



# Wollaston Polarizer



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The extremely high quality, ultra- low cost, just-in-time delivery!

Wollaston Polarizers ideal for laboratory experiments for their access to both ordinary and extraordinary rays are available at A-Star optics. A Wollaston prism is another birefringent polarizer consisting of two triangular calcite prisms with orthogonal crystal axes that are cemented together. Wollaston polarizer is made of two birefringent material prisms that are cemented together. The deviations of the ordinary and extraordinary beams are nearly symmetrical about the input beam axis, so that the Wollaston polarizing beam splitter has approximately twice the deviation of the Rochon. The separation angle exhibits chromatic dispersion, as shown in the blow. Any separation angle can be designed upon the requirement. The separation angle of standard products vs wavelength is shown in the plot below.

### Wollaston Polarizer Features:

#### Cemented

Separate Ordinary and Extraordinary Beams at Certain Angle  
 Suitable for Low Power Application and where the deviation is required

### Wollaston Polarizer Specifications:

Attribute	Specification
Material:	MgF2,α-BBO,Calcite ,YVO4 or Quartz
Wavelength Range:	MgF2:130-4000nm;α-BBO:190-3500nm; Calcite:350-2300nm;YVO4:400-5000nm; Quartz:200-2300nm
Extinction Ratio :	MgF2: <math><5 \times 10^{-6}</math>; α-BBO: <math><5 \times 10^{-6}</math>; Calcite: <math><5 \times 10^{-5}</math>; YVO4 : <math><5 \times 10^{-6}</math> Quartz: <math><5 \times 10^{-5}</math>
Surface Quality :	20/10 Scratch/Dig
Beam Deviation:	<math><1</math> arc minutes
Flatness:	$\lambda/4@633\text{nm}$
Damage Threshold :	> 500MW/cm <sup>2</sup>
Coating :	Single Layer MgF2
Holder :	Black Anodized Aluminum

**MgF2 Wollaston Polarizer**

Part. No.	Wavelength Range(nm)	Extinction Ratio	Angular Field(°)	C.A.(φa) ±0.1(mm)	O.D.(φd) ±0.1(mm)	L±0.1 (mm)
PWS5006	130-4000nm	<5×10 <sup>-6</sup>	2.7°@1064nm	6.0	15.0	19.5
PWS5008				8.0	25.4	23.5
PWS5010				10.0	25.4	27.5
PWS5015				15.0	30.0	37.5
PWS5020				20.0	38.0	47.5

**α-BBO Wollaston Polarizer**

Part. No.	Wavelength Range(nm)	Extinction Ratio	Angular Field(°)	C.A.(φa) ±0.1(mm)	O.D.(φd) ±0.1(mm)	L±0.1 (mm)
PWS6006	190-3500nm	<5×10 <sup>-6</sup>	15-27° 16°@900nm	6.0	15.0	14.0
PWS6008				8.0	25.4	16.0
PWS6010				10.0	25.4	18.0
PWS6015				15.0	30.0	23.0
PWS6020				20.0	38.0	28.0

**Calcite Wollaston Polarizer**

Part. No.	Wavelength Range(nm)	Extinction Ratio	Angular Field(°)	C.A.(φa) ±0.1(mm)	O.D.(φd) ±0.1(mm)	L±0.1 (mm)
PWS7006	350-2300nm (Coating@990m)	<5×10 <sup>-6</sup>	16.7-22.5° 19°@990nm	6.0	15.0	14.0
PWS7008				8.0	25.4	16.0
PWS7010				10.0	25.4	18.0
PWS7015				15.0	30.0	23.0
PWS7020				20.0	38.0	28.0

**YVO4 Wollaston Polarizer**

Part. No.	Wavelength Range(nm)	Extinction Ratio	Angular Field(°)	C.A.(φa) ±0.1(mm)	O.D.(φd) ±0.1(mm)	L±0.1 (mm)
PWS8006	400-4000nm (Coating@1550m)	<5×10 <sup>-6</sup>	19.6-23.3° 20°@1550nm	6.0	15.0	14.0
PWS8008				8.0	25.4	16.0
PWS8010				10.0	25.4	18.0
PWS8015				15.0	30.0	20.0
PWS8020				20.0	38.0	25.0

## Quartz Wollaston Polarizer

Part. No.	Wavelength Range(nm)	Extinction Ratio	Angular Field(°)	C.A.(φa) ±0.1(mm)	O.D.(φd) ±0.1(mm)	L±0.1 (mm)
PWS9006	200-2300nm (Coating@1064nm)	<5×10 <sup>-5</sup>	2-3° 2°@1064nm	6.0	15.0	20.0
PWS9008				8.0	25.4	24.0
PWS9010				10.0	25.4	28.8
PWS9015				15.0	30.0	38.0
PWS9020				20.0	38.0	48.0

Note: Order based on client requirement, including non-standard product and holder.

Wollaston Polarizer is made of birefringence material prisms that are cemented together. The ordinary ray in the first half of the prism becomes the extraordinary ray in the second half. The Wollaston Polarizing beam splitter has approximately twice the deviation for the Rochon Polarizer. der.

### Contact Info

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