

Premium Lenses

The Material Difference



HOYA

When it comes to choosing lens materials to optimise our patients' visual needs, it's essential that we take all options into consideration. However, with so many lens materials now available, it can be tempting to fall back on a 'go to' selection. In doing so, we may unwittingly neglect the most advantageous option for the patient sitting in front of us.

So how should we select the most appropriate lens material for each and every customer?

WRITER Nicole Grasso

Every refractive index that exists falls within the range of 1.000 and 2.400. However, in optics, lens indices only fall between 1.498 and 1.900. This limits the range of lenses we can choose from.

As a baseline, we know that refractive index is a measure of how much a lens will refract or bend light. The higher the refractive index of a material, the more that material will bend light, thus becoming 'optically denser'. Additionally, the higher the refractive index, the less material is required to achieve the same prescription, resulting in lighter, thinner lenses. However, the thinner the lens, the lower the abbe number – a measure of the lens material's dispersion of light – which impacts optical clarity.

With this in mind, there is always a debate over what patients prioritise: is it the cosmetic appearance of the lenses or the optical clarity?

When selecting a lens material for a customer, it is important to consider the following:

- Impact resistance,
- Abbe number (Vd),
- Refractive index,
- Specific gravity (determined by the density of a lens material by comparing its density to the density of water), and
- Customer wants vs customer needs.

MATERIAL OPTIONS

CR-39

The classic/trusty CR-39 – with index of 1.498 – is a great all-rounder offering a high abbe number Vd: 58 and a low specific gravity: 1.3 g/cm³. In combination, this makes for a relatively lightweight lens that can hold white light together in a way that deters optical aberrations such as colour fringing. Additionally, 1.498 has relatively good impact resistance, especially in comparison to its predecessor crown glass.

Polycarbonate

Polycarbonate lenses, with an index of 1.591 are best known for their durability and incredible impact resistance, and typically suggested for lenses in children's eyewear, police officers' eyewear, sports glasses, and safety glasses.

However, the downfall of polycarbonate is its low abbe number (or Vd) of 30, which translates colour fringing at the edges of high power lenses when compared with other materials. Before selecting polycarbonate, it is important to have an in-depth discussion with your patient about the aberrations they will have while wearing these lenses. For the right patient, the benefits of impact resistance and specific gravity: 1.2 g/cm³ will far outweigh the low abbe number.

High Index Plastics

High index plastic lenses (1.561–1.740) are thinner, lighter, and flatter than CR-39 lenses, which is appealing to patients. They also have a higher impact resistance than CR-39, making them an ideal choice for semi-rimless or three-piece frames as the material will be more resistant to accidental bumps.

However, like polycarbonate lenses, they also have a low abbe.

- 1.595 has a specific gravity of 1.3 g/cm³ and an abbe number of vd:36-42,
- 1.665 has a specific gravity of 1.3 g/cm³ and an abbe number of vd:32, approaching the abbe number of polycarbonate,
- 1.740 has a specific gravity of 1.4 g/cm³ and an abbe number of vd:33, and
- 1.760, created by Tokai, is agreeably the highest refractive index plastic material available and the thinnest lens. It has a specific gravity of 1.49 g/cm³ and an abbe number of vd:30.

Although you can't change the low abbe, your dispensing actions can help to reduce its effects.

To reduce distortion and improve optical clarity, it is recommended that you fit the heights according to the centre of rotation rule (C.O.R.R.); reduce the back vertex distance as much as possible; reduce the eye size; and increase the facial wrap. An aspheric lens design can also help reduce chromatic aberrations.

REALISTIC RECOMMENDATIONS

We also need to be realistic and ethical in our discussions when recommending products to customers as what they want may not always match their need.

For example, you may have a patient present in store with a RE +1.00/-0.25 x 90 LE +0.50 requesting the exact same 1.67 lens material that her friend is raving about. However, for this patient, a 1.67 lens would create a level of aberrations that negatively outweighs the lightness of this lens material.

