

## Photochromic

Light Activated Lens Technology

### What is Photochromic?

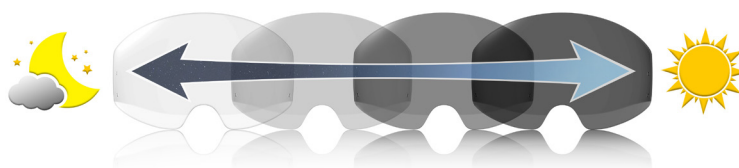
Gentex Photochromic coating absorbs direct, or light filtered through a vehicle's windshield to activate the photochromic molecules causing the lens to darken or lighten when exposed or removed from light.

### Why use it?

Gentex Photochromic technology enables users to manage variable lighting conditions with one visor, ending the need to switch between clear and tint visor during a mission.

### What are the benefits?

This solution reduces the burden and weight of carrying two visors and increases ease of product use, allowing for seamless mission configuration.



## KEY FEATURES

- Reacts in direct sunlight and in vehicles (through canopies and windshields)
- Begins darkening instantly
- Adapts seamlessly for day-to-night operations
- Clear state transmissions of greater than 80% PLT (Photopic Luminous Transmittance), offers future opportunity for combination with some laser eye protection (LEP) filters
- Maintains a neutral gray color when in darkened state
- External visor surface protected by Gentex's proprietary scratch resistant hard coating
- Replaces the need for two visor (clear and tint) kits



Representation of a Single Photochromic Lens on a Gentex HGU-56/P Rotary Wing Helmet (Low light vs. Bright Light)

## SPECIFICATIONS

### Photochromic Performance Characteristics

Parameter	Direct Sunlight	Through Canopies / Windshields
Clear State	84 T%	84 T%
Dark State	18 T%	30 T%
Dynamic Range	67 T%	55 T%
T% <sub>half</sub>	51 T%	57 T%
Darkening to T% <sub>half</sub>	9 sec	13 sec
Fading to T% <sub>half</sub>	89 sec	70 sec
Darkening to 50 T%	9 sec	20 sec
Fading to 50 T%	85 sec	46 sec

T=PLT (Photopic Luminous Transmittance) D65

T%<sub>half</sub> = midpoint of dynamic range

Direct sunlight illumination conditions: AM2

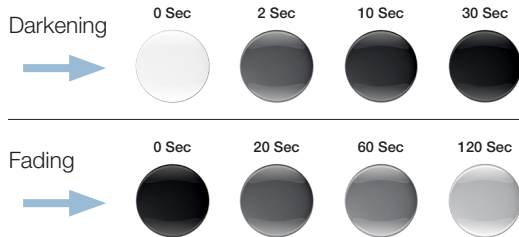
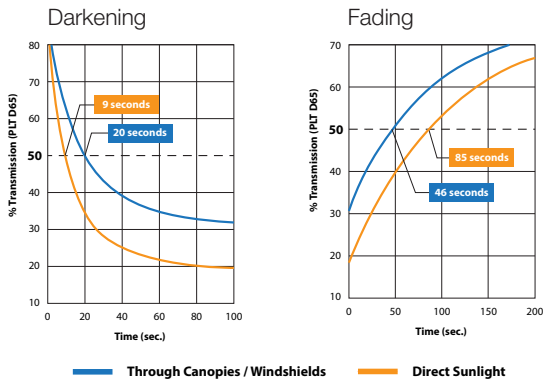
Through canopies / windshields illumination conditions: AM1 with/ aircraft canopy having 50% transmittance at 450nm

Temperature: Measurements were made with lens at 23°C +/- 2° (73F)



Representation of a Photochromic Lens transition on an Ops-Core STEP-IN Visor

### Photochromic Response



### Availability

Gentex Photochromic Visors will be replacing the need to operate two visor systems kits in most Fixed and Rotary Wing configurations as well as the Ground Ops-Core® Universal STEP-IN® Visor. The convenience of replacing Two-Visor Kits with Single visors will also be offered in select future Gentex Optics products.



Gentex HGU-55/P Fixed Wing Helmet



Gentex HGU-56/P Rotary Wing Helmet



Gentex HGU-68/P Fixed Wing Helmet



Gentex ALPHA® Eagle SAR Rotary Wing Helmet



Ops-Core STEP-IN Visor

### Contact Us

Gentex Corporation is dedicated to enhancing personal protection and situational awareness for global defense forces, emergency responders, and industrial personnel operating in high performance environments. To learn more about the Gentex Photochromic Light Activated Lens Technology, contact Customer Service at [sales@gentexcorp.com](mailto:sales@gentexcorp.com). Like us at [facebook.com/Gentexcorp](https://facebook.com/Gentexcorp)