# Dossier: SPHERE OPTICS COMPANY LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $57,517.00

**Award Date:** 2023-04-28

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

SPHERE OPTICS COMPANY LLC, based in Goffstown, New Hampshire, specializes in the design, development, and manufacturing of custom optical systems, components, and coatings for demanding applications primarily in the defense, aerospace, medical, and industrial sectors. Their core mission is to provide innovative and high-performance optical solutions tailored to meet specific client requirements, particularly for applications requiring precision, durability, and reliability in harsh environments. Sphere Optics aims to solve the problem of sourcing customized, high-quality optical components and systems from a responsive and technically capable supplier, addressing the needs of clients who often require specialized solutions not readily available from off-the-shelf providers. Their unique value proposition lies in their vertically integrated capabilities, encompassing optical design, thin-film coating, precision manufacturing, and rigorous testing, allowing them to control quality and optimize performance across the entire production process. They are especially known for their work in creating high-damage-threshold optical coatings for laser systems used in defense applications.

**Technology Focus:**

* Thin-Film Coating Capabilities:\*\* Specializes in high-performance thin-film coatings for a wide range of optical materials, including anti-reflection (AR), high-reflection (HR), and dichroic coatings. These coatings are engineered for specific wavelengths, angles of incidence, and polarization states, often exceeding industry standards for durability and laser-induced damage threshold (LIDT). Specific coating technologies mentioned include e-beam evaporation, ion-assisted deposition, and magnetron sputtering.
* Custom Optical Systems:\*\* Designs and manufactures custom optical systems ranging from single-element lenses to complex multi-element assemblies. These systems often incorporate advanced optical designs for demanding applications such as laser beam delivery, imaging, and sensing. Sphere Optics also offers optical bonding and assembly services.

**Recent Developments & Traction:**

* SBIR/STTR Grants:\*\* Sphere Optics has consistently received Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants from various government agencies, including the Department of Defense, related to advanced optical technologies. While specific amounts and dates are not easily ascertainable from open sources, continued participation in these programs points to ongoing R&D and government interest.
* Partnerships:\*\* Evidence suggests partnerships with larger defense contractors, although specific names are not readily available in public sources. The nature of their specialization makes them a likely supplier to larger prime contractors.
* Expansion:\*\* Public records indicate investment in equipment upgrades and facilities improvement.

**Leadership & Team:**

* Michael Bechtold (President):\*\* Appears to be the primary individual associated with the company. His background and experience is difficult to publicly ascertain beyond his role at Sphere Optics.

**Competitive Landscape:**

* Alpine Research Optics (ARO):\*\* ARO is a competitor in providing high-performance optical coatings and components, especially for laser applications. Sphere Optics differentiates itself through its higher degree of custom system design and potentially a more agile and responsive approach for smaller-scale or highly specialized projects.

**Sources:**

1. [https://www.sphereoptics.com/](https://www.sphereoptics.com/) (Company Website - foundational information)

2. [https://www.bizapedia.com/nh/sphere-optics-company-llc.html](https://www.bizapedia.com/nh/sphere-optics-company-llc.html) (Business Registration Information)

3. Various searches for SBIR/STTR awards associated with "Sphere Optics" combined with keywords like "optical coating" and "laser damage threshold" to identify potential awarded contracts and technology areas. These awards are not always public and specific award data is often behind a paywall.