



**Innovative Safety Products**

## **Faceshields, Goggles and Spectacles**

### **Clear UV Protective Faceshield**

Prolonged operation of equipment emitting UV light could cause burns to eyes and face. The Clear UV Protective Faceshield absorbs the UV energy before it reaches the worker. The faceshield provides extended protection from 200 nm to 400 nm. Other faceshields making similar claims may protect only from 200nm to 365nm.



Oberon's specialty coatings are available to further customize the protection. Permanent antifog and scratch resistant coatings provide additional comfort and economy with the Clear UV Protective Faceshield.

The basic shield size is 8" X 14" and .105" thick. This protection can be extended with a Double Crown chin protector and Shield Extenders. Meets ANSI Z87.1-2003. Made in the USA.

### **Clear UV Protective Cover Goggle**

The Clear UV Protective Cover Goggle protects the worker from potential damage to his eyes and vision from prolonged exposure to UV energy. The lens is manufactured with a special UV absorbing polycarbonate. The material is opaque to UV energy from 200 nm to 400 nm, while it is clear to visible light, providing a clear vision of the workspace. The frame and vents also provide protection from UV energy.



The Standard sized goggle frame is designed to fit over most ophthalmic frames. The UV protective goggle is available in two frame styles, Non-Ventilation and Indirect-Ventilation.

Meets ANSI Z87.1-2003. Made in the USA.

### **Clear UV Protective Economy Spectacle**

The Apollo VS™ provides the same UV protection in their lenses as our UV faceshield, covering less surface area. Economical price and traditional 90's style, with the UV protection you need. One Piece Front with non-adjustable temples. The material is opaque to UV energy from 200 nm to 400 nm, while it is clear to visible light,



Made in USA. Meets ANSI Z87.1-2003

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## Orange UV Extended Protection Spectacle

The "Image Orange" provides extended UV Light protection. Reaching into the Blue light range, it provides excellent protection and visibility when working with UV lamps in applications such as dentistry and fingerprinting.



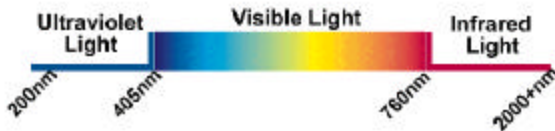
The "Image Orange" is available in Black and Tan colored frames. The frame incorporates wire-core temples, adjustable for a comfortable fit. The metal hinges insure a long product life.

Safety manufactured in the USA. Meets ANSI Z87.1-2003

## What is UV Light?

UV light is electromagnetic energy with wavelengths from 200nm to approximately 380 to 405, at which point visible light, specifically blue light, begins. You might hear reference to UVA, UVB and UVC. These are simply sub-ranges within the UV light spectrum. UVA stretches from 100nm to 280nm. UVB covers the range from 280nm to 315nm and UVC from 315nm to 400nm. UVA & UVB is also referred to as Far-UV and UVC as Near-UV.

## Spectrum of Visible Light + UV and IR



## Do safety glasses provide UV protection?

If your concern is for typical exposure to the UV energy of sunlight, standard safety glasses incorporating polycarbonate lenses are probably sufficient for most people (excluding those who may have extreme sensitivity due to medication or other). However, for industrial or laboratory application involving UV lamps, where the quantity of UV energy emitted is significant, we advise the use of Oberon Clear UV Protective goggles or faceshield. They are the only products on the market to provide clear visibility and effectively 100% protection from the UV light across the full spectrum of UV energy (200nm to 405nm, UVA, UVB & UVC).

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### How much Protection am I getting?

Safety Spectacles today are usually manufactured with Polycarbonate lenses. Regardless of the type of lens, clear, dark gray, mirrored or other, polycarbonate by nature provides some UV light protection. This protection extends from about 200nm to around 350 to 370nm, depending upon the brand and formulation of polycarbonate used. The ANSI Z87.1, the standard to which glasses, goggles and faceshields are manufactured in the USA, measures UV light across the Far-UV range. Many glasses may be stating an inflated percentage of protection across this abbreviated range. However, when measured across the entire UV spectrum from 200nm to 405nm, the resultant protection may be significantly lower.

Oberon's Clear UV Protective Products are manufactured with a special formulation of polycarbonate. This formulation incorporates an additive, which extends the absorptive character of the polycarbonate across the UV spectrum from 200nm to 405nm. This additive gives the lens of the faceshield or goggle a slight yellow tint. The additive acts trapping the energy within the lens, releasing it in a more harmless form of heat. Additionally, PVC material of the goggle frame also includes this additive to provide the UV protective quality to the frame as well.

