What's New for Opticians and Technicians

Phernell Walker, MBA, ABOM, LDO

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Phernell Walker, MBA, ABOM, LDO

- Master in Ophthalmic Optics
- Master in Business Administration
- Bachelor of Science in Business
- Associate of Science in Opticianry
- Past Adjunct Professor – Pacific University College of Optometry
- ABO & NCLE Certified
- Author of text-book, Pure Optics
- Joe Bruneni Award, Association of Schools Colleges of Optometry
- Beverly Meyers Achievement Award in Ophthalmic Optics

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Pacific Northwest (PNW)

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PURE OPTICS

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EMBRACE PROGRESS

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Don't Be Left Behind

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Innovation Everywhere

- Treatment options
- Frame technology
- Spectacle lens technology
- Contact lenses
- Diagnostic devices and tools
- Myopia control spectacle lenses
- Optical lab technology

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Why Innovate?

- Smaller
- Faster
- Cheaper
- Imposed regulations
- Readily available on demand
- Improved accuracy
- Improved outcomes
- Predictive results

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Why?

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Eye Care Beyond 2022

- Holistic patient care in a health care team approach
- Outcomes based vs. fee for service
- Reliance on technology
- Centralized data aggregated to give a complete picture of you
- Predictive analytics anticipate your health care needs

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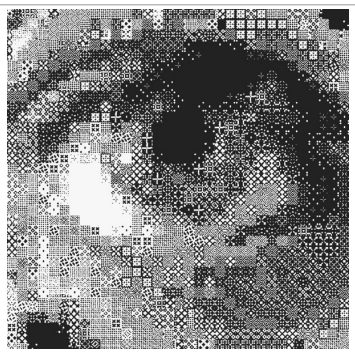
Health Care Nexus



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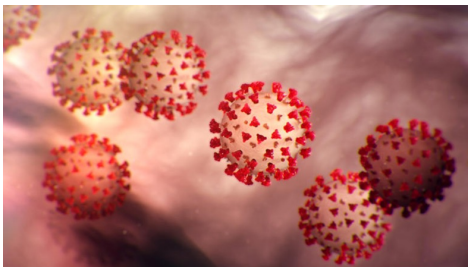
Current COVID-19 World



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Work Uniform

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Leverage Technology

- Doctors begin to embrace telemedicine
- Manufactures will begin to expand diagnostic equipment technology capabilities
- New technology will be introduced:
  - expanded home testing
  - agnostic data capture and share capabilities

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Telemedicine

- Embrace remote health care (i.e. eye care, etc…)
- Ability to care for patients from afar is necessary
- Usage Codes - G2012 & G2010 (synchronous and asynchronous modality)
- Digital Examinations - 99421, 99422, 99423 (based on exam duration)
- Medical codes with modifiers (GT, 95 and GQ) - 99202, 99203, 99204, 99212, 99213 and 99214
- Appropriated $8.3 billion dollars (i.e. lab testing, vaccine research, telemedicine services)
- Waiver 1135 - March 6, 2020 federal government removes obstacles to remote care
  - Relaxed HIPAA
  - Expanded platforms for seeing patients
  - Need to care for patients and public health supersedes privacy

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Diagnostic Devices and Tools

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Remote Eye Care

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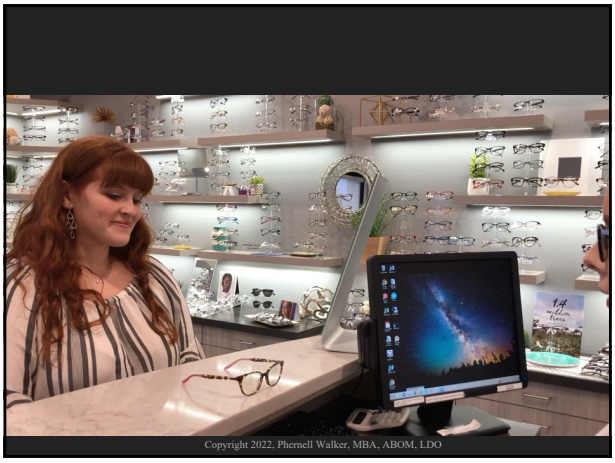

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SpecTech

PREMIUM LENS OPTIONS

Using real-time wear technology, show your patients exactly how they will see out of their newly prescribed lenses. No more drawing pictures of different progressive designs or going down the row of displays to demonstrate non-glare, photochromic or polarized lenses. Save time and energy by presenting a real-life simulation of lens options while giving your patients a more customized lens selection experience.