The 1.67 index may be great for your daily sales average but not so beneficial to the patient, who is trusting your experience as an optical dispenser for the best recommendation.

Patients don't know what they don't know. It is our role and responsibility to recommend and describe a range of solutions for each customer, so they have the best knowledge to make an informed decision that fulfils their optical needs.

As Indira Izidoro, Senior Trade Marketing Specialist from EssilorLuxottica said: "When offered a lens that is thinner and lighter, I have never heard a patient say they'd prefer the thicker, heavier one."

"When offered a lens that is thinner and lighter, I have never heard a patient say they'd prefer the thicker, heavier one"

Word of mouth is a powerful promotor. Your dispensing actions can lead to positive recommendations and help build your practice brand.

WHERE TO NEXT?

Lens materials are constantly evolving and improving and Ms Izidoro said, "the future really is in anything other than CR39".

With an ageing population in Australia and New Zealand, she said "the weight and safety of spectacle lenses really needs to be taken into account".

"Older skin can be damaged more easily by heavy spectacles and the risk of falls increases with age."

Nicola Peaper, National Professional Services Manager at Rodenstock agreed that the biggest gap in lens options is "a high index material with a high abbe value".

"Many dispensers steer away from the higher indexes due to transverse chromatic aberration causing coloured fringes, and axial chromatic aberration causing possible blur on higher powers," she said. Importantly she added that "many high script wearers do not necessarily notice these things and are happy with the cosmetic result".

To find out more about how you can meet the needs of your patient base, take a look at what the major lens suppliers have to offer on the following pages.

Nicole Grasso is a qualified optical dispenser and trainer at the Australasian College of Optical Dispensing. She has worked in the optical industry since 2015.

Reference

Wilson, D., and Daras, S., Practical Optical Dispensing. Open Training and Education Network (OTEN), TAFE NSW, 2014.

Premium Spectacle Lenses



ECO6

ECO6

The ECO6 lens swaps out traditional petrochemicals for sustainable biomass plant-based materials.

This innovative lens is both sustainable and eco-friendly. It is designed to reduce greenhouse gas emissions by up to 14% compared with conventional petroleum-based products.

ECO6 boasts unwavering tinting capabilities. It can absorb up to 85% tint density in any colour, thanks to its cutting-edge substrate technology. It also maintains tint integrity and is less likely to fade over time as the biomass material is consistent in colour and density.

ECO6 is comprised of a 1.6 index material and available in all grind products, a variety of colours and densities. It is lightweight and suitable for rimless and nylon / inline fitting.

Contact: CR Labs (AUS) 1800 334 867



Varilux XR series

B.I.G. Exact

With Biometric Intelligent Glasses (B.I.G.) Exact, Rodenstock determines the biometrics of the whole eye. This includes its length and several thousand data points in the eye – far beyond industry standards.

With the help of these data sets, an exact eye model is generated for each individual eye. All relevant biometric data flows directly into the lens production process and on this basis, the system calculates a lens that fits the individual person as perfectly as possible. Spectacle wearers therefore benefit from the sharpest vision for every angle and every gaze, no matter where they look.

B.I.G. Exact lenses are available in indices of 1.5, 1.60, 1.67, and 1.74 (plus 1.54 in ColorMatic only).

Contact: Rodenstock Account Manager

Varilux XR series

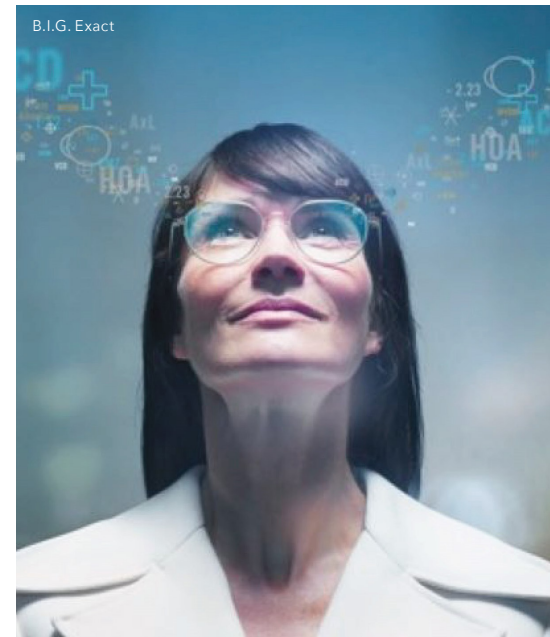
EssilorLuxottica's scientists have harnessed the power of behavioural artificial intelligence and combined it with their unmatched understanding of the visual needs of the wearer.