### I have heard about Blue-Blocker lenses. What are they?

Blue-Blocker or orange lenses are primarily used in the dental industry as well as in fingerprinting laboratories. The dentists in the past have used these spectacles when they are curing the filling compound in your teeth with a powerful UV light. The Blue-Blocker lens is simply an orange tinted lens. Because of physics, one sees the color orange because you are not seeing the blue portion of the visible spectrum. Adding this tint to the lens will likewise inhibit the transmission (and visibility) of the color blue. The Oberon Dental Orange lenses effectively block the UV and Blue light transmission from 200nm to approximately 530nm.

### Oberon UV Protective Products

Oberon's UV Protective series of safety products are manufactured using Oberon **UV-X™ Resin, Oberon's UV Protective Polycarbonate**. Oberon has developed this special formulation to provide enhanced UV protective characteristics to that of standard Polycarbonate, used in the manufacture of most safety spectacles and goggles.

Oberon's UV Protective Products provide effectively 100% protection from the harmful UV energy across the Ultraviolet Light spectrum from 200nm to 400nm. The minimum protective level of the products is **OD2.93 @400nm** (which represents 0.00171% transmission or 1 thousandth of 1%). The **maximum protective level** of the products is **OD4.36 @265nm** (which represents 0.0000429% transmission or 4 one hundred thousandths of 1%). While the products in this series do provide excellent protection against UV light generated by UV lamps and such, they are not intended for use for high intensity laser type applications (Please refer to Oberon's Apollo Laser™ Series of spectacles).

(nm)	%	Optical	
Wavelength	Transmittance	Density (OD)	
200nm	0.00084728	OD 3.0720	200nm to 400nm
205nm	0.00050263	OD 3.2988	Maximum OD
210nm	0.00029735	OD 3.5267	OD 4.3677

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215nm	0.00018819	OD 3.7254	<b>Minimum OD</b>
220nm	0.00012592	OD 3.8999	<b>OD 2.9314</b>
225nm	0.000093447	OD 4.0294	<b>Average OD</b>
230nm	0.000071971	OD 4.1428	<b>OD 4.0016</b>
235nm	0.000058635	OD 4.2318	<b>Visible Light Trans.</b>
240nm	0.000051843	OD 4.2853	<b>87.86%</b>
245nm	0.000047222	OD 4.3259	<b>(380nm to 780nm)</b>
250nm	0.000046258	OD 4.3348	
255nm	0.000045587	OD 4.3412	
260nm	0.000044492	OD 4.3517	
265nm	0.000042967	OD 4.3669	
270nm	0.000042888	OD 4.3677	
275nm	0.000043720	OD 4.3593	
280nm	0.000051878	OD 4.2850	
285nm	0.000047232	OD 4.3258	
290nm	0.000057350	OD 4.2415	
295nm	0.000058058	OD 4.2361	
300nm	0.000056784	OD 4.2458	
305nm	0.000058423	OD 4.2334	
310nm	0.000061161	OD 4.2135	
315nm	0.000064032	OD 4.1936	
320nm	0.000063388	OD 4.1980	
325nm	0.000067774	OD 4.1689	
330nm	0.000072648	OD 4.1388	
335nm	0.000072471	OD 4.1398	
340nm	0.000071089	OD 4.1482	
345nm	0.000071085	OD 4.1482	
350nm	0.000067872	OD 4.1683	
355nm	0.000063114	OD 4.1999	
360nm	0.000064576	OD 4.1899	
365nm	0.000064550	OD 4.1901	
370nm	0.000064668	OD 4.1893	
375nm	0.000076085	OD 4.1187	
380nm	0.00058365	OD 3.2338	
385nm	0.00074726	OD 3.1265	
390nm	0.00077191	OD 3.1124	
395nm	0.00093215	OD 3.0305	
400nm	0.0011712	OD 2.9314	
405nm	0.1278		
410nm	3.3912		

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415nm	18.804
420nm	43.213
425nm	63.088
430nm	74.185
435nm	79.594
440nm	82.136
445nm	83.436
450nm	84.194
455nm	84.690
460nm	85.069
465nm	85.377
470nm	85.650
beyond to 780nm	

If you have any additional questions, please feel free to e-mail us at [TechSupport@OberonCompany.com](mailto:TechSupport@OberonCompany.com) or call us **1-800-FACEFIT** asking for our **Technical Support Department**.

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