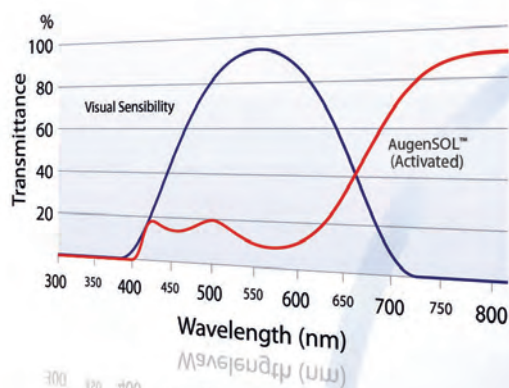


# Photochromic Lenses

## AUGENSOL™

AUGENSOL™  
THE HD PHOTOCROMIC



A new brand of photochromic  
performance



HIGH DEFINITION LENSES™

# AugenSOL™

## Photochromic Lenses

Introducing AugenSOL Photochromic Lenses, a unique combination of premium Augen High Definition lens design technology and the most advanced photochromic hard resin optical material available today.

AugenSOL Photochromic Lenses provide outstanding, reliable light-sensitive performance with greater stability in higher temperatures and more efficiency in cold and hot weather.

- Gets dark exceptionally fast outdoors - nearly sun-lens dark in just 12 seconds
- Provides 100% UVA / UVB protection on *both* front and back lens surfaces
- Extra-dark tint rivals the light protection offered by sun lenses
- Fades more quickly to barely noticeable tint indoors for clear, translucent lenses

## Superior UV Protection

AugenSOL Photochromic Lenses integrate UV-filtering cells throughout the lens material. Rather than filtering only incident radiation, AugenSOL Photochromic Lenses block ultraviolet light **on both front and back lens surfaces**, eliminating 100% UVA and UVB radiation during both light transmission and reflection.

The photosensitive homogenous mix of optical resin and photochromic material offers advantages over older technologies in UV protection, as UV filtration is complete on all lens surfaces.



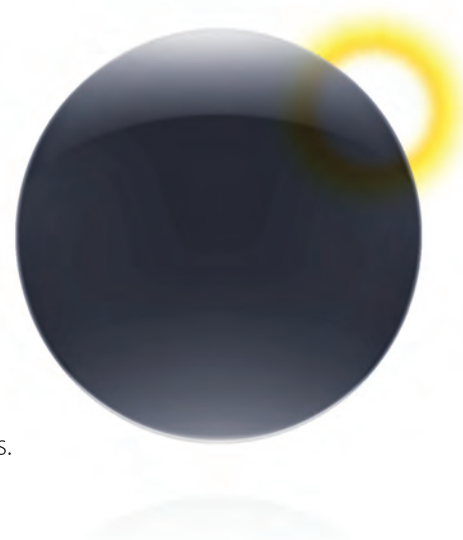
## AUGENSOL PHOTOCROMIC LENSES

# Clear. Dark. Fast.



### Sunlens Dark in Just 12 Seconds

AugenSOL Photochromic Lenses quickly change from clear to dark outdoors in just 12 seconds, and fade quickly from dark to clear indoors in approximately two minutes.



### Color Stability Throughout Activation

Extremely fast activation with no hysteresis (lag effect) ensures color stability in both activated and fading states.

**Light to Dark** 12 seconds (approx)  
(90% perceived darkness)

**Dark to Light** 2 minutes (approx)  
(50%T - equivalent to 90% perceived transparency)

Transmittance Data		AugenSOL™ Gray	Leading Photochromic Gray	Other In-Mass Gray
Clearness at bleached state T% @ 560nm		90	89	85
Darkening T(%) @560nm	23 deg C	12.8	10	16.0
	35 deg C	23.5	20	28.5
Fading @ 560nm 23 deg C	T(1/2)s	73	95	95
	T(3/4)s	214	239	280

## Uniform Gray Color

AugenSOL Photochromic Lenses exhibit a uniform gray tone throughout the activation process, with consistency across the lens and from lens to lens. Because AugenSOL is a fused material with photochromic cells throughout the lens, a darker lens color is perceived in the activated state – nearly as dark as a sun lens.

# CONSISTENT, RELIABLE PERFORMANCE

## More Stable in Extreme Temperatures

AugenSOL Photochromic Lenses are more stable in high and low temperatures than other photochromic lenses, maintaining their clarity indoors, even in higher temperatures.

UV-free transmitted light does not activate subsequent photochromic layers, maintaining complete transparency in the lenses and providing a uniform tone even with high positive and negative prescriptions.

