

## UV POLARIZER PRODUCT BRIEF

API Nanotronics Introduces Deep UV Polarizers from its **NanoOpto** Division based on proprietary frequency doubling technology and Atomic Layer Deposition (ALD).

These UV Polarizers utilize nanowire arrays with feature sizes as thin as 10 nm and all dielectric materials to offer premium polarizers at operating wavelengths such as 193 nm and 266 nm on a variety of substrates and sizes.

**KEY FEATURES AND BENEFITS**

### Optical Performance

- Transmissions >50%
- Contrast ratios 50:1 to 500:1
- High Transmission versions at 266 nm and 193 nm available
- Versions include 240-300 nm and 190-200 nm
- Transparent in the visible range

### High Damage Thresholds

- Non-metallic structure allow for high levels of incident laser power
- No oxidation or contamination concerns as seen with metal wire grid polarizers

### Substrate Capability

- Very large substrate sizes available
- Full wafer sizes to custom diced parts
- Thicknesses down to 0.1 mm

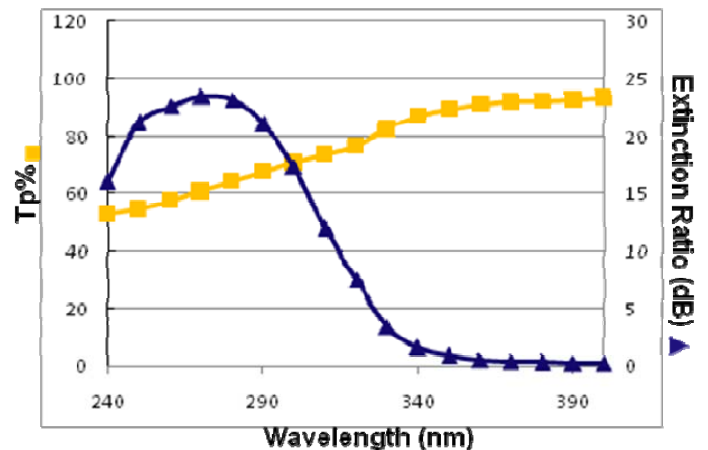
### Operating temperature range

- -40° to 80°C
- Wider range capable

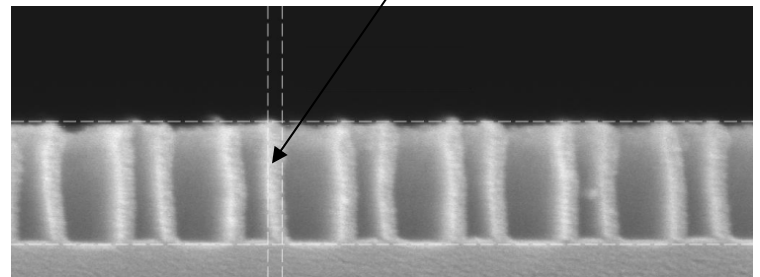
### Applications

- DUV lithography and metrology
- Laser optics
- Surface polarimetry
- Liquid crystal alignment

UV Polarizer 240-300 nm



Dielectric Nanowire



### **UV Polarizer Product Specifications**

<b>Performance</b>	<b>UVP 266</b>	<b>UVP 266 High Transmission</b>	<b>UVP 193</b>
<b>Wavelength</b>	265±20 nm	266 nm	193 nm
<b>Transmission</b>	>50% over range >60% @266 nm	>75%*	>55%*
<b>Extinction Ratio</b>	>17 dB over range >22 dB @266 nm	>17 dB	>15 dB
<b>Angle of Incidence</b>	0°±6°	0°	0°±6°
<b>Size</b>	Different sizes available	Different sizes available	Different sizes available
<b>Thickness</b>	1.0 mm / Custom	1.0 mm / Custom	0.5 mm / 0.7 mm / 1.0 mm
<b>Edge Chipping</b>	<100 µm	<100 µm	<100 µm
<b>Substrate Material</b>	Fused Silica	Fused Silica	Fused Silica
<b>Operating Temperature</b>	-40°~85° C	-40°~85° C	-40°~85° C

\*Optional protective coating reduces transmission by 5%

Find out more about NanoOpto at:  
[www.nanoopto.com](http://www.nanoopto.com)

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