# Dossier: MOMENTUM OPTICS INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,952.00

**Award Date:** 2022-11-01

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Momentum Optics Inc. is a manufacturer and provider of advanced optical components and systems primarily serving the defense, aerospace, and scientific communities. Their core mission centers around enabling superior performance in demanding applications by delivering high-precision, custom-engineered optical solutions that address challenges in imaging, sensing, and laser systems. They specialize in complex geometries, exotic materials, and challenging specifications. Their unique value proposition resides in their ability to offer vertically integrated design, manufacturing, and testing capabilities coupled with a deep understanding of their clients' specific mission needs, providing tailored solutions rather than off-the-shelf components. This allows them to optimize performance parameters such as wavefront error, scatter, and coating durability for mission-critical applications.

**Technology Focus:**

* Manufacturing of high-precision freeform optics, including aspheric and non-rotationally symmetric shapes, enabling compact and lightweight optical systems with improved image quality. Tolerances are often specified in nanometers.
* Development and application of advanced optical coatings, including high-reflectivity, anti-reflection, and polarization-selective coatings, optimized for specific wavelengths from UV to IR. They also provide durable coatings to withstand harsh environmental conditions.

**Recent Developments & Traction:**

* In 2022, Momentum Optics was awarded a Phase II SBIR grant from the Department of Defense (DoD) to further develop advanced manufacturing techniques for freeform optics, specifically targeting improved surface roughness and reduced manufacturing time.
* In 2023, the company announced the successful completion of a project to design and manufacture a custom freeform lens array for a hyperspectral imaging application in collaboration with a leading aerospace company (unnamed in public releases). This showcased their capabilities in advanced lens design and complex manufacturing.
* Increased focus on developing advanced coatings for Directed Energy Weapon (DEW) systems, providing solutions for high-power laser resistance.

**Leadership & Team:**

* Information regarding specific key leaders (CEO, CTO, President) and their experience is limited in publicly accessible sources. General mentions indicate a leadership team with experience in optics manufacturing, materials science, and engineering. Further investigation would be needed for a detailed profile.

**Competitive Landscape:**

* Edmund Optics:\*\* While Edmund Optics offers a broad range of optical components, Momentum Optics differentiates itself through its focus on custom-engineered, high-precision freeform optics and specialized coatings tailored to specific defense and aerospace applications.
* L3Harris Technologies:\*\* L3Harris is a much larger company with diverse capabilities, but within their electro-optical systems division, they manufacture optical components. Momentum Optics' competitive advantage lies in its agility, specialized expertise in freeform optics manufacturing, and potentially faster turnaround times for custom projects.

**Sources:**

1. [https://www.sbir.gov/](https://www.sbir.gov/) (Search SBIR database for Momentum Optics to find funded projects)

2. [https://www.thomasnet.com/profile/0808154/momentum-optics-inc.html](https://www.thomasnet.com/profile/0808154/momentum-optics-inc.html) (Company profile with basic information and capabilities)

3. [https://optics.org/directory/profile/35750/momentum-optics-inc](https://optics.org/directory/profile/35750/momentum-optics-inc) (Industry directory listing providing summary of services and capabilities)