



GlobalFoundries Certifies Ansys Lumerical Photonic Design Tools for GF Fotonix™ Platform

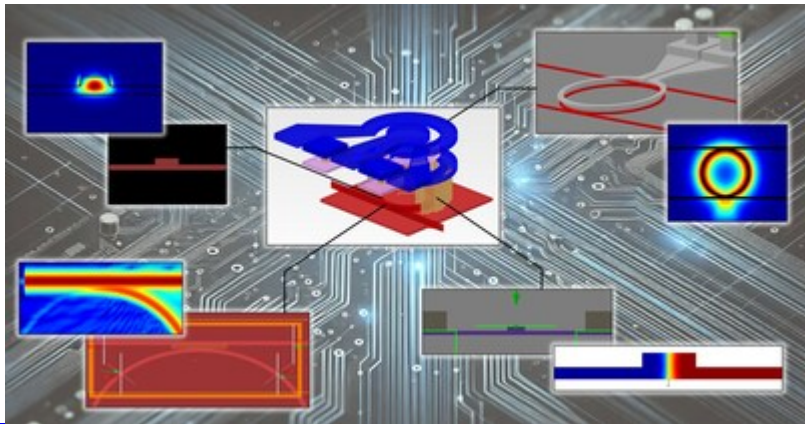
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Ansys' photonic solvers are certified for use with the GF Fotonix™ platform, enabling users to design passive and active photonic components, reduce costs, and improve photonics chips performance

/ Key Highlights

- GlobalFoundries certified four Ansys photonic solvers, including [Ansys Lumerical FDTD™](#) advanced 3D nano-photonic simulation software and [Ansys Lumerical MODE™](#) optical waveguide design tool
- Additional certifications include [Ansys Lumerical CHARGE™](#) physics-based transport solver and [Ansys Lumerical HEAT™](#) physics-based transport solver
- The certifications help customers design high-performing photonic components for the next generation of photonic integrated circuits (PICs), enabling faster and more efficient data communication technologies ideal for hyperscale data centers and Internet-of-Things (IoT) applications

PITTSBURGH, March 27, 2025 /PRNewswire/ -- [Ansys](#) (NASDAQ: ANSS) and GlobalFoundries collaborated to certify four Ansys photonic solvers, empowering engineers to simulate passive and active photonic components with high-fidelity in the GF Fotonix platform. Together, Ansys and GlobalFoundries enable access to reliable, multiphysics simulation solutions that address design challenges for a range of high-capacity chips — including those used in generative AI, autonomous vehicles, hyperscale data center communications, and IoT.



GF Fotonix is a feature-rich and highly flexible silicon photonics platform and is the only commercially available foundry platform for the monolithic integration of photonic and electronic components with the option of a photonics-only flow. The photonic components include active devices such as Mach Zehnder and Micro-ring modulators and Germanium photodiodes, and passive components such as splitters, multi-mode interferometers, phase shifters/rotators, tapers, bends, and filters for wave division multiplexing. The platform allows designers to develop custom solutions for their system applications for high-speed optical communications to address their high-bandwidth, low-latency data transmission, and low power consumption requirements.

GF Fotonix has certified four Ansys Lumerical solutions for the GF Fotonix platform — FDTD, MODE, CHARGE, and HEAT. The certifications span a wide range of capabilities, from passive to active photonic component design, including modeling the effects of electrical and thermal stimulus on optical behavior. Ansys and GlobalFoundries have benchmarked the solvers against real measurement data, ensuring high-fidelity simulations for mutual customers.

"The certification of Ansys solutions for the GF Fotonix Platform Development Kit establishes an array of physical design capabilities — including optical, thermal, and electrical — that are critical for our customers," said Ziv Hammer, senior vice president of design platforms and services at GlobalFoundries. "We are happy to partner with Ansys to help our customers overcome challenges in photonic chip design and empower them to develop tomorrow's technologies."

"The benefits of photonic communication are immense, but designing PICs is time consuming, costly, and offers no room for error once they go to manufacturing," said John Lee, vice president and general manager of the electronics, semiconductor, and optics business unit at Ansys. "Naturally, the demand for such high-capacity chips has skyrocketed due to the emergence of compute-heavy technologies like AI. Ansys' Lumerical solutions are versatile enough to keep pace with these evolving customer needs, empowering them to respond to design challenges with agility and confidence."

Designers interested in utilizing Ansys tools with GF Fotonix can [contact the GF sales team](#) to download RFL-000206-silicon photonics reference flow based on Ansys-CML compiler 4x4 optical switch and RFL-000168 45SPCLO Ansys Lumerical simulation flow.

/ About Ansys

Our Mission: Powering Innovation that Drives Human Advancement™

When visionary companies need to know how their world-changing ideas will perform, they close the gap between design and reality with Ansys simulation. For more than 50 years, Ansys software has enabled innovators across industries to push boundaries by using the predictive power of simulation. From sustainable transportation to advanced semiconductors, from satellite systems to life-saving medical devices, the next great leaps in human advancement will be powered by Ansys.

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