



# Powers of innovation

It wasn't all celebrity and fashion at New York's Vision Expo. **Rory Brogan** reports on some of the ophthalmic lens developments being promoted in the US

**T**he sun may not have appeared at International Vision Expo East, but a healthy representation of ophthalmic lens companies were banking on the opportunities it would bring in consumer eye protection. As well as new prescription sun lenses, polarisation was something of a buzz-word at the show and there were even a few nods to environmental issues.

Lenses were also on the menu prior to the show opening thanks to a launch event courtesy of PixelOptics. The company's chief executive officer, Ron Blum, explained that because of the US economy it considered cancelling the event, but decided to go ahead and make a donation to blindness prevention for every guest.

Having given some background information on PixelOptics, which he said had an amazing first year, he introduced Behold. This is a new premium product described as 'the thin lens', 'the first lens with a sub 1.0mm centre thickness able to pass the US FDA impact test' and a 'single-vision breakthrough'. The lens, said Blum, passed the FDA drop ball test 'with and without a cushion coat', adding that practitioners should give serious consideration to Behold for their patients, as it can outperform most indices.

Behold, like its atLast Enhanced Multifocal lens (available through Norville Optical) is a composite product. It teams up an aspheric Trivex front component with a 1.67 index back and, as a result, comes in 20 per cent lighter than a 1.74 index lens in the same power. Behold was capable of being surfaced down to 0.85mm in the centre in minus prescriptions, with a 1mm edge for plus prescriptions and, thanks to its rigidity, can be used with drilled rimless.

'Behold is positioned to compete with and gain a share of the 300 million single-vision lenses sold each year,' said Blum, who claimed the company's composite offering was



**Bill Spies and Ron Blum of PixelOptics at the company's pre-show launch event**

like adding one plus one and coming up with five.

Director of European sales Peter Zieman said that Behold would be of particular appeal to the UK market. It would be available to the UK in May and was going to be a 'revolution'. The prescription range is +10.00D to -11.00D, with benefits especially in the +6.00D to -6.00D range.

Blum added that this was just one of a family of composite products the company was developing, with a lower price point version of atLast, Composite 59, in polycarbonate coming soon. AtLast is now available in a wide range of coatings and the company has also recently teamed up with Transitions.

Blum then gave an update on the company's electronically activated lens, which has been in development for 10 years, and added that results coming back so far from wearer trials have been very positive. A slide-show demonstration of the system highlighted the electronic package that drives the lens, sealed in a watertight cavity in the temple. 'Our goal is to drop the electronic package down in size,' he added.

Guests were then told that two attendees were wearing the product and were challenged, and in my case failed, to tell them apart from wearers of standard frames.

'PixelOptics is a company with a lot of momentum and a family of products that are gaining market acceptance in such a short time,' said

William Spies, chief operating officer.

This was backed up on the company's stand at the exhibition which featured mock ups of the electro-activation system, demonstrating a bifocal adding power. Here, Josh Haddock, manager of electro-active optics, said that eye care practitioners were excited to see it in action. 'Every person we talk to and tell about the product wants to be the first to try it out.'

### Magnetised audience

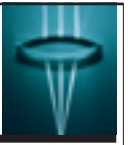
A new product that created a stir at the show was Chemistrie Sun lenses, a magnetic layered sun lens compatible with any pair of frames.

The concept combines magnets permanently embedded into prescription lenses with curve-matched polarised lenses.

Over the last year, popularity of the magnetic sun lenses has increased demand for Nidek ME-1000 edgers. To enhance that demand, Eyenovate in co-operation with Santinelli International and Nidek, has developed 'click mode' software for the edger that automates drilling points for Chemistrie with the press of a button.

Chemistrie was patented by Dennis G Zelazowski, chief innovation officer of Eyenovate, who came up with the idea in his father's optometric practice and has spent four years 'bringing it out of the basement'. Over 100 Chemistrie Sun lens demos were made over the three-day show.

Chemistrie offers polarised lenses in 16 tints, with base curves of 2-10, to ensure a flush fit to the wearer's spectacles. The magnetic lens system uses small (2.5mm), powerful magnets in three colour options, which are embedded in the temporal sides of the ophthalmic lenses. These are easy to position when using the ME1000 'click mode', which ensures they line up exactly. The grooved magnets are set into a slightly bigger hole drilled to a depth of 1.5mm in the lens, not the whole way through, and thanks to a vacuum bond there is an air-tight seal to hold the magnets in place when glued. 'There's no lens



side wall pressure in the ophthalmic lens, but it's the opposite principle in the sun lens,' explained Zelazowski.