Varilux XR series wearers benefit from instant sharpness, even when moving,¹ with up to 49% more volume of vision compared with Varilux X series.² In an independent third-party test, after trialling Varilux XR with the same prescription, 87% of subjects (mostly premium progressive wearers), preferred it to their current lenses, after trying them, with no change in their prescription.¹ Available in 1.50, 1.59, 1.6, 1.67, and 1.74 indices.

Contact: Essilor Account Manager

References

1. As reported in Varilux XR series - in-life consumer study - Eurosyn - 2022 - France (n=73 progressive lens wearers).
2. Prediction calculations using Essilor data analysis and Internal R&D simulations - 2022 - vs Varilux X series.



B.I.G. Exact

Autograph Intelligence

Shamir Autograph Intelligence is the artificial intelligence lens that evolves with you.

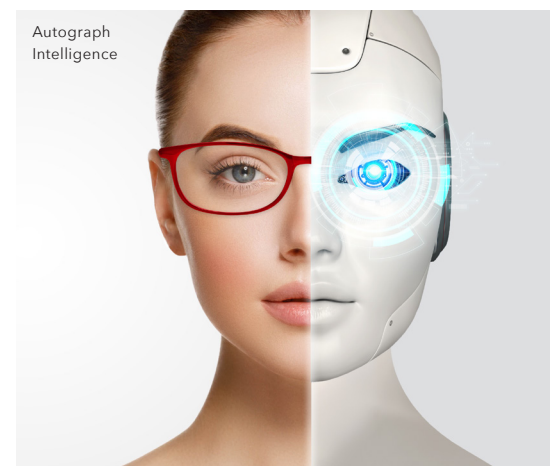
The award-winning lens design has been created to deliver the best visual experience, optimally matching the wearer's visual age with their visual needs.

Autograph Intelligence provides the most advanced progressive lens. Because Autograph Intelligence is capable of learning from a continuous flow of new data, it delivers a precisely tailored lens, designed specifically for your patient's individual needs.

The Autograph Intelligence lens is available in the following indices: 1.5, 1.53, 1.59, 1.6, 1.6 Tribrid, 1.67, and 1.74.

It is also available in clear, blue zero, Transitions, Transitions XTRActive, Transitions XTRActive polarised, NuPolar, and Drivewear.

Visit: shamir.com/au



Autograph Intelligence

INTRODUCING PRECISION1™ FOR ASTIGMATISM

THE NEWEST MEMBER OF THE PRECISION1™ FAMILY

Designed to meet the needs of the mainstream patients.
Long lasting comfort¹ with great stability^{1**8}



2 UNIQUE TECHNOLOGIES



A permanent, microthin layer of moisture on the lens surface that exceeds 80% water.² This helps provide longer-lasting lens surface moisture stability¹³⁻⁵ and a more stable tear film



A proven lens design that provides the on-eye stability astigmats need for consistent vision.⁸

MORE THAN ONE REASON TO SAY YES TO PRECISION1™ CONTACT LENSES

- ✓ Precise vision¹
- ✓ Easy handling¹
- ✓ And a contact lens that provides comfortable wear even at 16 hours^{1,6-7}
- ✓ 99% first fit success⁸
- ✓ Great stability^{**8}
- ✓ A toric lens that is as easy to fit as a spherical lens^{**9-10}



ALWAYS FOLLOW THE DIRECTIONS FOR USE.

[†] Based on lens movement, centration, and rotation at initial fitting.

