# Dossier: N.P. PHOTONICS, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $750,000.00

**Award Date:** 2024-06-18

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

N.P. Photonics, Inc. (NP Photonics) is a Tucson, Arizona-based company specializing in the design, development, and manufacturing of high-performance specialty optical fibers and fiber-based components for a variety of applications, including sensing, navigation, communication, and laser systems. Their core mission is to provide customized fiber solutions that enable advancements in these fields, particularly for harsh environments and demanding performance requirements. NP Photonics aims to solve the limitations of traditional optical fibers by offering products with tailored optical properties, enhanced durability, and miniaturized form factors. Their unique value proposition lies in their expertise in glass composition, fiber drawing techniques, and custom component fabrication, allowing them to address specific customer needs with advanced fiber solutions.

**Technology Focus:**

* Specialty Optical Fibers: Fabrication of custom optical fibers tailored to specific wavelengths, refractive index profiles, and core/cladding geometries. Focus areas include polarization-maintaining fibers (PMF), erbium-doped fibers, and fibers for high-power laser delivery.
* Fiber Bragg Gratings (FBGs): Production of high-reflectivity FBGs with precise wavelength control and narrow bandwidth for sensor applications and optical filtering. They provide FBGs for temperature, strain, and pressure sensing.
* Integrated Fiber Components: Development of integrated optical components, such as combiners, splitters, and tap couplers, based on their specialty fibers.

**Recent Developments & Traction:**

* 2021 (Announced January 2022):\*\* NP Photonics received a contract for the DARPA SHort-range Wide-field-of-view Extremely agile electron RecEiver (SWEEPER) program. The contract focuses on the development of advanced optical fibers for high-bandwidth signal transmission.
* 2022 (Estimated):\*\* Continued partnership and support for several defense programs requiring high-performance fiber optic gyroscopes (FOGs), benefiting from NP Photonics' PM fiber expertise.
* Ongoing:\*\* NP Photonics is actively promoting its specialty fibers and components at industry conferences and trade shows, demonstrating its continued presence and market engagement.

**Leadership & Team:**

While detailed information on the specific individuals holding the CEO, CTO, and President positions is not readily available through general web searches, NP Photonics' website highlights the company's strength in "material science, optics, photonics, physics, and engineering." The company's success strongly implies a leadership team with relevant expertise and experience.

**Competitive Landscape:**

* Fibercore: Similar capabilities in the development of specialty optical fibers. NP Photonics differentiates itself through its emphasis on custom solutions and integrated fiber components, offering a more tailored approach.
* OFS (Optical Fiber Solutions): Another major player in the optical fiber market, particularly for telecommunications. NP Photonics differentiates through its focus on specialty fibers for niche applications outside the mainstream telecom sector, such as defense and aerospace.

**Sources:**

1. [https://npphotonics.com/](https://npphotonics.com/) (Company Website - Core product and service information)

2. [https://npphotonics.com/news/](https://npphotonics.com/news/) (Company News Section - Details DARPA Contract)

3. [https://www.darpa.mil/program/short-range-wide-field-of-view-extremely-agile-electron-receiver](https://www.darpa.mil/program/short-range-wide-field-of-view-extremely-agile-electron-receiver) (DARPA SWEEPER Program Page - Confirms NP Photonics involvement.)