



OPTICS CATALOGUE

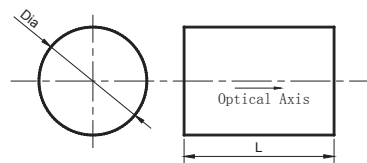
(2017-2018)



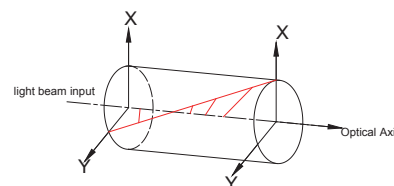
Polarization Rotator

Specifications

Material:	Crystal Quartz
Dimension Tolerance:	+0.0, -0.1mm
Wavefront Distortion:	$< \lambda / 8 @ 632.8\text{nm}$
Wavelength Range:	440-1600nm
Rotation Accuracy:	< 5 arc min
Surface Quality:	20/10 scratch /dig
Clear Aperture:	$>$ central 90% of diameter
AR Coating:	$R < 0.25\%$ per surface at central wavelength
Rotation Orientation:	Clockwise (right-handed, standard)



- Excellent optical performance
- All kinds of coatings are available
- Custom designs for other sizes and coatings are also available upon request
- Left-handed polarization rotator is also available



Order Information

CPR — 127 — R045 — W1064
 Product Code Diameter=12.7 (mm) Rotation =45 ° Design Wavelength “λ”=1064nm

For example: CPR127-R045-W1064 is a diameter 12.7mm , 45 ° rotation@1064nm ,Polarizing Rotator

Polarizing Rotator

Part Number	Diameter (mm)	Rotation (Clockwise)
CPR-127-R045-λ	12.7	45°
CPR-150-R045-λ	15.0	45°
CPR-200-R045-λ	20.0	45°
CPR-254-R045-λ	25.4	45°
CPR-127-R090-λ	12.7	90°
CPR-150-R090-λ	15.0	90°
CPR-200-R090-λ	20.0	90°
CPR-254-R090-λ	25.4	90°

Standard Wavelength(λ)

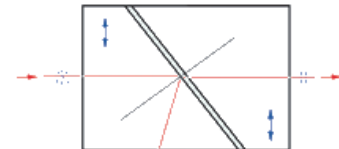
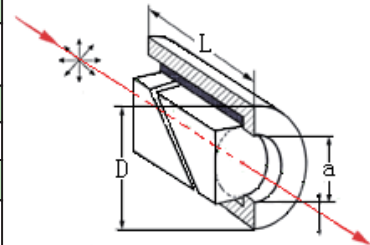
532 nm	632.8 nm	1064 nm
--------	----------	---------

Glan-Taylor Polarizer

Specifications

Wavelength Range:	Calcite: 350-2300 nm; α -BBO: 200-3500 nm
Extinction Ratio:	Calcite: $<5 \times 10^{-5}$; α -BBO: $<5 \times 10^{-6}$;
Surface Quality:	20/10 scratch /dig
Dimension Tolerance:	0/-0.1 mm
Beam Deviation:	< 3 arc min
Wavefront Distortion:	$< \lambda/4$ @632.8nm for α -BBO $< \lambda/2$ @632.8nm for Calcite
Coating:	Single layer MgF ₂
Damage Threshold:	>500 MW/cm ²
Housing:	Black Anodized Aluminum

- High Polarization Purity
- Wide Wavelength Range
- High Total Transmission



Order Information

PGT	—	100	—	CAL
Product Code		Clear Aperture a = 10mm		Material Code Calcite

Glan-Taylor Polarizer

Part Number	Wavelength Range (nm)	a (mm)	D (mm)	L ± 0.1(mm)	Material
PGT-100-CAL	350-2300	10	25.4	18.5	Calcite
PGT-150-CAL		15	30	23.0	Calcite
PGT-100-ABBO1	200-270	10	25.4	18.5	α -BBO
PGT-150-ABBO1		15	30	23.0	α -BBO
PGT-100-ABBO2	400-700	10	25.4	18.5	α -BBO
PGT-150-ABBO2		15	30	23.0	α -BBO
PGT-100-ABBO3	700-3000	10	25.4	18.5	α -BBO
PGT-150-ABBO3		15	30	23.0	α -BBO