^{*} Based on a survey in which 94% of eye care professionals in Germany, Italy, Austria, Switzerland, and the US who agreed/strongly agreed with the statement "The lenses are as easy to fit as spherical lenses." (n=50).

^{**} Based on 98.7% of eyes with lens oscillation with blink of $\leq 5^\circ$ while wearing PRECISION1™ for Astigmatism contact lenses

References: **1.** Cummings S, Giedd B, Pearson C. Clinical performance of a new daily disposable spherical contact lens. *Optom Vis Sci.* 2019;96:E-abstract 195375. **2.** PRECISION1™ (DDT2) Lens with Smart Surface study; Alcon data on file, 2019. **3.** Tucker B, Leveille E, Bauman E, Subbaraman L. Characterization of the Surface Properties of a Novel Daily Disposable Silicone Hydrogel Contact Lens. Poster presented at the American Academy of Optometry Annual Conference, October 23-26; Orlando FL. **4.** IDDrop Comparative Study DACP and BioTrue ONEday Report; Alcon data on file, 2019. **5.** IDDrop Comparative Study Oasys 1 Day and TruEye; Alcon data on file, 2019. **6.** Alcon data on file, 2021. In a clinical trial to assess comfort and vision over 16 hours of wear with PRECISION1™ sphere contact lenses where n=35. [IIT #59917981]. **7.** Alcon data on file, 2021. In a clinical trial to assess comfort and vision over 16 hours of wear with PRECISION1™ for Astigmatism contact lenses where n=30. [IIT #64882539]. **8.** Alcon data on file, 2020. Clinical Performance of a Daily Disposable Toric Silicone Hydrogel Contact Lens [CLA306-C003] n=78 eyes. **9.** Alcon Data on File, 2021. PRECISION1™ for Astigmatism PEaCE - Europe Regional Report REF-12902. **10.** Alcon Data on File 2021. PRECISION1™ for Astigmatism PEaCE - US Report REF-12942.

Unity Via Progressives

The Unity Via progressive lens portfolio features three easy-to-fit and dispense lens designs that are enhanced for today's demanding visual needs, providing clear vision at all distances.

Your patients will enjoy seamless transitions from near to far, and a wide, distortion-free viewing area that ensures sharp and clear vision. From entry level to the most sophisticated product, Unity Via progressive lenses are sure to meet the unique visual and lifestyle needs of any progressive patient.

Available in 1.50, 1.53, 1.59, 1.60, 1.67, and 1.74 indices.

Contact: VSP Optics (AUS) 02 9697 8080

SmartLife Individual 3

ZEISS SmartLife Individual 3 are top-of-the-range progressive lenses. They are optimised for the wearer's visual behaviour and requirements. The design is based on age-related differences in dynamic and activity-driven visual behaviour and considers the oculomotor behaviour together with the wearer's individual parameters including anatomy and physiology, resulting in an ultra-refined lens.

The lenses make use of ZEISS Intelligence Augmented Design to match an individual wearer's data to a set of more than 12.5 million data points on visual behaviour in specific age groups. This allows predictions on how individuals will use their eyes in daily life, to create the best-matched lens design.

ZEISS SmartLife Individual 3 lenses are available in 1.5, 1.53, 1.6, 1.67, and 1.74 indices.

Contact: ZEISS Account Manager

SmartLife Individual 3



Unity Via Progressives

HOYA

HOYA has a range of premium progressive lenses that allow for varying levels of personalisation and budgets.

Hoyalux iD MySelf

Hoyalux iD MySelf delivers a progressive lens design beyond what has been possible before.

Using the newly launched HOYA consultation centre (HCC360) iPad app, you can personalise the iD MySelf Lens design based on your patient's lifestyle and previous lens wearing history. This enhances their patient journey and creates a lens design unique to them.

With two patented technologies, Adapt Ease and 3D Binocular Vision, HOYA aims to address the key problem areas that consumers continue to have with progressive lenses today:

Adapt Ease technology improves the near and intermediate visual width and gaze transition without influencing the distance vision.