The Japanese-made lenses come in eight polarised options and eight mirrored tints with back surface AR. Chemistrie are made from a flexible, durable, chip and shatter-resistant tri-acetate. Hardware components are Japanese-made, including rigid titanium bridges, which cannot be bent or twisted. These have width options of small 26mm, medium 31mm and large 34mm, with a 28mm option also being introduced. Colour choices are silver, gold, gun metal and bronze. By using a rigid titanium bridge, and semi-flexible lenses, a self-aligning-design has been created to eliminate misadjustment. The rimless design is minimal, so as not to add mass or obstructions to the frame style. Zelazowski, who was making up trial sets at the Santinelli booth, explained that they work with any style of frame or lens type, aside from glass. The polarised lenses are slightly up-sized with the bridge positioned centred over the frame's bridge.

There are two retail displays in options of burlwood or a modern teal acrylic. The company has also produced a lens selection tool, the View Master, that enables consumers to go to the practice front window and flick through the polarised lens swatches.

Zelazowski explained that a practitioner selling two of the magnetic lenses a week could pay the monthly fee for the edger, and on whether it was essential to use the ME1000, he said: 'It's whether you want to cross the desert in a Humvee or on a tricycle.'

He added that a magnetised



**Chemistrie uses magnetised polarised lenses**

progressive option would be added and could be used with or without the sunglass option. The lenses come with a purpose-designed pouch, and will not scratch, even when stacked in multiple parallel layers. 'Chemistrie Sun lenses are light and flexible and the pros far outweigh the cons compared to traditional clip-ons which will become obsolete. It's a new way to combine lens properties to suit the activity of the wearer and the only magnetic lens compatible with any frame,' he said.

While Eyenovate works in the US with Nidek supplier Santinelli, Birmingham Optical Group, which distributes Nidek here, is considering taking on the product.

### Green thinking

Manufactured in Scotland and now available in the US is the Polaroid UltraSightXI line, named after the lenses' composition from 11 optical elements. Made from renewable resources – tri-acetate, the lenses are

1.6mm thick for a quality feel and are manufactured using Polaroid's Thermofusion technology which locks the polarising light filter at the core.

Paul Sheerin, Polaroid's vice president of global operations, described the lenses as safe, like injection-moulded polycarbonate but in comparison with polycarbonate, which is derived from crude oil, this has the green credentials of tri-acetate.

'Tri-acetate has been round for a while, but not in this thickness. It's one of the few plastics from the sustainable source of wood pulp and should be biodegradable if pulped. We have a consultant testing how long it will take to break down,' he explained.

The UltraSight XI are shock absorbent, absorbing the impact of a steel ball travelling at 100mph and exceeding the American National Standards Institute sunglass tests (ANSI Z80.3). They also satisfy the high velocity impact test (ANSI Z87.1), with high polarising efficiency and with a value price point favourable to polycarbonate.

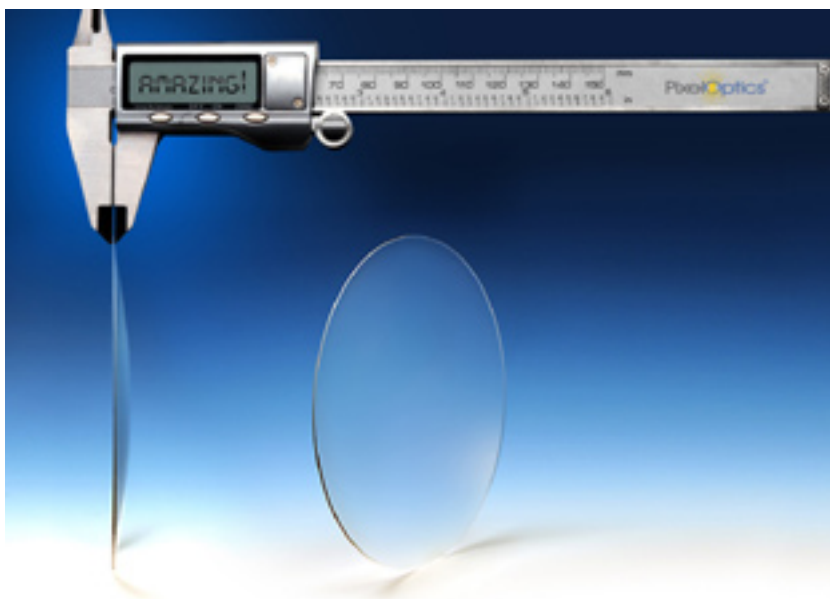
Sheerin explained that the lens had been developed with the US market in mind, in response to feedback in consumer testing that their perception of quality required a thick lens. 'In consumer testing beta titanium frames with thin lenses were not viewed as top end, so we designed and built a lens around that. What works here may also work in Europe.'

He added that as lenses were 1.6 super-rigid tri-acetate they passed the 'thumb test' for rigidity at the centre of the lens.

Polaroid has also developed a new unit to demonstrate polarisation with reflected glare from grids, enabling stockists to explain the difference of polarised lenses, which he described as a growth market.

