# Dossier: SLD PHOTONICS, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $100,000.00

**Award Date:** 2024-04-16

**Branch:** NGA

## AI-Generated Intelligence Summary

**Company Overview:**

SLD Laser (now SLD Photonics, LLC) is a world leader in the design, development, and manufacturing of gallium nitride (GaN)-based high-luminance laser light sources and modules. Their primary business is focused on disrupting traditional lighting and display technologies with their high-brightness, high-efficiency, and high-resolution laser light engine solutions. Their core mission is to enable next-generation illumination, sensing, and communication applications by delivering superior light source technology. They aim to solve the problems of limited brightness, efficiency, and color gamut encountered with LEDs and other traditional light sources in applications requiring long-range visibility, high-definition projection, and secure optical communication. Their unique value proposition lies in their high-performance laser diode technology that enables significantly smaller, brighter, and more energy-efficient solutions compared to conventional technologies, offering substantial advantages in automotive, industrial, medical, and defense applications.

**Technology Focus:**

* LaserLight SMD and Fiber Modules:\*\* High-brightness laser diodes packaged into surface mount device (SMD) or fiber-coupled modules for integration into various systems. These modules boast significantly higher luminance (often exceeding 1,000x that of LEDs) and directionality compared to LEDs.
* GaN Laser Diodes:\*\* Vertically-emitting GaN-on-Sapphire laser diodes operating in the visible spectrum (blue, green, red) and near-infrared. These diodes are designed for high-power, high-efficiency, and narrow beam emission, crucial for applications requiring long-range illumination and precise targeting.

**Recent Developments & Traction:**

* Acquisition by KYOCERA SLD Laser:\*\* In January 2021, SLD Laser was acquired by KYOCERA Corporation and rebranded as KYOCERA SLD Laser (now KYOCERA SLD Photonics).
* Demonstration of LaserLight for AR/VR Displays:\*\* Continued development and demonstration of LaserLight technology for augmented and virtual reality (AR/VR) displays, showcasing its potential for brighter, more vivid, and power-efficient displays.
* Expansion of Automotive Lighting Applications:\*\* Further integration of LaserLight technology into automotive headlights, demonstrating extended range, enhanced visibility, and improved safety performance.

**Leadership & Team:**

* James Raring (President):\*\* Experienced executive with a background in laser technology and business development. Details regarding this leader's specific prior experience are not widely available in public sources.

**Competitive Landscape:**

* Osram:\*\* While Osram provides a range of lighting solutions, SLD Photonics distinguishes itself through its specialized focus on high-luminance laser light sources and its vertically-emitting GaN-on-Sapphire laser diode technology, providing a performance advantage in specific applications requiring extreme brightness and directionality.
* Laser Components:\*\* Like Osram, Laser Components is a competitor in the broader photonics space; SLD differentiates itself with its specific specialization in high-power GaN laser diodes engineered for illumination and directed energy applications.

**Sources:**

1. [https://www.kyocera.com/](https://www.kyocera.com/) (KYOCERA Corporation Website)

2. [https://www.kyocera-sldlaser.com/](https://www.kyocera-sldlaser.com/) (KYOCERA SLD Laser website - though, information is relatively limited)

3. Various industry news articles referencing Kyocera SLD acquisitions and product developments.