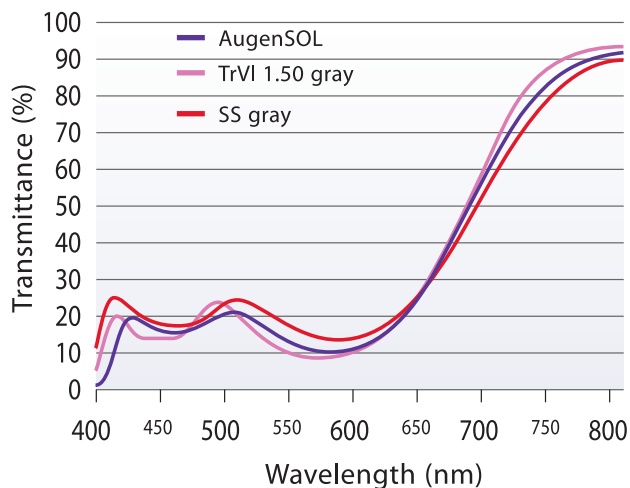
### Transmission Data, 23°C

Clear (Deactivated) T% @ 560nm

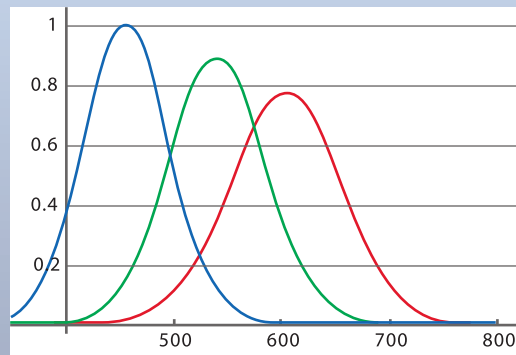
Dark (Activated) T% @ 560nm

Attenuation @ 560nm to 50%

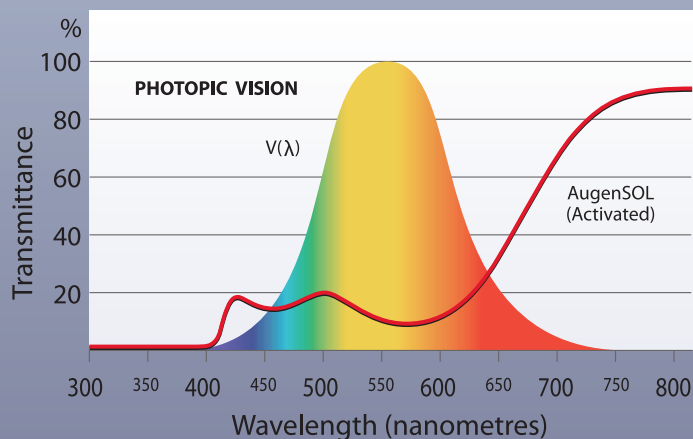
## Transmittance Spectra in activated state (23 deg C)



Measurement condition: Xenon lamp, Airmass filter 2.50 kLx, exposure 300 seconds



Normal receptor sensitivity functions in arbitrary units over wavelength

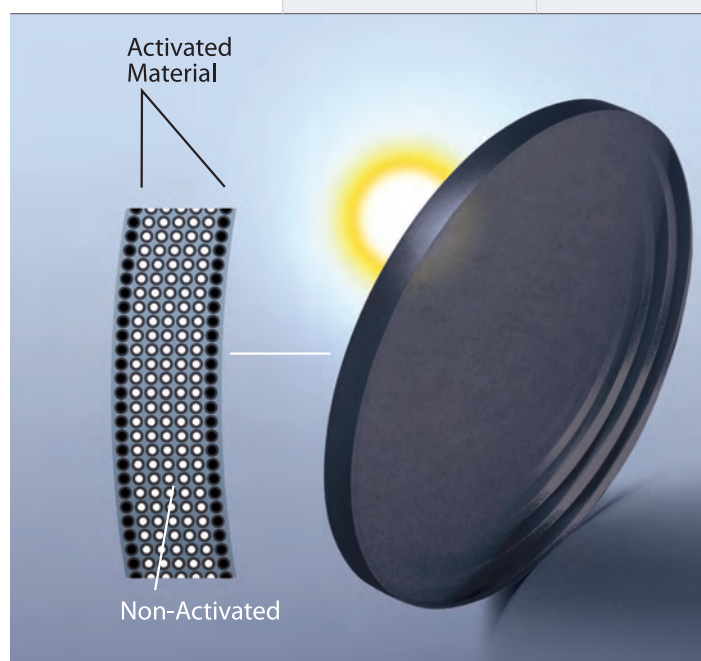


## Professional Quality That's Easy to Process

With its high Abbe value of 56 and low level of dispersion, AugenSOL material ensures uncompromising optical quality. And with its superior tensile strength, AugenSOL Photochromic Lenses can be processed just like 1.50 hard resin lenses for shaping, polishing and beveling. AugenSOL material easily accepts grooving and perforations for rimless frames.

