Requirements / Specification Document

National Institute of Standards and Technology
U.S. Department of Commerce

TITLE: Pulse Generator

Requesting Laboratory / Division / Group:

Communications Technology Laboratory
Radio Frequency Technology Division
Electromagnetic Fields Group (672.02)

General Statement of Need:

The Electromagnetic Fields Group requires a high-voltage, unipolar pulse generator with a nanosecond pulse width to support Rydberg Research / Multiple OA Projects.

Item Specifications and Quantities:

Item 1:	Pulse Generator	
Quantity:	1 EACH	
Specifications:	1.1	Maximum pulse output > 10 kV in 50 Ohms
	1.2	100 ps rise time
	1.3	3 ns decay time
	1.4	Repetition rate 1 kHz
	1.5	Single shot Mode
	1.6	Output high voltage N-type (HN)
	1.7	Internal and external trigger options
	1.8	Input power 100 to 240 VAC 50 to 60Hz at <5 amps
	1.9	Fits 19” rack 3U
	1.10	Weight =< 7.5 kg

Vendor Requirements

1. Possess at time of award/contracting an Export Control Classification Number (ECCN).
2. Possess at time of award/contracting a Unique Entity Identification Number (UEI) which registration is listed as “Active” on the GSA System for Award Management (SAM.gov).

Procurement Support Information and Ancillary Services:

Section		Requirements/Specifications
Planning Considerations	☐	List any visits required to allow potential vendors to see site specific constraints.

☒ N/A

[Explain Requirements.]

☐ US citizen required on-site (foreign nationals require pre-registration 30 days prior to visit.)

☐ Vendor Representative On-Site more than three (3) days.

☐ Other Considerations:

[List other considerations to ensure an accurate quote.]

Shipping & Delivery

☐ N/A

Shipping Address:

☒ NIST-Boulder
ATTN: TBA
Mail Stop: TBA
325 Broadway
Boulder, CO 80305

☐ NIST-Gaithersburg
ATTN:
Mail Stop:
100 Bureau Dr
Gaithersburg MD 20899

☐ [Alternate Shipping Address]

Shipping Criteria:

☐ Partial Delivery Acceptable

☐ [Enter Shipping and Delivery information by item.]

☐ Direct Delivery to OU Building Required

[Explain Need for Requirement]

Building /Room Number: [Enter Building/Room Number]

☐ Building has Loading Dock

Containerization Preference: [Enter Container Type]

Other Requirements:

[List Any Other Requirement]

Delivery Date Criteria:

☐ Delivery Shall Be Competed No Later Than:
Click or tap to enter a date.

☐ Delivery Shall Be Made No Earlier Than:
Click or tap to enter a date.

☐ Scheduled Deliveries:

Item Number	Due Date

	☐ Other: [List Other Shipping, Delivery or Special Requirements.]
Electronic Media ☒ N/A	[Enter Electronic Media Requirements by Item.] ☐ Software ☐ Electronic Manuals ☐ License Key ☐ Other: [List Any Other Electronic Media Requirements] ☐ US Government Email Address for Software Delivery: [Enter Address]
Installation ☒ N/A	[Enter Installation Requirements by Item] ☐ Vendor Technician on Site ☐ Rigging ☐ Uncrating / Unpackaging ☐ Removal of Packaging Material ☐ Equipment Set Up ☐ Start-Up Services ☐ Turnkey Installation ☐ Other: [Enter Details] NOTE: TPOC shall be the coordination POC.
Facility / Utility Considerations ☒ N/A	[List Site Specific Utility Considerations by Item] ☐ OFPM Work Order Numbers [List Work Order Numbers] ☐ Power Available Voltage: [Enter voltage] (V) Maximum Current: [Enter max current draw] (A) Phase: [Choose Phase] Frequency: [Typically 60Hz] (Hz) NEMA Plug Type: [Enter Plug Type] (i.e.: NEMA L5-20P) Environment: [Choose Environment]

Other Power Considerations:
[List Any Other Power Considerations.]

☐ Utility Connections:
[List Relevant Available Utilities, Pressure(s) and Flowrate(s).]

☐ Other Considerations:
[List Other Considerations to Ensure an Accurate Quote.]

Inspection and Acceptance
☐ N/A

[Inspection Requirements Per Item (Who, When, What, Where)]

☐ On-Site

☒ Acceptance Not Expected to Exceed 7 Business Days

☐ Acceptance Expected to Exceed 7 Business Days:
[Duration]

☐ Inspection and Acceptance Plan:
[Explanation]

☐ Other:
[Enter Other Requirements]

Training
☒ N/A

Training Requirements (Who, When, What, Where)

☐ Number of Trainees: [Enter Number of Trainees]

☐ On-Site

☐ Off-Site Location: [Enter Location(s)]

Is Trainee Travel Required: [Choose Answer]

Scope of Training

☐ Operation ☐ Maintenance ☐ Troubleshooting

☐ Safety ☐ Other

[Enter Other Scope of Training Requirements]

☐ Training Materials to be Provided by Government:
[Describe Materials]

☐ Training Materials to be Provided by Vendor:
[Describe Materials]

☐ Other
[Enter Other Training Requirements]

NOTE: SME shall be coordination POC.

Warranty ☐ N/A	Base Manufacturer Warranty is acceptable Warranty Length: [i.e. 3 - Years] What is included? ☐ Labor ☐ Parts ☐ Travel ☐ Cost and Liability for Returns ☐ Other [Enter Other Requirements] ☐ 1 Option Period ☐ 2 Option Periods ☐ 3 Option Periods ☐ 4 Option Periods (Maximum)
Calibration ☒ N/A	[Describe Calibration Requirements Per Item] Calibration Plan Length: [i.e. 3 - Years] What is Included? ☐ Labor ☐ Spare Parts ☐ Consumables ☐ Travel ☐ Cost and Liability for Shipment ☐ Software Updates ☐ Manuals ☐ Other [Enter Other Requirements] ☐ Requirements: [Enter Requirements] (i.e.: On-Site Within 72 hours, etc.) ☐ 1 Option Period Length: [i.e. 1 – Year / 6 - Months] ☐ 2 Option Periods ☐ 3 Option Periods

	☐ 4 Option Periods (Maximum)
Maintenance ☒ N/A	[Describe Maintenance Requirements Per Item] Maintenance Plan Length: [i.e. 3 - Years] What is Included? ☐ Labor ☐ Spare Parts ☐ Consumables ☐ Travel ☐ Cost and Liability for Shipment ☐ Software Updates ☐ Manuals ☐ Other [Enter Other Requirements] ☐ Requirements: [Enter Requirements] (i.e.: On-Site Within 72 hours, etc.) ☐ 1 Option Period Length: [i.e. 1 – Year / 6 - Months] ☐ 2 Option Periods ☐ 3 Option Periods ☐ 4 Option Periods (Maximum)
Government Furnished Material / Equipment ☒ N/A	List Any Government Furnished Material / Equipment Per Item] ☐ Samples for Testing ☐ Equipment which will leave Government Site Description: [Enter Description] Serial Number: [Enter Serial Number] NIST Property Number: [Enter NIST Property Number] ☐ Other: [Enter Other Details]
Travel ☒ N/A	[Describe any Travel Requirements Per Item] ☐ Explain: [Enter Justification / Requirement] ☐ Other: [Enter Other Requirements] NOTE TO VENDOR: To the maximum extent possible, include travel requirement estimates as part of pertinent sections above (Installation, Maintenance, Repair, etc.). Otherwise, Travel will be a separate line item, reimbursable per the Federal Travel Regulation.

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