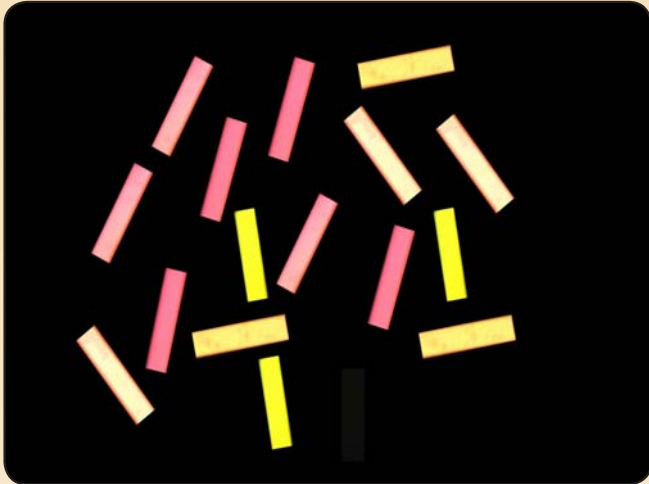


# Micro Retarders

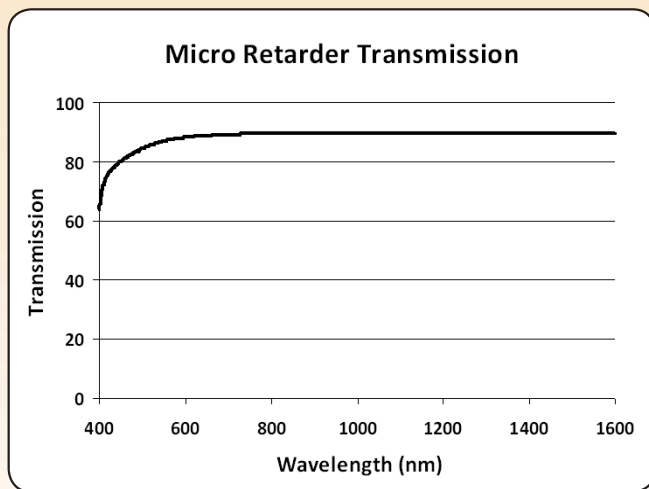


## Key Benefits

- Tens of Microns Thick Retarders
- Millimeter Dimensions
- Custom Sizes, Wavelengths, Retardances available
- Designed for telecommunication systems
- Reliable in extreme environments

Micro Retarders are manufactured out of a high birefringent polymer to allow for retarders with a thickness on the order of microns. These retarders were originally designed for use in telecommunication systems. They have passed months of exposure to extreme environmental conditions with a retardance change of less than 0.005 waves. Meadowlark Optics can manufacture these retarders with dimensions that are millimeters in size and a clear aperture that goes to within microns of the edge due to Meadowlark Optics precision edge cutting. Micro Retarders are produced ready made for a cleanroom environment, with a limited number of surface particles, microns in size.

The Micro Retarder manufacturing process can be customized for a wide range of sizes. They can be manufactured for any one of a number of retardances over a broad range of wavelengths. Please contact your Meadowlark Optics Sales Engineer for assistance and a custom quote.



Transmission versus Wavelength graph over the usable wavelength range for Micro Retarders.

## ORDERING INFORMATION

*Micro Retarders are built on a custom basis due to the ability to build them in custom sizes for custom retardances over custom wavelengths. Please contact your Meadowlark Optics Sales Engineer with your specifications and application for assistance and a custom quote.*

SPECIFICATIONS	
Retarder Material	High Birefringence Polymer
Wavelength Range	400 - 1600 nm (specify)
Contrast Ratio (for $\lambda/2$ )	$\geq 300:1$
Retardance Range	0 - $\lambda/2$ (specify)
Outside Dimensions	1.0 to 10.0 +0.2/-0 mm (specify)
Edge Perpendicularity	$90^\circ \pm 5^\circ$
Clear Aperture	To within 15 $\mu\text{m}$ of the part edge
Thickness *	10 - 20 $\mu\text{m}$
Fast Axis Orientation, standard	$45^\circ$ to the long edge
Temperature Range	$0^\circ\text{C}$ to $125^\circ\text{C}$

*\* Thickness is design dependent.*

*Fast Axis can be oriented as needed.*

*Please contact your Meadowlark Optics Sales Engineer for assistance.*