PATIENT TUTORIALS

Medical terminology can be confusing and scary for patients. SpecTech explains the various refractive errors and your patients' visual needs in a way that is easy for them to understand. SpecTech gives your patients an easy way to learn more while streamlining the message from your staff.

MEASUREMENT ABILITIES

SpecTech is the best solution available today to ensure a proper lens fit for even the most sophisticated custom lenses. With just a few simple pictures, you can take all of your patients' necessary measurements including those needed for customized digital lens designs. Alleviate your office staff of the time consuming task of taking each measurement by hand.

- PD
- SEG. HEIGHT / OC HEIGHT
- FRAME MEASUREMENTS
- PANTO / RETRO
- VERTEX DISTANCE
- WRAP

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SpecTech Leverage Technology

ASPHERIC (DIGITAL) VS. TRADITIONAL SINGLE VISION

How do you show your patients the difference between digital single vision lenses and traditional single vision lenses? What are the actual benefits and how can you translate it to your patients? Use SpecTech to show your patients the differences in cosmetic appeal and visual acuity. SpecTech gives your patients real-time wearer visualization between these two lens options and helps them see the difference for themselves!

LENS THICKNESS CALCULATION

One of the most important aspects of your patients' purchase decision is how thick their lenses will look in their frame. SpecTech allows you to dial in the patient's prescription and see the difference in the thickness between materials. With multiple viewing options, SpecTech also produces a visual display of their lenses mounted into a frame to get a real-life perspective.

FRAME SELECTION TOOL

We've all had patients who struggle to select their new frames. Whether they simply cannot see themselves without their prescription lenses or want a second opinion, SpecTech helps your patients confidently select their frames. Take up to four different pictures to show your patients the options for their new look and allow them to email it to friends and family for a second opinion.

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Diagnostic Equipment

- Medical ("Non-refractive") telemedicine
- Fundus Photography
- OCT
- OCT-A
- Eye Tracking Systems
- Dry Eye Management
- AMD

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Fundus Photography

Advanced diagnostic imaging devices use DICOM (Digital Imaging and Communications in Medicine) format.

- **DICOM -** allows for software assisted automated quantitate and qualitative measurements (based on modeling)
- **Beyond 2022** - we will begin to see software aid doctors in diagnosis using millions of comparisons in a matter of seconds in a centralized cloud data base

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A View Behind the Curtain

- OCT evaluates the structure of the retina—it provides an in-vivo analysis of both the retinal and choroidal anatomy
- OCT-A - does not take replace standard OCT, but provides a different dimension
- OCT-A - correlates with a patient's visual function by providing a functional analysis.
  - Reduced peripapillary perfusion correlates with focal defects on visual, RNFL and GCC thickness
  - Using them together, we get a structural and functional analysis side by side

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A View Behind the Curtain

Dual-modality imaging system augments optical coherence tomography angiography to conventional **OCT** to quickly visualize blood-flow within the retina and layers of choroidal neovascularization (CNV).