3D Binocular Vision technology is a leap forward in providing stable image perception, significantly reducing distortion and swaying effects along all dimensions.

Hoyalux iD MySelf Profile

Hoyalux iD MySelf Profile provides wearers with an elevated visual performance, combined with a fuss-free consultation process. This lens is made for a digital world and makes customisation easy with five pre-defined design variants, meeting the different vision needs of your customers.

Hoyalux iD LifeStyle 4

Hoyalux iD LifeStyle 4 is easy to prescribe and for wearers to adapt to. This new lens, with three design variants tuned to your patients' daily activities, takes into account today's digital lifestyle with HOYA 3D Binocular Vision. It also comes with two additional corridor lengths.

Hoyalux iD MySelf lenses are available in 1.5, 1.53, 1.6, 1.67, 1.74 indices.

Contact: HOYA Lens Account Manager





Myo **ME**

Myo-freeform technology meets myopia management

Innovative Myo-freeform technology that offers the next generation of managing childhood myopia.



Central viewing zone

Allows for clear and sharp vision for enhanced comfort, all the while sustaining a harmonious equilibrium with the treatment zone.



Reading addition

Helps to relax the eyes when performing near-work tasks. The smooth transition enhances comfortability and improves compliance.



Peripheral treatment zone

Offers a more optimal and targeted treatment option as it takes into consideration the asymmetry of the back of the eye.*



Remarkably thinner

Slim and aesthetically pleasing appearance.



Scan for more



hub.crlabs.au/myome-ecp



*Faria-Ribeiro, M., Queirós, A., Lopes-Ferreira, D., Jorge, J. and González-Méjome, J.M., 2013. Peripheral refraction and retinal contour in stable and progressive myopia. *Optometry and Vision Science*, 90(1), pp.9-15.

Premium Contact Lenses



Total1 Multifocal

Total1 Multifocal

Total1 Multifocal contact lenses combine the benefits of Alcon's Water Surface technology with Precision Profile lens design to provide clear, comfortable vision for presbyopes.¹

The lenses feature a centre near multifocal design that works synergistically with natural pupil function and delivers a smooth progression of power with a 96% fit success.^{2,3*}

The unique water gradient material approaches 100% water at the outermost surface for a lens that feels like nothing.^{4,^}

Total1 Multifocal contact lenses also feature SmarTears technology. Embedded phospholipids are drawn out of the lens to support the tear film and address contact lens related dry eye through lipid layer stabilisation.⁵

Contact: Alcon Account Manager

* Fit success was achieved for established presbyopes in clinical studies where n=27 for Air Optix Aqua Multifocal contact lenses and n=26 for Dailies AquaComfort Plus Multifocal contact lenses.

With two lenses or less per eye, at the initial fitting visit.

^ Based on wearers agreeing with the statement 'With these lenses I sometimes forget I have them on'.

References

1. Lemp, J., Kern, J., Alcon multifocal contact lenses for presbyopia correction. Paper presented at the Canadian Association of Optometrists Congress; 28-30 June 2017; Ottawa, ON.
2. Alcon data on file, 2017. Clinical study report for: assessing fitting guides in Alcon Multifocal contact lenses (REF-01165).
3. Bauman, E., Lemp, J., Kern, J., Material effect on multifocal contact lens fitting of lenses of the same optical design with the same fitting guide. Poster presented at the British Contact Lens Association (BCLA) Clinical Conference and Exhibition; 9-11 June 2017; Liverpool UK (REF-01164, p80).
4. Perez-Gomez, I., Giles, T., European survey of contact lens wearers and eye care professionals on satisfaction with a new water gradient disposable contact lens. *Clin Optom* 2014;6:17-23.
5. Pitt, W.G., et al., Loading and release of a phospholipid from contact lenses. *Optometry and Vision Science*. 2011; 92(3): 301-311.

