### **POLYMER OPTICAL FILTERS**

PHILLIPS-SAFETY.COM COPYRIGHT ©2025. ALL RIGHTS RESERVED





Phillips Safety is the industry leader in occupational safety eyewear. In business for over 100 years, you are being served with the dedication and craftsmanship of a family owned company.

Phillips Safety has been producing occupational safety glasses since 1905 and continues to develop and produce the highest quality glasses and lenses today. A leading manufacturer of specialty safety eyewear in the United States, Phillips Safety adheres to strict ANSI Z87-2+ and EN 207 CE standard certifications, holding itself to a highest standard and prides itself on producing glasses with the finest quality materials available.

All safety glasses produced and sold by Phillips Safety meet strict industry standards for military, medical, research laboratories, and a variety of other industries.

With Phillips Safety's dedicated team, you can rest assured knowing that all your prescription safety needs are met. Phillips Safety takes pride in offering an extensive assortment of polymer optical filters designed to meet diverse application needs. Optical filters play a crucial role in manipulating the passage of light, both visible and invisible, across various industries and settings. They come in different types, including cut, block, and pass filters, each further categorized into short pass, long pass, and notch filters.

In our selection, we provide a wide range of filters in both glass and polymer materials. Specifically focusing on our polymer filters, we offer four distinct variations: laser scanner (coated or uncoated), acrylic UV transmission, acrylic NIR/near Infrared, and acrylic UV cut.

Filters Laser Scanner are essential components in handheld and stationary laser scanners, such as those used in supermarkets. They not only enhance the sensitivity of lasers for reading barcodes but also ensure the safety of end-users by shielding them from harmful radiation. These filters are tailored to accommodate various laser wavelengths, ensuring compatibility with different scanning systems.



#### CATEGORY INFORMATION POLYMER OPTICAL FILTERS



UV cut filters serve the purpose of blocking UV emissions while allowing the passage of all other wavelengths. Our range includes five types of UV cut filters, spanning from 370nm to 480nm, and they are available with non-glare and scratch-resistant coatings to enhance durability and optical clarity.

UV pass filters, on the other hand, block all wavelengths except ultraviolet, transmitting up to 80% at 300nm. These filters boast excellent optical characteristics without double refraction and are also offered with non-glare and scratch-resistant coatings for added longevity.

Lastly, our NIR filters transmit near-infrared wavelengths while effectively blocking visible light. With five types available, transmitting from above 700nm to 820nm, these filters exhibit superior optical properties without double refraction and come with non-glare and scratch-resistant coatings for enhanced performance.

Explore our collection of polymer optical filters with confidence, knowing that you'll find the perfect solution tailored to your specific requirements. We're committed to providing you with the support and expertise you need for your optical filtration needs.

## PHILLIPS SAFETY POLYMER OPTICAL



The Acrylic NIR/Near Infrared Filters transmit Near Infrared (IRT) light and absorb visible light. There are 6 types of Near Infrared filters that transmit through the ranges of 670nm to 910nm.

**APPLICATIONS** – Instrumentation, Sensors, Communications and Optical Devices, LIDAR filters, Machine-Vision, Time of Flight Sensors, Covert Imaging & Illumination

 $\textbf{THICKNESS} - 0.5, \ 0.6, \ 0.7, \ 0.8, \ 1.0, \ 1.2, \ 1.5, \ 2.0, \ 2.5, \ 3.0, \ 3.5, \ 4.0, \ 4.5, \ 5.0 mm$ 

**SIZE** – 400mm x 550mm standard. Custom sizes are available upon request.

**MACHINING / PRINTING** – Available to customer specification.

#### SPECIFICATION

Excellent optical characteristics No double refraction Available scratch-resistant Transmit Near Infrared light and absorbs visible Available smooth surface or anti-glare surface Available with custom-tuned antireflection coating



The Acrylic UV Cut Filter protects displays from ultraviolet rays. There are five types of ultra-violet absorption filters, ranging from 370 nm ~ 480 nm. Available with smooth or non-glare surfaces. Both surfaces are available with scratch-resistant coating. High transparency – 92% Total Light Transmission.

**APPLICATIONS** – Display protectors, optical filters, instrumentation and sensors

THICKNESS - 0.2 up to 5.0mm

**SIZE** – 400mm x 550mm standard. Custom sizes are available upon request.

**MACHINING / PRINTING** – Available to customer specification.

#### **SPECIFICATION**

Excellent optical characteristics No double refraction Excellent weatherability Available smooth surface or anti-glare surface Scratch-resistant grades



Transmits ultra-violet rays at 260nm. UV Filters provide extremely accurate transmission specifications. Product Designation is Grade: "S-O" Clear.

**APPLICATIONS** – Optical disc substrates, UV-cure applications, sterilization filters

THICKNESS - 0.2, 0.3, 0.4, 0.5, 0.8, 1.0, 1.2, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0 and 5.0mm

**SIZE** – 400 x 550mm standard. Custom sizes are available upon request.

**OPTICAL PROPERTIES** – Transmission from 260nm — Transmit about 80% at 300nm — Transmit about 90% at 350nm. Total Light Transmission 93% – Haze 0.1% – Refractive Index 1.49

**MACHINING / PRINTING** – Available to customer specification.

#### SPECIFICATION

Transmit ultra-violet ray (80% at 300nm)

Excellent optical characteristics

Available smooth surface or anti-glare surface Available scratch-resistant

No double refraction



The AR Coat Filter is designed to maximize the transmission of 630 – 670nm lasers. Scratch-resistant, anti-reflection, and anti-smudge coatings are available.

**MAXIMUM AVAILABLE SIZE** – With Anti-Reflection Coating 290mm x 360mm. Without Anti-Reflection Coating 400mm x 550mm.

THICKNESS – 0.5, 0.8, 1.0. 1.5, 2.0, 2.5, 3.0, 4.0 and 5.0mm. Please contact us if you require other thickness.

**MACHINING / PRINTING** – Available to customer specification.

**COLORS** – Available in clear and many colors.

#### SPECIFICATION

Excellent transmission

**Excellent optical characteristics** 

Excellent surface hardness Excellent smudge resistance



The Near Infrared Cut Filters have been designed specifically for NVIS applications where it is important to minimize the amount of NIR light emission. These filters can also serve as NIR-Hot Mirrors.

**APPLICATIONS** – Typical uses include cockpit/avionics instrumentation, displays, and illumination

**MACHINING / PRINTING –** Available to customer specification.

#### SPECIFICATION

PC available 0.8 - 2.0mm thick.	Transmits visible wavelengths and cuts near infrared
Cast Acrylic available 0.2 - 5.0mm thick	Standard HPP600 coating design shown.
Sold as sheets or customized	Coating design can be modified.
Substrate is hardcoated polycarbonate or cast acrylic, with IR-cut coatings both front and back	Standard HPP600 NIR-cut coating design imparts a blue/green tint in transmitted light, and reflections have a redish tint

# CONTACT

Should you need any further information, please do not hesitate to contact us.

 $\mathcal{Q}$ 123 Lincoln Blvd, Middlesex, NJ 08846, USA



service@phillips-safety.com  $\left|\times\right|$ 



www.phillips-safety.com 🌐



PHILLIPS-SAFETY.COM