- **OCTA** - 3D view of all capillary beds of the retina
- Visualize the presence or absence of flow in the blood vessels in 3D
- Eliminates the need of histology slides in a lab

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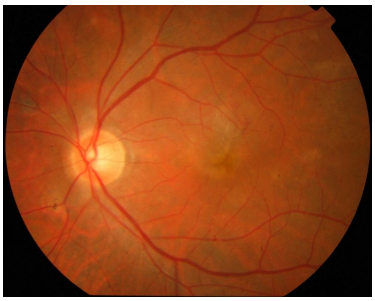
Choroidal Neovascularization



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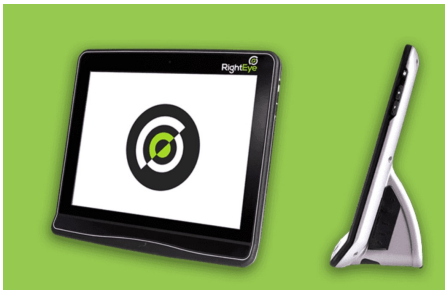
Technology Expands Optometry's Scope



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Righteye

- Eye Movement Skills
- Binocularity
- Vergence
- Ocular Motility
- Depth Perception
- Visual Motor Integration
- Head Tilt
- Reading Regressions
- Reading Comprehension

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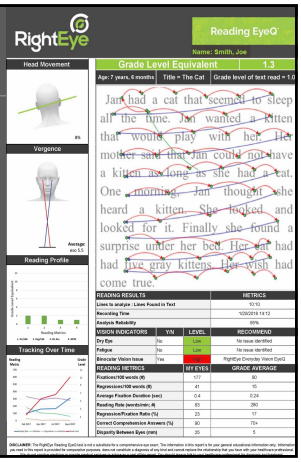
Objective Results



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Intraocular Lenses (IOL)

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IOL

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AcrySof IQ PanOptix Trifocal IOL

- Advanced IOL technology allowing patients comfortable vision at distance, near and far
- PanOptix IOL - intermediate focal point of 60 cm (more natural arms-length) to reduce the need for intermediate and reading glasses post cataract surgery
- Availability - spherical & toric
- Refractive power can be adjusted up to +/- 2.00 diopters sph. & 3.00 diopters of Cyl. The lenses can be irradiated using a near UV-light mounted to a slit lamp to change the lens' shape (lens polymerization)

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Retinitis Pigmentosa Implant

- Retina implants - bring patients out of the dark
- Delivering sight to RP patients and other conditions
- Beyond 20/20 we will see vision restored for many conditions

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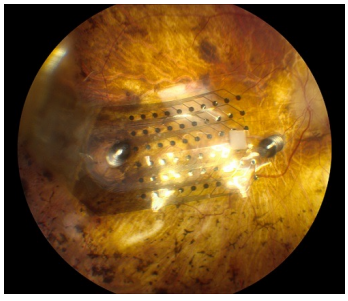
Bionic Retina



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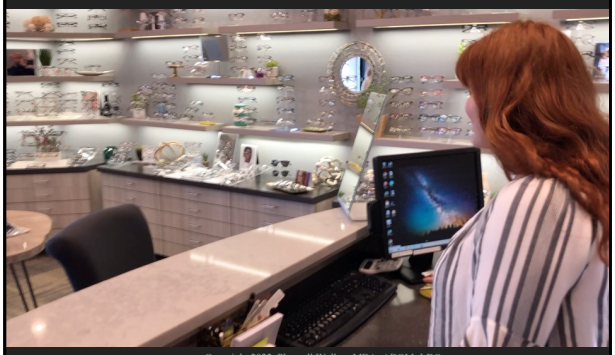
PURE OPTICS



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Visual Field Testing

Smart System® | VR Headset

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Visual Field Testing

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Myopia Control

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Myopia Control

Myopia – rays of light focus in front of the retina

Cause – too much convergence power as a result of the cornea being too steep

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Myopia Control Spectacle Lenses

MiYOSmart

SightGlass Vision Dot

Stellest

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MiYOSmart (D.I.M.S) Technology

- Defocus Incorporated Multiple Segments
- Lenslets incorporate +3.50 D of myopic defocus in the periphery

Category	Availability
Power	Plano to -10.00 Sph. | up to -4.00 D. Cyl.
Substrate	Polycarbonate
Index	1.586_n
Design	Hundreds of small segments honeycomb structure
Central Clear Zone	9.4 mm

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MiYOSmart (D.I.M.S) Technology

Photo: Hoya MiYOSmart

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MiYOSmart (D.I.M.S) Technology

