

# ITEM OPPORTUNITY SYNOPSIS

Name of the item to be scouted: 1320nm Entangled Photon Source

State item to be used in: Maryland

## Describe the Item:

**Please describe the item application/the end use of item.** One (1) Entangled Photon Source (EPS) that emits entangled photon pairs in the telecom O-band around 1320 nm. The EPS will assist NIST in achieving the goal of developing a measurement and testbed infrastructure to test and validate the performance of optical quantum components on the NIST Gaithersburg campus.

## Supplier Information:

Type of Supplier being sought (select from list below)

**Manufacturer**

Contract Manufacturer

Distributor

Other (please specify)

Reason for scouting submission (select from list below)

**2<sup>nd</sup> Supplier**

Price

Re-Shore

Past supplier no longer available

New Product Startup

Other (please specify)

## Summary of Technical Specifications and Performance Requirements:

Describe the manufacturing processes (elaborate to provide as much detail as possible). N/A

**Provide dimensions / size / tolerances / performance specifications of the item.** Photon generation centered at  $1320 \pm 1$  nm; The 1320 nm bi-photon bandwidth shall be 100 nm; Photon pair rate shall be >500 000 pairs/s at the source; Polarization-entanglement visibility shall be >98%; Photon-heralding probability shall be >30%; Photon Output Fibers shall be SMF28

List required materials needed to make the product, including materials of product components, if applicable. N/A

Are there applicable certification requirements?

Yes

No

Please Explain:

Are there any applicable regulations that apply to the production of this item?

Yes

No

Please Explain:

Are there any other standards, requirements?

Yes

No

Please Explain:

**Additional Comments:**

**Additional technical comments:** The contractor shall warrant the entire system in accordance with the Original Equipment Manufacturer's commercial item warranty terms and conditions, to include at minimum parts and labor, for a minimum of 12 months.

**Volume and Pricing:**

**Estimated Potential Business Volume (i.e. #Units per day, month, year):** 1 unit

**Estimated Target Price / Unit Cost Information:** \$24,900

**Delivery Requirements:**

**When is it needed by? (Immediate, 30 days, 6 months, etc)** Within 24 weeks of award/purchase

**Describe packaging requirements (i.e., individually/ group packaging).** Freight/Individually

**Where will this item be shipped?** Gaithersburg, MD