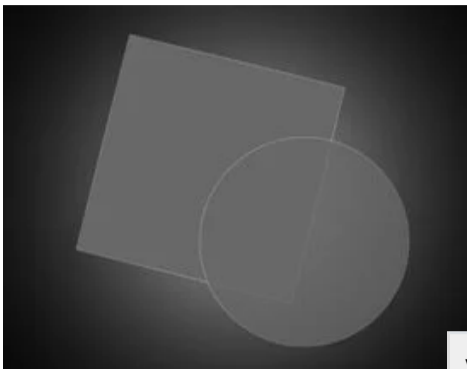


# 100 x 100mm, $\lambda/4$ Retarder Film (WP140HE)



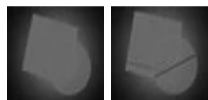
Stock #14-724 **20+ In Stock**

1 **C\$46<sup>.90</sup>**

**ADD TO CART**



Retarder Film with protective film removed



| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-10       | C\$46.90 each                 |
| Qty 11+        | C\$40.74 each                 |
| Need More?     | <a href="#">Request Quote</a> |

| Product Downloads |                              |
|-------------------|------------------------------|
| STEP:step         | Curve:pdf                    |
| PDF Drawing:pdf   | IGES:igs                     |
| Spec Sheets:pdf   |                              |
| eDrawing:eprt     |                              |
| EO Spec Sheet     | <a href="#">Download All</a> |

## General

**Type:** Retarder Film

**Note:** Fast axis is indicated by a black stripe on the protective film. This film should be removed before use.

## Physical & Mechanical Properties

|                                      |  |
|--------------------------------------|--|
| <b>Length (mm):</b> 100.00           | <b>Dimensions (mm):</b> 100.0 x 100.0        |
| <b>Thickness (mm):</b> 0.06 ±0.003   | <b>Dimensional Tolerance (mm):</b> +0.0/-1.0 |
| <b>Construction:</b> Polarizing Film | <b>Width (mm):</b> 100.00                    |

## Optical Properties

|  |  |
|--|--|
| <b>Design Wavelength DWL (nm):</b> 588           | <b>Substrate:</b> <a href="#">Polymer Film WP140HE</a> |
| <b>Retardance:</b> $\lambda/4$                   | <b>Transmission (%):</b> >89                           |
| <b>Phase Shift (°):</b> 90.00                    | <b>Wavelength Range (nm):</b> 400 - 700                |
| <b>Index of Refraction (n<sub>d</sub>):</b> 1.58 | <b>Retardation (nm):</b> 147 ±4                        |

## Material Properties

**Haze (%):** <1

## Environmental & Durability Factors

|  |  |
|--|--|
| <b>Operating Temperature (°C):</b> -40 to +120 | <b>Heat Resistance (°C x Hours):</b> 80 x 1000 |
|--|--|

## Regulatory Compliance

RoHS 2015: [Compliant](#)

Certificate of Conformance: [View](#)

Reach 235: [Compliant](#)

## Product Details

- Highly Durable Polymer Sheets
- $\lambda/4$  (WP140HE) Achromatic Retarder with Greater than 90% Transmission from 450-700nm
- $\lambda/4$  (WP140HE),  $\lambda/2$  (WP280), and  $1\lambda$  (WP560) Retarder Films Available

Polymer Retarder Film is an extremely durable, birefringent polymer sheet that has been designed to modify the polarization state of transmitted light. The highly transparent, achromatic  $\lambda/4$  (WP140HE) and  $\lambda/2$  (WP280) Polymer Retarder Films consist of a single layer, modified polycarbonate sheet that acts as an achromatic retarder, and is optically and mechanically sound up to 90°C or 80°C respectively. The  $1\lambda$  (WP560) Polymer Retarder Film consists of two  $\lambda/2$  films that have been laminated together to create retardation values of 560nm. These films are ideal for use in a variety of coherent and polarized light applications, including circular polarizers, LCDs, and fiber optics.

### Immediate Custom Quotes Available

If you have a need for any round, square, or rectangular size of a Polymer Retarder Film in dimensions between 3mm and 600mm, please visit our [Polarizing Film Tool](#). We'll provide an immediate quote, and can deliver the part to your requested size in approximately 3 weeks. A full list of standard manufacturing tolerances and restrictions are listed. For fully customized polymer polarizers to your requirements, visit our [Customized Polymer Polarizers Capabilities](#) page.

## Technical Information

### Related Products



Metric Polarizer Mounts



Rotation Kinematic Mounts

### Frequently Purchased Together



#03-629 - C-Mount Double Male Thread Ring  
C\$51.45

Qty



#31-795 - 62 x 147mm FL, Grade 1, Double-Convex Lens  
C\$5.93

Qty



#32-540 - 5mm, Aluminum, High Tolerance N-BK7 Right Angle Prism  
C\$151.20

Qty



#32-741 - 48 x 84mm AR Coated Float Glass Window  
C\$41.65

Qty



## Resources

**Media Type**

- Application Note
- Technical Tool
- Video
- FAQ
- Glossary

**APPLICATION NOTE**  
**Introduction to Polarization**

**TECHNICAL TOOL**  
**Laser-Cut Polymer Polarizer and Retarder...**

**APPLICATION NOTE**  
**Polymer Polarizers and Retarders**

**APPLICATION NOTE**  
**Polarizer Selection Guide**

**APPLICATION NOTE**  
**Understanding Waveplates and Retarders**

**VIDEO**  
**How Do 3D Movies Work? Polarization**

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