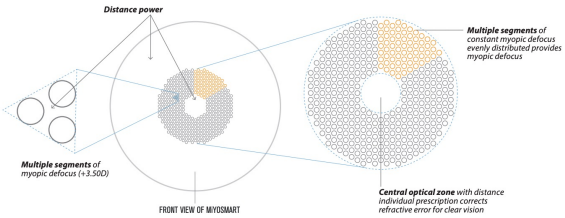

Photo: Hoya MiYOSmart

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SightGlass Vision Dot Lenses

- Peripheral contrast modulation
- Uses diffusion optics technology
- Concept based on reducing the contrast detected by the retina
- Designed to slow axial elongation progression
- These lenses utilize thousands of light-scattering elements to reduce or diffuse light in order to reduce retinal contrast
- Waiting for FDA approval

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Stellest (H.A.L.T.)

- Stellest (H.A.L.T.) – Highly Aspheric Lenslet Technology

Category	Availability
Power	Plano to -10.00 Sph. | up to -4.00 D. Cyl.
Substrate	Polycarbonate
Index	1.586_n
Design	• 11 continuous concentric rings • 1.1 mm diameter • 1120 invisible micro rings changing the signal to the retina to slow elongation of axial length
Central Clear Zone	9.0 mm

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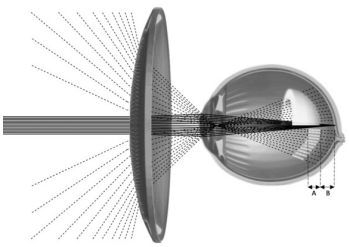
Stellest (H.A.L.T.)



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Lenses for BVD

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Binocular Vision Dysfunction Symptoms

- Attention or concentration issues
- Balance and mobility issues
- Double vision
- Eyestrain
- Headaches
- Poor hand-eye coordination
- Reading or learning difficulties

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Contouring Prism Lenses for BVD

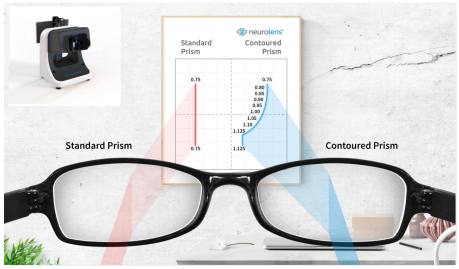

Photo:Neurolens

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Contouring Prism Lenses

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Presbyopia Drops

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Presbyopia Drops

- Pilocarpine HCl 1.25% (VUITY)
- FDA approved
- Miotic
- Pinhole effect (depth of field)
- Dose = QD
- Duration = ~6 hrs.

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Frame Technology

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Luke Mills Custom Eyewear

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The Art of Eyewear

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Opticianry Beyond 2022

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Picasso Inspired Design

- Sustainable plant based materials
- Biometric designed — frame is cut exactly to match the patient exactly
- 3D milled frames delivering a perfect fit zero adjustments needed
- Eliminates stress as the curves are formed (wrap, temple angle, etc…)
- 100% customized
- Reduces waste by 80%

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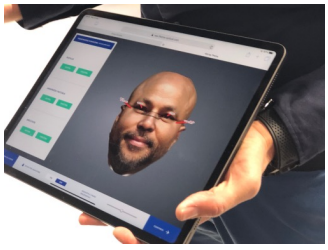
Blue Print



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Sculpting Frames from 3D Model

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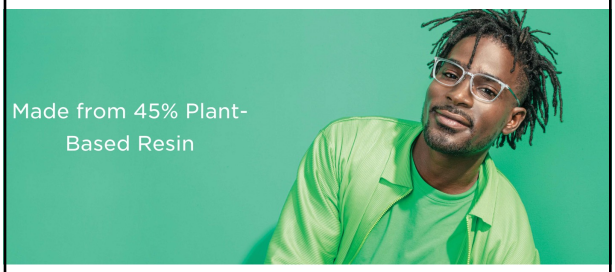
Bio Resin Frames



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Pure Plant Based Resins

- Bio-resin 45%
- Light weight
- Renewable
- Reduce waste
- Sustainable
- Castor bean based

