

3E8 builds the next-generation photonic AI accelerator chips tackling the critical problem of increased energy consumption of AI computations. Utilizing innovative photonic memory technology, 3E8 brings in-memory photonic computing to reality. Combined with innovation on the electrical to optical conversion techniques, the optical computing chips are to outperform their traditional electronic counterparts in terms of latency and energy efficiency. 3E8 chips will enable cost-effective inference and training of complex AI networks. The dedicated software stack bridges the gap between traditional machine learning frameworks and the new paradigm of optical computing. www.3e8.co



AEPONYX develops advanced integrated photonics with MEMS products. Utilizing the next generation photonics material -Silicon Nitride, with the fastest MEMS devices in the industry, we bring innovative products to market. AEPONYX has extensive experience in developing advanced technology. And we have grown a team with vast and deep expertise in bringing products to market. This is all driven by our key values of Teamwork, Trust, and Technology. These values make it all possible. AEPONYX is a leader in integrated photonics with MEMS. [www.aeponyx.com](http://www.aeponyx.com)



CMC Microsystemsworks with researchers and industry across Canada’s National Design Network®, providing access to world-class tools, technologies, expertise and industrial capabilities for designing, prototyping and manufacturing innovations in microsystems and nanotechnologies. Photonic manufacturing includes SOI-based silicon photonic technologies, III-V epitaxy and processing on GaAs and InP substrates, and value-added packaging and assembly services to integrate multiple technologies. CMC reduces barriers to technology adoption by creating and sharing platform technologies. [www.cmc.ca](http://www.cmc.ca)



CorActiveis a manufacturer of advanced Specialty Optical Fibers (SOF) and OEM modules and components for customers serving the industrial, telecommunications, sensing, defense, and medical markets. CorActive uniquely offers a full line of standard and custom products, including rare-earth doped active and passive single clad and double clad fibers for fiber laser and amplifier applications, Mid-IR transmission fibers, UV sensitive and attenuating optical fibers, plus OEM modules and components for high power CW lasers. [www.coractive.com](http://www.coractive.com)



Enablence is a leading vendor of innovative integrated optical products for the telecommunications, aerospace, and bio-chemical sensing industries. Enablence products are marketed globally and are critical to just about every fiber-optic network in the world. Enablence products perform critical functions in long-haul, metro and local access topologies. Our product line has expanded to include advanced 100G transceiver products for 40-80km reach. These transceiver products complement our traditional Dense Wavelength Division Multiplexer (DWDM) filtering and routing devices. Enablence has a planar lightwave circuit (PLC) foundry in its Fremont, CA facility, which produces both silica-on-Si PLC chips based on its proprietary low-loss CVD technology and polymer PLC chips, and an advanced technology center located in Ottawa, Ontario, specializing in hybrid integration of active optical devices and electrical components on silica PLCs. In addition, Enablence has a joint venture subsidiary in China, Sunblence Technologies, for mass production of PLC splitter chips for Fiber-to-the-Home (FTTH) markets. [www.enablence.com](http://www.enablence.com)



Femtum is a Canadian spin-off from the Center of optics, photonics and laser (COPL) in Quebec City. Femtum was born in 2017 from a strong desire to unleash the potential of mid-infrared fiber lasers all over the world. Our mission is to help industrial manufacturers and scientific teams to solve their most demanding requirements, from selective laser microprocessing to state-of-the-art mid-IR spectroscopy. Femtum offers a range of fiber laser products including ultrafast lasers, tunable lasers and optical fiber amplifiers operating at wavelengths above 2800 nm. [www.femtum.com](http://www.femtum.com)



Gentec-EO is a leader in the laser beam measurement field with 50 years of experience. We design and manufacture a complete range of instruments to characterize your laser’s performance: laser power meters, laser energy meters, high speed joulemeters, THz sensors, beam profilers and custom measurement solutions. We strive to offer the best accuracy on the market, and our calibration laboratories are accredited ISO/IEC 17025:2017. We are also the first worldwide supplier of large aperture calorimeters to measure the highest pulse energies. Our products are sold around the world, with distributors and representatives in over 35 countries and offices in Canada, USA and Japan. We also have calibration centers on 3 continents for fast turn-around times, just what you need to keep pace with today's rapid market. [www.gentec-eo.com](http://www.gentec-eo.com)



Iridian Spectral Technologies designs and manufactures custom optical thin film filter solutions from the UV (300nm) into the LWIR (10+um). Our wavelength selective dielectric thin-film filters provide "More Signal and Less Background" to our customers' systems with long term durability and reliability combined with industry leading optical performance at affordable prices. We tailor our optical filter solutions for use in spectroscopic applications, tele/datacom systems, space and satellite (earth observation, satcom, and astronomy), remote sensing including LiDAR, 3D entertainment, and many more applications. Our capabilities include single and multi bandpass/edgepass/notch filters and multi-spectral filter arrays. We support our customers from initial prototype development through to high volume production all from our facility in Ottawa, Canada. [www.iridian.ca](http://www.iridian.ca)



