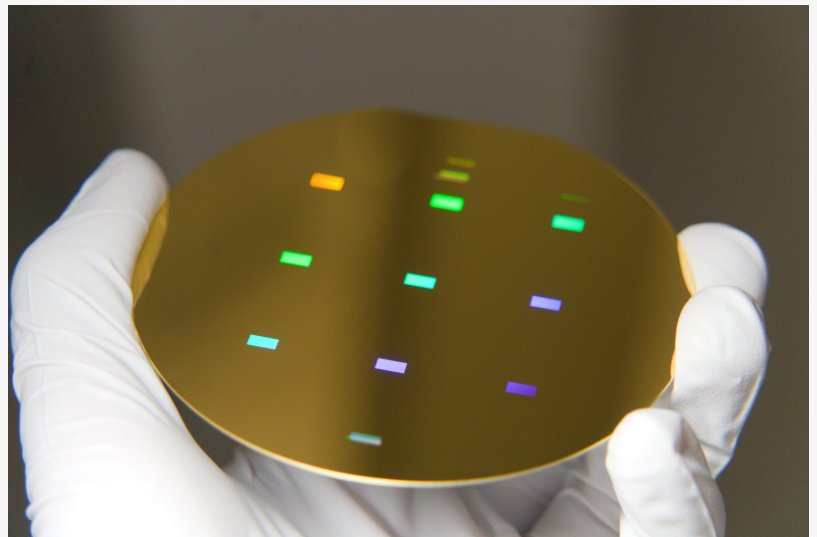


Inprentus Delivers Volume Product Lines for Sensing, Augmented Reality, and Semiconductor Applications

Inprentus, maker of ground-breaking custom blazed diffraction gratings, continues to serve customers by creating higher volume, smaller gratings for new markets

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Inprentus manufactures advanced custom blazed diffraction gratings for a variety of high-end scientific and technical applications, including for the company's founding market of soft X-ray materials research. These applications are highly customized, and require a precise production set up for each grating to meet the customer's complex technical specifications. Each customer only needs one or two of these highly specialized large optical components, and each can take months to produce.



Augmented Reality Gratings Ruled In Parallel on Single Substrate by Inprentus

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Inprentus has a very wide spectrum of grating solutions to facilitate innovations at the heart of humanity's technological future, and the demand is only going to go up from here”

Subha Kumar, Chief Operating Officer of Inprentus

In addition to the ability to make highly specialized large diffraction gratings, Inprentus has increasingly been sought after for higher volume production of ultra-precise smaller gratings. Compared to soft X-ray gratings, where the customer's source light beam has a large area footprint necessitating large gratings, markets in other applications require smaller area gratings. For example, [augmented reality](#) requires multiple small gratings on the same substrate in a “step and repeat” process, and [sensing or semiconductor applications](#) require identical single gratings on multiple substrates. “Inprentus uses mechanical ruling technology, and this technology is very

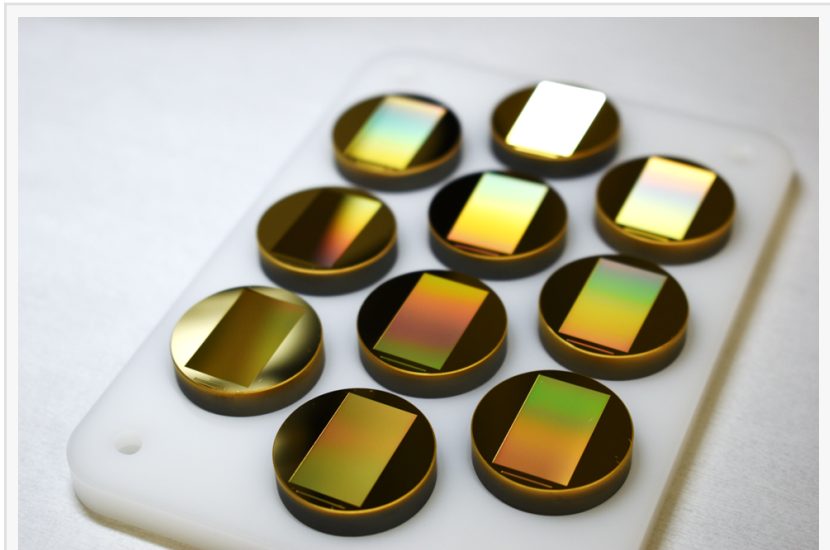
flexible in terms of handling a “step and repeat” on one substrate or multiple substrates” says Cody Jensen, Chief of Engineering at Inprentus. “Inprentus has been increasingly sought after by customers to create gratings in higher volume. The challenges for quality assurance are different when going into volume production; however we have welcomed the challenge and have exceeded customer expectations in innovating every step, from design to production set-up and implementation, to metrology”.

Inprentus’ first foray into volume production was facilitated by orders from customers in the rapidly emerging area of Extreme Ultra-violet (EUV) lithography, a technology that fabricates ultra-small features on semiconductor chips. This technology is now used by every major computing

technology in the world for cutting edge applications like artificial intelligence. “Due to the flexibility of mechanical ruling that a blazed grating provides the market, we are able to provide grating based solutions for applications all the way from Soft X-ray, Deep Ultra-violet and Visible Light, to Infrared and Far-Infrared Light. Inprentus has a very wide spectrum of grating solutions to facilitate innovations at the heart of humanity’s technological future, and the demand is only going to go up from here” says Subha Kumar, Chief Operating Officer of Inprentus.

“Delivering these volume orders is a big win for the company but there was never a doubt that we could achieve this. For a company known for making the likes of Ferraris for the optics world, making our product in volume is all about executing the plan” says Jeff MacDonald, the interim CEO.

Inprentus designs, manufactures, and sells X-ray and EUV diffraction gratings for a variety of scientific and commercial applications by companies, academic institutions, and government laboratories around the world. Inprentus was founded in June 2012 to commercialize an innovative, nano-scale lithography technology using mechanical deformation of metallic surfaces. Inprentus aims to apply 21st century mechanical ruling to solve critical current and future grating-centered challenges. Inprentus is a disruptive technology company that will lead the manufacturing of next-generation diffraction gratings. We are committed to excellence, risk,



Spectrometer Gratings Ruled In Parallel on Multiple Substrates by Inprentus



and pushing boundaries by providing state-of-the-art blazed gratings that perform to unprecedented specifications and that enable novel applications. Outcomes include next-generation monochromators, spectrometers, laser systems, and analytical instrumentation in defense applications, as well as ground-breaking consumer experiences enabled by improvements in chip manufacturing and see-through AR waveguides. We are dedicated to facilitating next-level science and technology by continually enhancing our capabilities with cutting-edge developments, collaborations, and partnerships. The Inprentus team truly exemplifies an unwavering belief in the power of can-do creativity, perseverance, and excellence.

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