

Developer: Electronic eyewear in sight

The Roanoke Times

PixelOptics and Panasonic are close to launching an eyeglass lens that automatically focuses.

By [Duncan Adams](#)
981-3324



Artist rendering courtesy of PixelOptics

Eyewear goes high-tech PixelOptics says its electronics-equipped frames and auto-focus lenses will resemble other eyeglasses in appearance. The Roanoke County-based company and partners hope to begin offering the high-tech eyeglasses in a regional launch during the second half of 2010.

Two nights before Christmas, Ron Blum drove home from PixelOptics' headquarters in Roanoke County wearing a prototype of prescription eyeglasses outfitted with electronically focusing lenses.

"It was a 'wow' experience," he said.

Blum, an optometrist, entrepreneur and inventor, and his colleagues at PixelOptics, and earlier at eVision, have been working for more than a decade to develop electronic eyewear. The high-tech spectacles are meant to auto-focus faster than the blink of an eye -- employing chemistry, electricity and optics but no

moving parts -- to help people's vision stay focused whether viewing objects near, far or in between.

The latest product development update suggests Blum's "wow" might become contagious -- though more work remains.

PixelOptics and Panasonic Shikoku Electronics Co. of Japan announce today that they have been collaborating for nearly two years to develop and produce PixelOptics' electronic eyeglasses -- which are designed to correct for presbyopia, a condition that typically begins to affect vision in middle age. Panasonic Shikoku Electronics is one of Panasonic Corp.'s companies. In September 2008, the Panasonic Venture Group became an investor in PixelOptics. The amount of Panasonic's investment in the privately held company has not been disclosed.

Why an announcement now?

"We've wanted to make the announcement for almost two years," Blum said, but Panasonic officials preferred to wait until certain development milestones were met, he said.

"The product now has gotten to the stage of development that I think Panasonic believes as we believe -- that a commercial product is almost definitely going to happen," he said.

Blum acknowledged that the phrase "almost definitely" allows wiggle room.

"The technology we are working on here and that I tend to get involved in is transformational [for an industry]," he said. "It's absolutely cutting edge. It's high risk.

"That's the world I like to play in. It causes me to get up in the morning," Blum added.

And he has gotten up in the morning before to help create innovative products for the optics industry, including work that informed development of the Definity lens now sold by Essilor but first produced by Johnson & Johnson.

PixelOptics is a spinoff of eVision, in turn a spinoff of The Egg Factory, a company founded by Blum in Roanoke in 1999. PixelOptics says its intellectual property portfolio includes more than 300 patents and patent applications around the world.

As for what might derail commercial production: Some glitch could still emerge, but the bulk of the main work is done, Blum said.

"In development work, and I've learned this so many times, there is a period at the beginning where you don't know what you don't know and then you move to knowing more about what you don't know and then to knowing what you need to know," he said.

Blum said the electronics functions and eyeglass frame designs "have been pretty much put to bed," and "we are optimizing the lenses."

He said the eyeglass frames will resemble conventional high-fashion frames. Tests have shown, he said, that the electronics-equipped glasses are durable and resistant to weather-related problems.

Blum said PixelOptics plans to start selling the high-tech eyeglasses, whose brand name has not been announced, during the second half of 2010 -- probably in a regional launch in Virginia, North Carolina and Washington, D.C.

PixelOptics' headquarters are in the Valleypointe business park off Peters Creek Road. The company has 49 employees, including 16 involved in research and development. Blum said a "clean room" inside the headquarters building is a sophisticated research and development lab.

As envisioned, the auto-focus eyeglasses will likely be manufactured elsewhere.

In November 2008, PixelOptics began selling the atLast fixed-focus eyeglass lens to compete with traditional bifocal lenses worldwide. That lens hit a few marketplace snags when first introduced. As a composite, it cost considerably more than other bifocal lenses and some eye care professionals mistakenly thought of the atLast lens as a competitor to progressive addition lenses, said Clay Musselwhite, director of marketing for PixelOptics.

The company later came out with a less expensive version of the atLast lens.

Blum said about 100 million pairs of eyeglasses, whether bifocals or progressive addition lenses like Definity or Varilux, are sold each year to correct for presbyopia. He said the new auto-focus equipped eyeglasses would likely sell at a price comparable to eyeglasses with premium progressive addition lenses.