AugenSOL™ 1.50	Leading Photochromic 1.50	Hard Resin 1.50
Tensile Strength		
18 - 20 Kgf (t=2.2 mm)	12 - 14 Kgf (t=2.2 mm)	15 - 18 Kgf (t=2.0 mm)
(f=5.5 mm) 18 - 20 Kgf	(f=5.5 mm) 12 - 14 Kgf	(f=5.0 mm) 12 - 18 Kgf

	AugenSOL™	1.50 Hard Resin
Refractive Index (20°C)	1.502	1.499
Specific gravity (25°C)	1.177	1.31

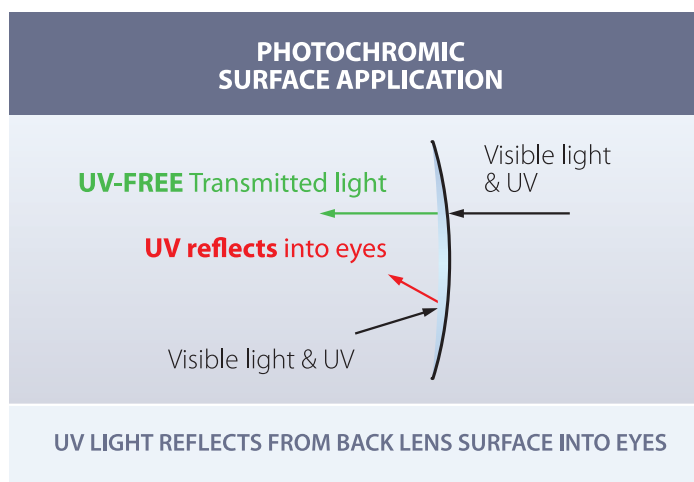
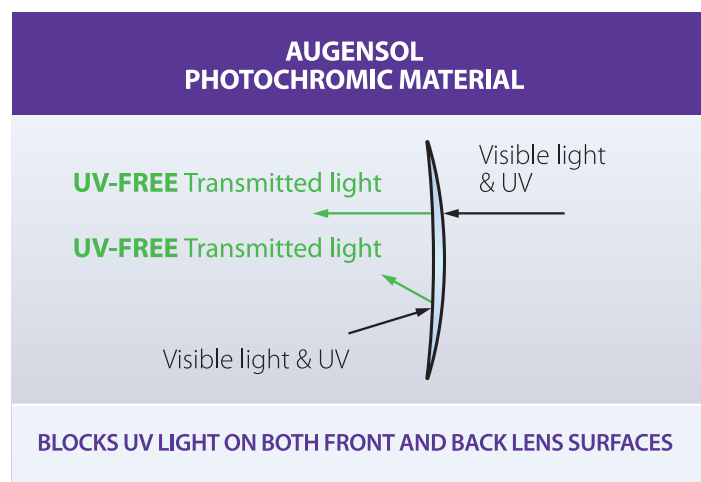


## Photochromic Material Characteristics

AugenSOL is a 1.50 index optical lens material with photochromic cells embedded throughout the material resin. As the surface of the lens wears thin, new photochromic cells are activated to replace those that might be lost through cleaning or everyday wear, giving wearers long-lasting, reliable photochromic performance.

AugenSOL Photochromic Lenses combine the excellent optical characteristics of 1.50 hard resin with the superior protection of proven light-sensitive and UV-filtering photochromic technology, including 100% blockage of UVA/UVB rays on both front and back lens surfaces.

The optical performance of AugenSOL photochromic material is comparable to 1.50 hard resin. However, its low specific gravity makes AugenSOL material lighter weight than hard resin, resulting in more comfortable lenses.



# AugenSOL™ Photochromic Lenses

## AVAILABILITY

Augen High Definition®  
**HD SINGLE VISION**  
71mm Diameter - S.F. Gray

### A new approach to aspheric design

- Advanced patented aspheric design extends the benefits of asphericity to low and medium prescriptions while enhancing higher prescriptions
- Unique design provides flatter curves for all prescriptions
- Every wearer gets wide, clear, natural vision – even in higher Rx’s

	BASE							
	0.75	2.00	3.50	4.00	5.00	6.25	7.25	8.25
Aspheric								
Double Asph.								

Augen High Definition®  
**TRINITY® 13/17 PROGRESSIVE**  
76mm Diameter - S.F. Gray

### Fast Adaptation in an Easy-Wear Design

- Aspherized curves vary based on Rx strength and add power, for a better fit for myopes and hyperopes
- Soft design minimizes peripheral distortion, allowing an easy visual transition through the viewing zones
- Moderate 13mm corridor allows greater flexibility in selecting smaller frames
- 17mm recommended minimum fitting height

BASE	ADD POWER											
	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
3.50												
5.00												
6.00												

866.284.3611  
AugenSOL.com

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**BIFOCAL FLAT-TOP 28**  
71mm Diameter - S.F. Gray

### Classic Design Bifocal Lenses

- Effectively combines wide distance vision with a broad reading area

BASE	ADD POWER								
	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
2.00									
4.00									
6.00									
8.00									

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