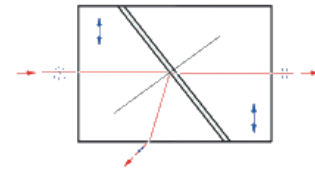
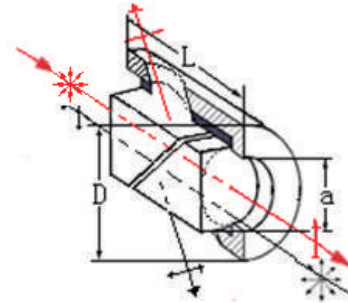
Note:

- Custom designs for other sizes and coatings are also available upon request.
- YVO₄ Glan-Taylor Polarizer is also available upon request.

Glan-Laser Polarizer

Specifications

Wavelength Range:	Calcite: 350-2300 nm; α -BBO: 190-3500 nm
Extinction Ratio:	Calcite: $<5 \times 10^{-5}$; α -BBO: $<5 \times 10^{-6}$;
Surface Quality:	60/40 Scratch / Dig
Dimension Tolerance:	± 0.1 mm
Beam Deviation:	< 3 arc min
Wavefront Distortion:	$< \lambda / 4$ @632.8nm for α -BBO $< \lambda / 2$ @632.8nm for Calcite
Coating:	Single layer MgF_2
Damage Threshold:	>500 MW/cm ²
Housing:	Black Anodized Aluminum



- High Polarization Purity
- Wide Wavelength Range
- High UV Transmission
- Available with two, one or no escape ports for extra power capacity
- Suitable for high power applications

Order Information

PGL	—	100	—	CAL
Product Code		Clear Aperture a=10mm		Material Code Calcite

Glan-Laser Polarizer

Part Number	Wavelength Range (nm)	a (mm)	D (mm)	L ± 0.1 (mm)	Material
PGL-100-CAL	350-2300	10	25.4	26.2	Calcite
PGL-150-CAL		15	30	33.3	Calcite
PGL-100-ABBO1	200-270	10	25.4	31.0	α -BBO
PGL-150-ABBO1		15	30	38.6	α -BBO
PGL-100-ABBO2	400-700	10	25.4	26.0	α -BBO
PGL-150-ABBO2		15	30	33.4	α -BBO
PGL-100-ABBO3	700-3000	10	25.4	25.9	α -BBO
PGL-150-ABBO3		15	30	33.0	α -BBO

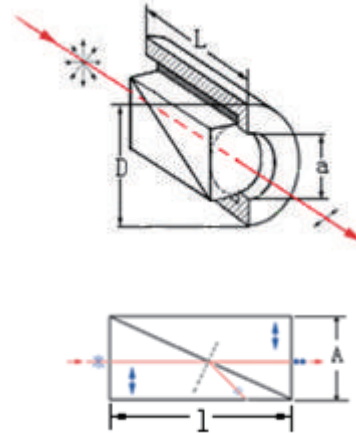
Note:

- Custom designs for other sizes and coatings are also available upon request.
- YVO4 Glan-Laser Polarizer is also available upon request.

Glan-Thompson Polarizer

Specifications

Material:	Calcite ; α -BBO
Wavelength Range:	Calcite: 350-2300 nm α -BBO: 220-900nm
Extinction Ratio:	Calcite: $<5 \times 10^{-5}$ α -BBO: $<5 \times 10^{-6}$
Surface Quality:	60/40 Scratch / Dig
Dimension Tolerance:	± 0.1 mm
Damage Threshold:	>200 MW/cm ²
Beam Deviation:	< 3 arc min
Wavefront Distortion:	$< \lambda / 4$ @632.8nm
Coating:	Single layer MgF ₂
Housing:	Black Anodized Aluminum



