This Request for Information (RFI) is not a request for Proposal (RFP), no contract will be awarded following receipt of information, and no commitments with respect to future purchases or contracts.

TITLE :

High Power Spatial Light Modulator.

Objective :

The objective of this request for information is to evaluate the feasibility, cost, and delivery time of a High Power Spatial Light Modulator whose characteristics are detailed in the "Scope of Work" section.

Context :

Defence Research and Development Canada (DRDC) is undertaking research initiatives involving the control of spatial characteristics of high-power continuous-wave laser beams.

Acronyms :

DRDC – Defence Research and Development Canada
HP-SLM – High Power Spatial Light Modulator

Scope of the work :

We present here the preliminary specification of a transmissive or reflective spatial light modulator, so as to modulate the phase of an optical wavefront of a laser beam.

The High Power Spatial Light Modulator must have the following specifications:

a. must be based on liquid crystal technology;;
b. must be either reflective, or transmissive;
c. must operate in the short-wave infrared region;
d. must comprise a software interface allowing to select the desired phase profile (phase delay per pixel) across the entire active area. The control interface shall allow a user-defined, time-varying phase profile control, with an input in the form of successive matrices, or a video file;
e. must have a pixel separation (pitch) of no more than 1 mm;
f. must tolerate incident power densities of at least 500 W/cm2;
g. must have an active surface area diameter of at least 5 cm and no more than 30 cm.

Optional characteristics :

1. may include an active cooling system;
2. may also provide spatial amplitude modulations;
3. Multiple solutions with different aperture diameters, pixel resolutions, or irradiance limits are desired.

Intellectual property :

No intellectual property will be retained by Canada.

Answers to the following questions shall provide information regarding the technical challenges as well as important commercial and budget considerations.

Note: All the information provided will be treated as confidential; it will not be shared with competitors or any other organization outside DND. Companies responding to this Request for information should identify potential partners, if there is a need to augment or complement existing company expertise.

Questions about your company:

Does your company have expertise in the manufacture of High Power spatial light modulator (HP-SLM) ?.

Can you provide a point of contact, if further questions or clarification is required?

Technical questions:

Based on your expertise, are the preliminary specifications achievable? If not, why? Can they be improved?

Can you identify other important technical aspects that must be considered?

Budget questions and commercial considerations:

What are your estimation of the cost and the time frame of this development effort? Can a preliminary schedule and cash phasing be presented?

Can you identify other important commercial aspects that must be considered?

Can you send us any additional documentation (presentation, report and brochure) relevant to this development effort?

CLOSING DATE AND DOUCMENT SUBMISSION:

Suppliers interested in responding should send their responses (preferably by email) to Céline Vaillancourt before the closing date and time indicated on the first page of this RFI. All responses and requests for information are to be addressed to:

Celine Vaillancourt
Procurement specialist, Valcartier Research Centre
Defence Research and Development Canada / Government of Canada
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Bulding 53
Quebec QC G3J 1X5

Téléphone: 418-844-4000 ext 4629
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Email: Celine.Vaillancourt@drdc-rddc.gc.ca or Celine.Vaillancourt@forces.gc.ca

Documents may be submitted in either official language of Canada (English or French)