

## Optics industry growing in Rochester

Optical components company Rochester Precision Optics is planning a \$6.5 million expansion of its Henrietta plant that will enable it to add 130 jobs.

Glass optics maker Optimax Systems Inc. expects to be done in December with an addition to its Wayne County plant where it will grow by 50 positions.



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Maker of optical measurement equipment Lumetrics Inc. moved in June to more spacious offices in Henrietta to accommodate its growth. Sydor Instruments, a maker of ultrafast diagnostic systems such as cameras and photon detectors, made a similar move this summer in Chili.

Optical grinding, polishing and equipment maker Optipro Systems LLC this year added 7,500 square feet to its Wayne County site.

Coating company AccuCoat Inc. has added several people over the past year and is about to expand its Rochester site by nearly 30 percent.

Germanow-Simon Corp., parent of G-S

Plastic Optics, is planning \$2.5 million worth of renovations to its Rochester building that will lead to adding 15 full-time-equivalent positions over three years

Henrietta aerial imagery company Pictometry International Corp. made its first acquisition in company history earlier this year and has added close to 100 employees over two years.

As you can see, this is a good time to be in the optics, imaging and photonics industry.

Not counting Eastman Kodak Co., Xerox Corp. or Bausch + Lomb Inc., the industry employs more than 5,000 people in the Rochester region, according to the Rochester Regional Photonics Cluster. And the trade group estimates that the number could grow by 450 positions over the next two years.

The Finger Lakes Regional Economic Development Council has identified optics, imaging and photonics as a cornerstone of what will become a five-year growth plan.

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The plan — which also will look at industries such as advanced manufacturing and agriculture and food processing — will be presented in November to state officials as the nine-county region competes for various pots of state money.

### Rich history

Cameras today are everywhere, used in ways that would have seemed science fiction 15 years ago — from atop traffic lights and in medical devices that can be swallowed to the noses of unmanned aerial military drones. Demand for such technology, for the optoelectronics used in solar cells and light-emitting diodes and for all the photonics tech dealing with light puts the Rochester region atop the crest of a big wave. The region bills itself as the Imaging Capital of the World because of its long history with photography and optics — dating back more than 100 years to George Eastman, John Jacob Bausch and Henry Lomb and the **businesses** they started here, all of which built up to eventually employ tens of thousands.

Today, parts of the optics field are so specialized that, for example, of the dozen or so chief competitors Syntec Optics has in the precision plastic optics industry worldwide, several of them are around town, said general manager Richard Arndt.

But unlike Detroit's Motor City or Los Angeles' Entertainment Capital of the World mantles, the Imaging Capital crown is somewhat shakier. Tucson, Ariz., is busy branding itself "Optics Valley" as it tries to

promote the cluster of optics firms there. And entire nations, from South Korea and Malaysia to Canada, are taking steps such as huge direct **investments**, tax credits and other incentives "to position themselves to exploit the growth," said Thomas Battley, executive director of the New York Photonics Industry Association.

One of the local optics industry's biggest needs may be marketing and name recognition. "We want (the world) to think of Rochester whenever they think optics," said Optimax President Mike Mandina. "Nobody in the country has the infrastructure like we have."

### Show us the money

Establishing itself as the go-to place for optics could help with another long-standing problem of access to capital for starting-out companies, said Michael Richardson, a researcher with Rochester Institute of **Technology's** Carlson Center for Imaging Science.

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"You hear it over and over, especially with startups," he said.

During its run in the 1990s, the University of Rochester's Center for Optics Manufacturing helped spawn a number of local optics firms, Mandina said. The center, now largely defunct, specialized in coming up with new ways of producing lenses and other optical components. Something operating on that model is needed again, Mandina said.

"There's not a willingness to take risks in our community," he said. "We've got to figure out how to become more entrepreneurial."

Meanwhile, any new optics companies may face a challenge of finding workers because of a shortage of skilled labor, said Stefan Sydor Optics President Jim Sydor.

Monroe Community College in the past six months has doubled the number of adjunct instructors it has in optical systems technology to eight, and it hopes to hire within the next few months a full-time, tenure-track faculty member in optics for both instruction and to interact with the optics industry.

MCC also is starting with East High School a dual-credit optics program where East students earn college credit.

"The issue is, we don't have the volumes," said Todd M. Oldham, MCC vice president for economic development and innovative workforce services. Optical systems technology enrollment in recent years has

been roughly 40 students at a time and is lower this fall.

Pointing to optics and other career-oriented technical programs, he said, "We're not seeing students elect to go into these fields. We have to get students at the high school and even middle-school level to be aware these careers exist and that they're good careers."

### Well-paying

Entry-level optics industry technician jobs pay \$10 to \$12 an hour, said Ross Micali, MCC engineering technologies project coordinator. But many jobs in the industry pay much more, and the average of all optics jobs in the region exceeds \$90,000, according to the Center for Governmental Research.

Politicians and bureaucrats at the local, state and federal level were enthusiastic about an idea about four years ago for a trailer or bus that would go to various middle schools in the area with displays

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and work stations aimed at getting kids jazzed about science, technology and engineering fields, including optics, but money never materialized, said Lumetrics President John Hart.

Medicine and the military have been big customers of the area's photonics industry because defense work and medical instruments are two areas where international competition, particularly from low-wage nations, is less head-to-head. Work for the U.S. military generally has to be done by U.S. companies. And medical device companies typically are looking for high-precision optics such as those made by domestic manufacturers.

But the local optics industry is nervously eyeing the shrinking skills gap between what it can do and what foreign firms can. While Sydor Optics recently picked up some work that a Chinese manufacturer was unable to do because of that skills gap, "Five years from now, that job might not come back," Sydor said.

Arndt, at Syntec Optics, is seeing more Asian competition in its commercial products **business**. And the growth of LED lighting globally will likely create volumes where it could move overseas as well, he said.

While U.S. military spending seems likely to decline in coming years, optics could be one area somewhat insulated from a budget ax, said RIT's Richardson. "You're probably not going to build as many tanks in the future," he said. "But information is

key."

Even if military spending on photonics dips, "I don't know if we have a lot of concern," said AccuCoat sales engineer Alan Parsons. "Optics are in so many products."

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Tracy Watkins, assistant production supervisor for Syntec Optics, wears white gloves while inspecting optical parts under a light. The parts are used in camera lenses. MARIE DE JESUS/STAFF PHOTOGRAPHER / MARIE DE JESUS/STAFF PHOTOGRAPHER

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### By the numbers

**31,000** Approximate number of people employed in the Rochester region in optics, imaging and photonics, including the big traditional manufacturers.

**\$2.84 billion** Average annual payroll of the local industry.

**\$91,325** Average annual salary.

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