- Large Acceptance Angle: Special design for the ratio of L/A (length/aperture) guarantees the wide acceptance angle
- High Polarization Purity
- Suitable for low power applications

Order Information

PGM	—	080	—	ABBO
Product Code		Clear Aperture $a=8$ mm		Material Code α -BBO

Glan-Thompson Polarizer

Part Number	L/A	Wavelength Range	a (mm)	D (mm)	$L \pm 0.1$ (mm)	Material
PGM-080-CAL-2.5	2.5	350-2300	8	25.4	28	Calcite
PGM-100-CAL-2.5			10	25.4	33	Calcite
PGM-150-CAL-2.5			15	30	45.5	Calcite
PGM-080-CAL-3.0	3	350-2300	8	25.4	32	Calcite
PGM-100-CAL-3.0			10	25.4	38	Calcite
PGM-150-CAL-3.0			15	30	53	Calcite
PGM-080-ABBO-1.6	1.6	220-900	8	25.4	21	α -BBO
PGM-100-ABBO-1.6			10	25.4	24.5	α -BBO
PGM-150-ABBO-1.6			15	30	32.5	α -BBO

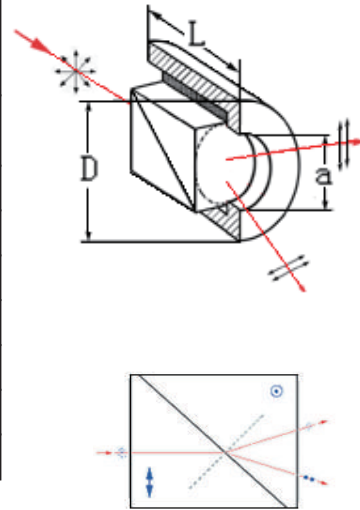
Note :

- Custom designs for other sizes and coatings are also available upon request.

Wollaston Polarizer

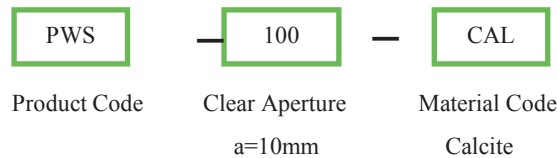
Specifications

Material:	Calcite; α -BBO; YVO ₄ ; Quartz
Wavelength Range:	Calcite: 350-2300 nm α -BBO: 220-900nm YVO ₄ : 400-4000nm Quartz: 200-2300nm
Extinction Ratio:	Calcite, Quartz: $<5 \times 10^{-5}$ α -BBO, YVO ₄ : $<5 \times 10^{-6}$
Surface Quality:	60/40 Scratch / Dig
Dimension Tolerance:	± 0.1 mm
Damage Threshold:	>500 MW/cm ²
Beam Deviation:	< 3 arc min
Wavefront Distortion:	$< \lambda / 4$ @632.8nm
Coating	Single layer MgF ₂
Housing	Black Anodized Aluminum



- Wide Wavelength Range
- Both ordinary and extraordinary beams are deviated
- Suitable for low power application and where the large deviations is required

Order Information



Wollaston Polarizer

Part Number	Separation Angle(°)	a (mm)	D (mm)	Material
PWS-100-CAL	16.7-22.5	10	25.4	Calcite
PWS-150-CAL		15	30	Calcite
PWS-100-ABBO	15-27	10	25.4	α -BBO
PWS-150-ABBO		15	30	α -BBO
PWS-100-QZ	2-3	10	25.4	Quartz
PWS-150-QZ		15	30	Quartz
PWS-100-YVO ₄	19.6-23.3	10	25.4	YVO ₄
PWS-150-YVO ₄		15	30	YVO ₄

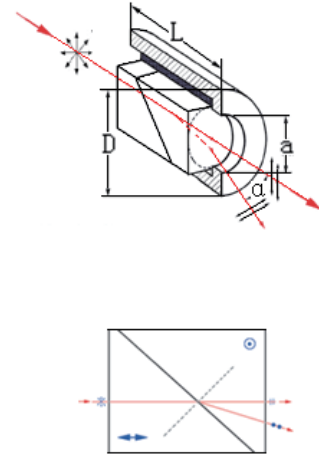
Note:

- Custom designs for other sizes and coatings are also available upon request.