ANZ-DTM-2400001



Acuvue Oasys Max

Coming Soon: Acuvue Oasys Max 1-Day Multifocal

Adults are now spending over 13 hours a day on digital devices, a 35% increase since 2019.¹ When looking at a digital screen, we blink 60% less, which can destabilise the tear film, impacting comfort and vision.^{2,3} Blue-violet light scatters from digital screens, fluorescent/LED lights and the sun, which can impact visual clarity.⁴ These demands are even more troubling for ageing eyes.⁴

For patients with presbyopia, Acuvue Oasys Max 1-Day Multifocal contact lenses provide crisp, clear vision at all distances and in all lighting conditions.^{*5}

Explore the advanced technologies and discover what this could mean for your patients. Be the first to learn: Australia: registration.jnjvisionpro.com/en_AU/profile/create; New Zealand: registration.jnjvisionpro.com/en_NZ/profile/create.

Contact: Johnson and Johnson Vision Account Manager

*n=172.

References

1. COVID-19: Screen Time spikes to over 13 hours per day according to Eyesafe Nielsen estimates, published 3/28/20, (available at eyesafe.com/covid-19-screen-time-spike-to-over-13-hours-per-day).
2. Tsubota, K., Nakamori, K., Dry eyes and video display terminals. *N Engl J Med*. 1993;328(8):584. DOI: 10.1056/NEJM199302253280817.
3. Patel, S., Henderson, R., Bradley, L., et al., Effect of visual display unit use on blink rate and tear stability. *Optom Vis Sci* 1991;68(11):888-892. DOI: 10.1097/00006324-199111000-00010.
4. JJV data on file 2022. Blue-violet filter utilized in Acuvue Oasys Max 1-Day contact lenses.
5. JJV data on file 2022. Subjective stand-alone claims for Acuvue Oasys Max 1-Day Multifocal contact lenses - Exploratory Meta-analysis.

Blusafe

In today's screen-centric world, constant exposure to blue light leads to digital eye strain, causing headaches, dryness, and blurred vision. Blusafe blue light blocking contact lenses alleviate this by filtering harmful blue light to help preserve eye health. Additionally, they shield against UV rays outdoors, which is crucial for preventing cataracts.

Ideal for office workers, gamers, and students, they promise comfort and convenience akin to regular lenses. Available in various prescriptions, they combat digital eye strain effortlessly. Blusafe lenses are a comprehensive solution for screen-related eye issues, offering superior protection and comfort.

Visit: abkvision.com.au

CooperVision

Success is simple with MyDay multifocal contact lenses.^{1,2} According to CooperVision, eye care professionals achieve first-fit success in 83% of patients, and 98% are successfully fitted with two pairs or fewer.^{1,2*}

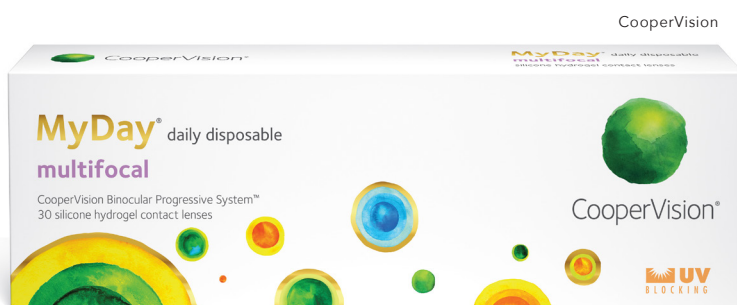
Contact: CooperVision Account Manager 

*When using the fitting guide.

References

1. CVI data on file, 2021. Prospective, subject-masked, randomised, bilateral, two-week dispensing study at five United States sites with MyDay daily disposable multifocals; n=58 habitual multifocal contact lens wearers.
2. CVI data on file, 2020. Prospective, double-masked, bilateral, one-week United Kingdom dispensing study with MyDay daily disposable multifocals; n=104 habitual multifocal contact lens wearers.

Warning: UV-absorbing contact lenses are not substitutes for protective UV-absorbing eyewear, such as UV-absorbing goggles or sunglasses, because they do not completely cover the eye and surrounding area. Patients should continue to use UV-absorbing eyewear as directed.



CooperVision



Blusafe