



// PHOTOFUSION®
MADE BY ZEISS

The moment your lenses keep pace with
changing light – and your life.

Self-tinting lenses by ZEISS.



We make it visible.

PhotoFusion® by ZEISS – powerful self-tinting lenses that keep pace with your life.

PhotoFusion® was created by Carl Zeiss Vision's experts to meet the consumers' expectation of self-tinting lenses that darken and turn clear faster*. The introduction of PhotoFusion® in 2011 has given the self-tinting market a revival in these kind of lenses.



*A cloudy day with no obvious sunshine:
PhotoFusion® still protects the eyes against
harmful solar UV rays.*



*When outside, PhotoFusion® lenses darken
according to the sunlight giving 100% solar
UV protection.*



*Even if the sun is shining outside, PhotoFusion®
lenses are very clear indoors and offer excellent
vision.*

Most relevant PhotoFusion® benefits for consumers:

Convenience

PhotoFusion® lenses adapt to changing light fast for more convenience in every day use.

Comfortable Vision

PhotoFusion® lenses are very clear in-doors yet turn very dark outside in sunlight for excellent vision at all times.

Protection

PhotoFusion® lenses provide 100% protection against harmful solar UV rays.

Durability

PhotoFusion® lenses retain their self-tinting performance long.

Colour Consistency

PhotoFusion® lenses show excellent colour consistency for an attractive appearance in any lens state.

Consumers say**:

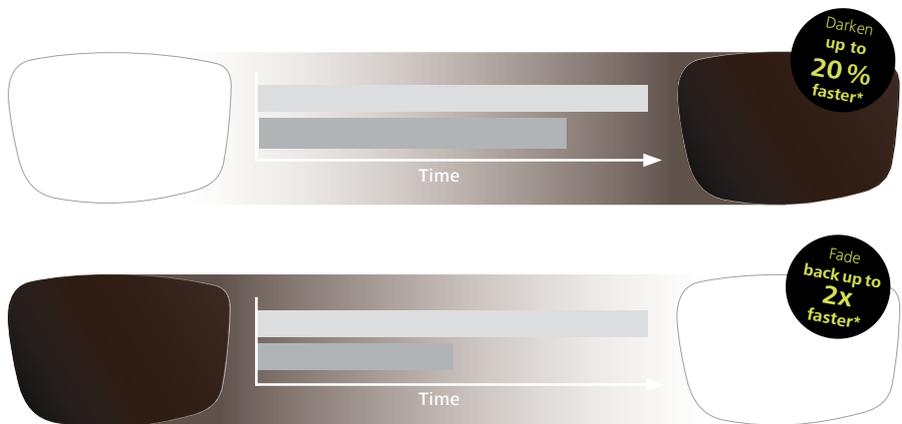
- 9 out of 10 consumers rate the vision quality of PhotoFusion® very good/good.
- 4 out of 5 consumers are very satisfied/satisfied with PhotoFusion®.
- 83% of the respondents would recommend PhotoFusion® to their friends or colleagues.

* Source: Global consumer study for Carl Zeiss Vision International July 2010, based on national representative samples in US, Brazil, Germany, Italy, UK, Australia and China.

** Source: External consumer study, Germany, November 2012.

A state-of-the-art technology – for strong performance.

PhotoFusion® high and mid-index self-tinting lenses in comparison to existing photochromatic lenses offered by ZEISS.



- PhotoFusion® high and mid-index self-tinting lenses
- Existing photochromatic lenses by ZEISS

Fast dark. Fast clear

PhotoFusion® lenses respond more efficiently to light energy, darkening up to 20% faster* than standard lenses in the self-tinting market.

- Lenses darken to 85 %T** in 15 – 30 seconds*
- Lenses fade back to 70 % T** in 5 – 10 minutes*.

Comfortable Vision

Indoors the PhotoFusion® lenses are very clear whereas outside they turn very dark in the sunlight. Clear state: 92% T**, dark state: 11% T**

Light conditions	Molecules	Status of self-tinting lenses
Indoors/Outdoors rainy 		
Outdoors/slightly cloudy 		
Outdoors/sunny 		

A state-of-the-art technology for strong performance:

This PhotoFusion® technology is based on molecules that unfold according to the intensity of solar UV rays. The stronger they become, the more they unfold and consequently darken the lenses.

* Average performance for 1.67, 1.6 and polycarbonate self-tinting lenses is up to 20% faster than the standard in the self-tinting market. Performance will vary according to material, temperature and light conditions.

** T = transmission based on AR coated lenses.

PhotoFusion® by ZEISS – lenses that keep pace with changing light conditions.

Our claims were tested by COLTS Laboratories*, an external ophthalmic testing laboratory and one of the leading quality testing services worldwide with 150 years of combined experience in all aspects of the optical industry. Result: PhotoFusion® is better than competitor's product in certain categories, especially in terms of both activation and deactivation speed.

Laboratory test results of PhotoFusion® high and mid index lenses conducted by COLTS*:

Test category	Transmission/ Initial state	Transmission/ Activation	Transmission/ Darken state	Transmission/ Deactivation
Result	On par with current market offering	Noticeably faster and significantly darker	On par with current market offering	Noticeably faster and significantly clearer

* COLTS Laboratories Report: O-CSD121710 & O-CSD052311; COLTS laboratories assessed the activated darkness, fade-back clarity, temperature dependence, and UV attenuation of both PhotoFusion® and Transitions lenses in gray 1.67 high-index, polycarbonate, and hard resin using standardized test methods that comply with the ISO 8980-3 international standard.

To learn more about PhotoFusion® please visit:

www.zeiss.com/photofusion

The moment you see something
you couldn't before.
This is the moment we work for.

How will doctors treat their patients in the future? What role will photos and videos play in the communications of tomorrow? Just how far can the miniaturisation of semiconductor structures go? These and many other questions are what constantly propel Carl Zeiss to new heights of excellence.

As a pioneer of innovative technology and one of the global leaders in the fields of optics and optoelectronics, Carl Zeiss has always challenged the limits of human imagination.

With its trend-setting products and solutions for use in medicine, Carl Zeiss sets the pace around the globe; both doctors and patients benefit from these leading-edge technologies. One outstanding example is the INTRABEAM radiotherapy system; it offers breast cancer patients considerably gentler and shorter treatment.

Razor-sharp images in The Lord of the Rings, the most successful movie trilogy of all time, or the crystal-clear image enjoyed by nature watchers through their binoculars or spotting scope – Carl Zeiss reveals fascinating details every time.

In the area of semiconductor manufacturing technology Carl Zeiss is constantly advancing into even tinier dimensions; its products are used to manufacture more than one half of all modern microchips worldwide. Wherever high precision is a must, measuring systems and software solutions from Carl Zeiss ensure maximum standards of quality. Aircrafts become safer, cars faster and wind turbines – the future of power supply – more efficient.

Around the globe, two people per second decide to purchase spectacle lenses from Carl Zeiss. With its focus firmly on the future, Vision Care develops innovative lenses – like the revolutionary MyoVision that slows the progression of shortsightedness in children.

This passion for perfection is the driving force behind all the company's business groups. With this goal always in sight, Carl Zeiss creates customer benefits and inspires the world to see things that were invisible before.



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