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Mirror - Mirror

- PD - Binocular / Monocular / Distance / Near
- Pantoscopic
- Panoramic
- BVD
- Box measurements
- Measurements while wearing sun-wear
- No frame clips or prisms
- PC or Mac driven

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People Want Choice

- Everyone wants the power of choice
- Our goal is to educate patients on their treatment options and allow them to decide
- Visualizing lenses can be difficult for the general public

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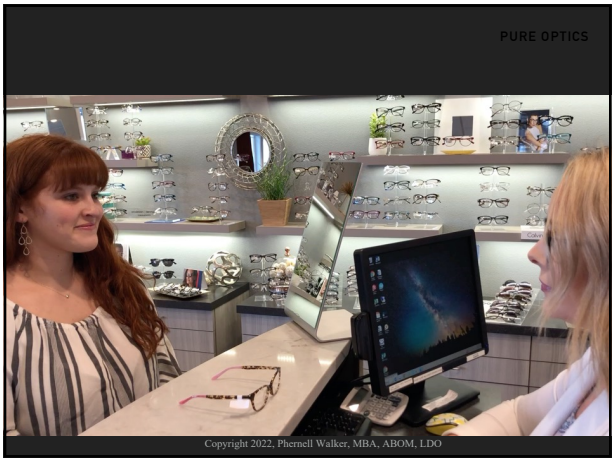

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A Picture Speaks a 1000 Words

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Optical Lab Technology

- Beyond 3D to 4D
- Measuring lens power - lab computers are now measuring lens thickness to determine refractive power across thousands of reference points
- Ophthalmic lens accuracy- dioptric power is limited
- Lens thickness - measured in hundredths of a diopter

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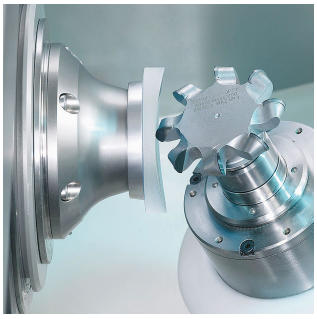
Lens Fabrication



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Thin Film Expansion

- Substrate matching
- “Glass-like” scratch resistance
- Lens encapsulation
- Trifecta - heat resilience, hydrophobic and oleophobic
- Blue light blocking capabilities
- Nano optics - each layer can respond to broader bands of light

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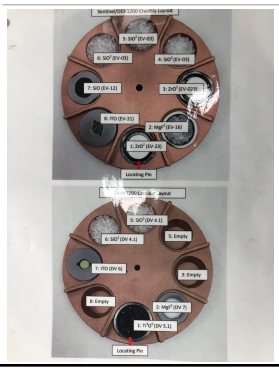
Crucible Magic



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Beyond Magnesium Fluoride

- ITO - indium tin oxide
- Zirconium dioxide (ZrO 2)
- Titanium dioxide (TiO2)

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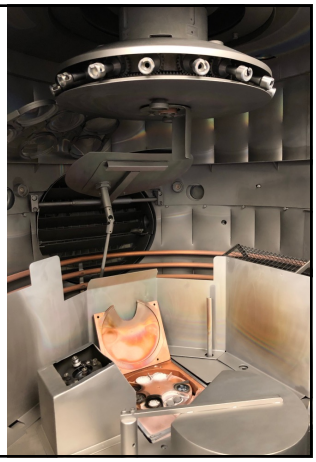
Thin Film Expansion



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Edger Innovation

- Block-less
- Leap pad-less
- Zero water
- Milling technology
- Auto-layout

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Take Aways

- **Opportunities** - what can you do to better serve your patients, differentiate your practice, expand your scope and increase revenues? What provides for the best ROI?
- **Unexpected becomes expected** — challenge your practice to use digital lenses, advanced thin films and photochromic on all patients. People want the best, deliver on their desire.
- Educate your team on these and other technologies on the horizon
- **Lights, camera, action** - after answering the above, put a plan in place with a time-line and execute!

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Questions

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