**SOLE SOURCE / SINGLE SOURCE / NO SUBSTITUTE JUSTIFICATION**

**Complete this form and submit to Procurement Services when Purchase Request dollar amount exceeds standard purchase amounts\* and competitive bidding is unavailable or deemed unacceptable.**

REQUISITION # ITEM(S): Thorlabs opto-mechanical components & scanning lens, Newport delay line COST: $8083.32

**I. Check the category most applicable to your requirement:**

◼**Sole Source.** No other known source or the only source meeting specification requirements.

**Single Source.** Only the designated Supplier is acceptable, others may exist.

**No Substitute.** Specified item is required due to uniqueness, research continuity, etc.

**II. Check the description(s) most applicable to your requirement:**

◼Item has characteristics unique to a single manufacturer essential to proposed use.

Proprietary repair or replacement item.

◼Supplementary or accessory item required from same manufacturer.

Designed into fabricated equipment.

Required for test and evaluation.

Emergency acquisition as defined in BUS 43

Other:

**III. Defining Item / Supplier uniqueness:**

A. What are the minimum use requirements (e.g., operating specifications; dimensions; tolerances; accuracy; purity; reliability; useful life, etc.)?

The opto-mechanical components should provide variable functionalities needed for our planned experiment setup, and also needs to be compatible with the components we currently own. As for the variable delay line component, it should provide enough precision and range, and also needs to be compatible with the laser wavelength of interest. The scanning lens should have the enough field of view and aberration performance to meet the spec for our lens-based beam-steering system.

B. How are these requirements critical to your needs?

Functionality and compatibility is extremely critical for opto-mechanical components, as current purchase is planned to extend current setup that is built on the opto-mechanic platform from Thorlabs. Also, in order to precisely match the path delay of the interferometer setup, optical delay line should meet both precision and range requirements as fiber-based interferometer can have highly varying path mismatch. As for the laser scanning lens, it is important to have large field of view and also excellent aberration performance in order to meet the design goal of our beam-steering system, while being compatible with the mirror-based scanning system we will be using in combination.

C. What other suppliers were considered and why were they rejected? (Brand names and suppliers should be specified.)

Newport Corporation also offers opto-mechanics components, but the range of functions offered by the components on the catalog was considered insufficient for our needs, and it is not compatible with the platform that we already own. As for the delay line, we also considered products from OzOptics, but the product available on their catalog for order was insufficient in tuning range.

D. Why is this make, model, service, or supplier the only one acceptable?

Opto-mechanics components from Thorlabs is the only set of products that provides both required functionality and compatibility with existing platform. Variable delay line from Newport corporation was the only product available that meets our range and precision of interest while in stock. Finally, to the best of our knowledge, scanning lens from Thorlabs was the only product commercially accessible that is designed for beam scanning applications we are interested with sufficient aberration performance.

Prepared By: Fred Burghardt Date: Email: flb@berkeley.edu

(if different than the Approver)

Approved By: Date: Email:

(Principal Investigator/Administrative Officer)

Concurrence: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:

Buyer

\* $5,000 for Federal and $10,000 for Non-Federal