actions taken as a result of this scouting instance within 30 days after receiving a results report. For instances where the submitting entity is an MEP Center submitting on behalf of a client, the MEP Center agrees to notify NIST 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

	• Cor	ntact with matches identifie	d in report complete and no supply contract awarded, process complete		
	• Cor	ntact with matches identifie	d in report complete and supply negotiations underway, process in progress		
	• Cor	ntact with matches identifie	d in report underway; supply negotiations not yet begun; process in progress		
	• Cor	ntact with matches identifie	d in report not yet begun, process in progress		
	• Cor	ntact with matches identifie	d in report will not occur within the next 6-months, process complete		
High-Resolution Laser Mask Writer			days Opportunities will be postedfor 30 days unless specified		
Item to	be Scoute	ed			
Please o	lescribe t	he item application/ the end use of i	tem.* Provide the item number if applicable: (N95 Mask vs Protective Mask).		
of photo	masks. T	he system will be sited and used as a sl	T) seeks information on commercial vendors capable of providing a high-resolution laser mask writer for the fabrication hared resource accessible to researchers from industry, academia, NIST, and other government agencies in the CNST stion laboratory and has various lithography tools that require photomasks to produce lithographic images.		
2022-132					
Supplie	Scouting	Number (NIST MEP use)			
333242					
Scouting customer/product NAICS Code, if known					
-	_	sought*			
ECI	- s	■ Manufacturer	☐ Contract Manufacturer ☐ Distributor		
Z	ldn	☐ Other			
CA	Supplier				
TECHNICAL INFORMATION:		b. Reason for scouting su	bmission*		
FO	Information	☐ 2 <sup>nd</sup> Supplier ☐	Price   Re-shore   Past supplier no longer available		
RM	natio	☐ New Product Startu	JD		
ΑTI	on	Other			
9					
	0 N	a. Describe the manufact	uring processes (elaborate to provide as much detail as possible).*		
	2. S	a. 2 2222 Processes (elanorate to protince as illustrate as possible):			
	2. Summary and Perform	Item to be pu	urchased as a standalone unit		
1	μŽ	b. Provide dimensions / s	ize / tolerances / performance specifications for the item.*		

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. 1. System Configuration 1) Mask writer system shall have an environmental enclosure. 2) Mask writer system shall have a 355 nm wayelength 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 ess 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 GenlSys 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.



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



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