LumIR Lasers, established in 2019, is a market-leading provider of mid-IR fiber lasers and components, unlocking the disruptive potential of this wavelength range for research, medical device, material processing and sensing applications. Our expertise, the culmination of a decade-spanning partnership between researchers at Quebec City’s Center for Optics, Photonics and Lasers (COPL) and the world’s foremost provider of mid-IR optical fibers, Le Verre Fluoré inc., allows us to deliver unmatched power, quality, and convenience. Our current products include 10-watt-level singlemode fiber lasers emitting above 2.8 µm in wavelength and 5-watt lasers emitting above 3.1 µm, with more wavelengths and specifications on the way. [www.lumirlasers.com](http://www.lumirlasers.com)

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The National Research Council of Canada (NRC) is the Government of Canada's premier research organization. The NRC’s Canadian Photonics Fabrication Centre (CPFC) provides a "comprehensive facility" for the development of your next photonics product, seamlessly taking it from design through to commercial production. You gain access to top-level industrial engineering expertise and the latest developments in semiconductor photonics technology. CPFC offers a comprehensive suite of facilities and services for photonic device development and commercialization:

* MOCVD III-V semiconductor epitaxial growth including multi-level overgrowth and selective area growth.
* Fully equipped 11,000 sq ft Class 100/1000 cleanroom for III-V Photonics Integrated Circuit (PIC) prototyping and high yield manufacturing utilizing stepper, ebeam and holographic lithography enabling complex multilevel processing (25 mask levels) for next generation photonic component requirements.
* Extensive data collection, analysis, engineering, manufacturing and IP controls via dedicated MES and QMS systems.
* Back end processing including wafer thinning and optical facet coating for prototyped devices.
* Device design and optical test support for both active and passive photonic components. [www.nrc-cnrc.gc.ca](http://www.nrc-cnrc.gc.ca)



Optiwave is the emerging leader in the development of innovative software tools for the design, simulation, and optimization of components, links, systems and networks for the dynamically growing fields in photonics nanotechnology, optoelectronics, optical networks and other photonic applications. Since its inception in 1994, Optiwave’s software has been licensed to more than 1000 industry-leading corporations and universities in over 70 countries worldwide. Today, Optiwave’s cutting-edge photonic design automation software and customized engineering design services offer its customers a distinct competitive advantage, by vastly shortening their time to market while dramatically improving quality, productivity and cost-effectiveness. [www.optiwave.com](http://www.optiwave.com/)



Optonique – Quebec’s Center of Excellence in Optics-Photonics is a non-profit organization that unites Quebec’s photonics sector around common objectives of innovation, growth and competitiveness. Its mandate is to bring together the main players in the industry, i.e., companies, research centres and educational institutions, to contribute to the dissemination of their expertise. Quebec, the FrenchEnglish bilingual region of Canada, comprises more than 220 photonics companies that generate close to $3 billion in GDP and employ more than 22,000 people. Quebec photonics companies’ primary sectors of activity are life sciences, advanced manufacturing, aerospace & aeronautics. Their innovative products, such as sensors, imaging systems, software and signal processing are well-known worldwide, as indicated by their 92% export rate. Optonique fosters partnerships with European organizations such as Photonics Hub (Germany) and French competitiveness clusters such as Pôle Optitec and Alpha RLH with whom we’ve signed memorandums of understanding. [www.optonique.ca/en](http://www.optonique.ca/en)



TeraXion is a leader in the manufacturing of innovative photonic components that incorporate fiber Bragg gratings, low noise lasers and integrated photonics. FBGs have been the cornerstone of our offering for more than 20 years and TeraXion has successfully applied this technology in four different markets, reaffirming FBGs’ potential in countless highly advanced applications. Beyond our technology portfolio, our true strength stands in our ability to transform and evolve existing technology to meet our customers’ changing needs. This unique expertise and market-orientation has led TeraXion to manufacture over 500 000 leading-edge photonic components. Our partnership approach to doing business and our team of over 65 researchers and engineers make us a prime designing and supplying partner for leading companies involved in light and heavy manufacturing, telecommunication, medical equipment, and aerospace and defense. [www.teraxion.com](http://www.teraxion.com)



The Centre for Research in Photonics (CRPuO) of the University of Ottawa is at the forefront of photonics research in Canada and one of the top research centres of its kind in the world. Building on the University’s strengths in science, engineering and medicine, this multidisciplinary centre is developing the next generation of applications in photonics and leveraging the strong regional concentration of photonics and technology companies, the embedded base of intellectual capital, and partnerships with universities and federal research labs. Cutting-edge research, from fundamentals to applications, is at the heart of the CRPuO, with research areas including: Optical Physics, Nanoscience, Biomedicine, Solar Energy, Broadband for All, Sensors and Sensor networks. In addition to individual research labs, the CRPuO includes two core facilities: the NanoFab and the SUNLab, both open for business. [www.photonics.uottawa.ca](http://www.photonics.uottawa.ca)