Concerns about the environment were echoed by Vision-Ease, which uses 100 per cent renewable energy to produce lenses in Minnesota. It makes premium polycarbonate lenses including Coppertone Polarised Prescription Sun Lenses, which give 100 per cent UV protection. They are endorsed by the Skin Cancer Foundation as giving a higher level of protection and Kari Morgenthaler, senior marketing manager, added that Coppertone gave a great message for eye care practitioners to spread to their patients. 'They go beyond just UV into high energy visible light.'

'Practitioners wear polarised lenses but they don't necessarily sell them.'



**The Behold composite lens (actual lens) from PixelOptics**



## Looking at lenses

We need to get that message out and once consumers are in them they will stay with them.'

Although the company is known mostly for polycarbonate lenses, she said they try to make it better by using 100 per cent renewable energy from solar, biomass and hydro. 'It's the responsible thing to do. We save 10.5lbs of carbon emissions with every pair of lenses.'

She pointed out that Vision-Ease has other environmentally friendly approaches, such as energy efficient lighting and progressive lens boxes that do not require extra packaging to hold the lens in place.

### Active in sunwear

On the Transitions stand, as well as getting the eye protection message across through golf sponsorship, the main emphasis was on the official launch of the sun lens brand Transitions SOLFX, described as a means to bring the company's photochromic technology to more consumers.

Courtney Myers of Euro RSCG Worldwide PR explained that as well as golfers Trevor Immelman and Retief Goosen wearing the brand during last month's Transitions Championship in Florida, a sports presenter aged 41 who had never had an eye examination also tried the lenses and vowed on air to have his eyes tested. 'It's a great way for people to understand how vision will impact on your life,' she said.

The sun lens, which has a constant tint and darkens outdoors, self-adjusting to the sun, is available in prescription and plano options ([www.transitions.com/sunwear](http://www.transitions.com/sunwear)). She described sunwear as a huge opportunity globally for eye care practitioners as recent Transitions research showed that 20 per cent of consumers who use everyday eyewear have photochromics to protect eyes against glare.

Partners, for example Younger Optics and Oakley, would change over to the new brand name and Essilor may also roll it out globally.

The focus will be across three areas – sports, speciality and style. With sports, there is an emphasis on golf, cycling, running and tennis. The golf product has been designed to give high contrast in low light conditions, then move to a darker, more colour neutral shade to reduce glare and give optimal vision in bright light conditions. It is a non-polarised product as this can limit the ability of the golfer to read the lie of the grass.

**Transitions sees sunwear as a global opportunity**



'Each product is designed to meet specific needs and more will be rolled out,' said Myers. 'People are quick to use polarised lenses, but are they right for the conditions?'

Under speciality, Transitions has teamed up with Younger to create Drivewear Transitions SOLFX. The polarised lens is green/yellow in low light to minimise glare and maximise contrast, taking on a copper colour in brighter light conditions behind the windscreen to reduce glare and excess visual light, and providing good traffic signal recognition. In outdoor conditions it turns a dark reddish-brown.

With style, the Transitions SOLFX lenses will team up with frames from leading manufacturers, with more than 2,500 different photochromic dyes covering the colour spectrum.

### Growth opportunity

One area of promotion on the Essilor stand was the introduction of the Xperio polarised category, with the tag line 'Experience the outdoors like never before'.

Glen Funk, district sales manager, described Xperio as a category name for the company's polarised lens brands, with the aim of attracting the consumer. 'We think polarised could be the next big growth mode for the optical industry and will promote it for everyday outdoor use,' he said.

There will be branded sales tools, demonstration units and training for eye care professionals, with a proposed launch in Europe next year.

Polarisation also got a mention on the Carl Zeiss Vision stand, with customer marketing manager Laurie Badone pointing out the opportunity for polarised lenses, suggesting only 15 per cent of clear lens wearers have

sunwear (Eyeing the New Options in Rx Sun, *Vision Monday*, January 19). The premium sun lens programme PrescripSun covered base-8 wraps including Spazio single vision, precise edging and tie-ups with major frame manufacturers. There were also Tri-Flection Mirrors – easy to clean low-hue flash mirror treatments, along with tint enhancements for outdoor activities that include driving, skiing, golf and biking.

Improving vision of night-time drivers, for example, was the aim of iZon High Resolution lenses, from Ophthonix, which produces customised lenses from readings on its Z-View Aberrometer.

New York representative Rachel Gladstone explained that it had recently introduced Transitions and polarised options, in addition to its single-vision and free-form progressive lenses. She described the 'iPrint' results as giving crisper, sharper vision with high definition. 'Every reading is different, like a fingerprint,' she said, describing the result as 'like Lasik in a lens without surgery'. The iZon lenses have three layers and address the 2nd-6th order aberrations of the eye.

Aimed at the top 20 per cent of the market, the company's brochure makes an impressive claim: 'In night-time driving tests using an FDA-validated simulator, iZon lens wearers driving at 55mph under glare conditions were able to react to a pedestrian in the road on average a full 20 feet sooner than drivers wearing conventional lenses.'

Whether or not all the products discussed make it to the UK, it seems that active consumers are very much the target of the US lens suppliers. ●