Rochon Polarizer

Specifications

Material:	α -BBO; YVO ₄ ; Quartz
Wavelength Range:	α -BBO: 220-900nm YVO ₄ : 400-4000nm Quartz: 200-2300nm
Extinction Ratio:	Quartz: $<5 \times 10^{-5}$ α -BBO, YVO ₄ : $<5 \times 10^{-6}$
Surface Quality:	60/40 Scratch / Dig
Dimension Tolerance:	± 0.1 mm
Damage Threshold:	>500 MW/cm ²
Beam Deviation:	< 3 arc min
Wavefront Distortion:	$< \lambda / 4$ @632.8nm
Coating	Single layer MgF ₂
Housing	Black Anodized Aluminum



- Wide Wavelength Range
- Large Field Angle
- High Extinction Ratio
- Guarantee a wide transmission range, especially, suitable for UV applications
- Split the ordinary and extraordinary ray, but only extraordinary beam is deviated

Order Information



Rochon Polarizer

Part Number	Separation Angle(°)	a (mm)	D (mm)	Material
PRC-080-ABBO	8.0-14	8	25.4	α -BBO
PRC-100-ABBO		10	25.4	α -BBO
PRC-150-ABBO		15	30	α -BBO
PRC-080-QZ	1.0-1.5	8	25.4	Quartz
PRC-100-QZ		10	25.4	Quartz
PRC-150-QZ		15	30	Quartz
PRC-080-YVO4	9.8-13.0	8	25.4	YVO4
PRC-100-YVO4		10	25.4	YVO4
RCP-150-YVO4		15	30	YVO4

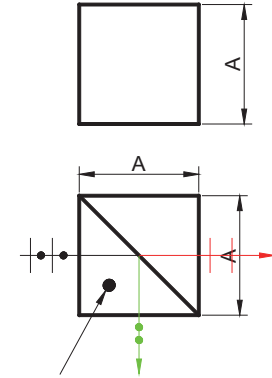
Note:

- Custom designs for other sizes and coatings are also available upon request.

Broadband Polarization Beamsplitter Cubes

Specifications

Material:	SF2
Dimension Tolerance:	$\pm 0.25\text{mm}$
Surface Quality:	40/20 scratch / dig
Wavefront Distortion:	$\lambda/4@6328\text{nm}$ over the clear aperture
Clear Aperture:	>central 80% of diameter
Transmitted Beam Deviation:	<5 arc min
Reflected Beam Deviation:	$90^\circ \pm 5$ arc min
Efficiency:	$T_p > 80\%$ min ,>90% average , $R_s > 99.5\%$ average
Extinction Ratio:	$T_p:T_s > 500:1, 1000:1$ average
Antireflective Coating:	Broadband multilayer coating : $R_{\text{avg}} < 1\%$ per surface
Chamfers:	<0.5mm face width $\times 45^\circ$ typical
Damage Threshold:	2KW/cm ² , 1J/cm ² with 10nsec pulses typical

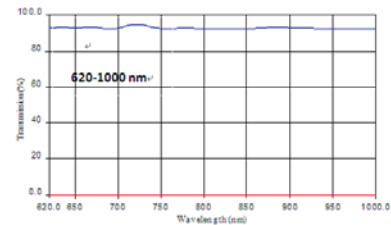
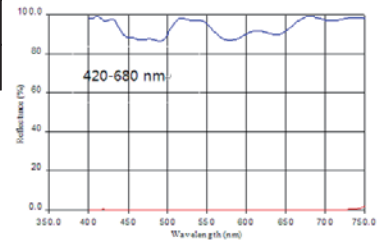


NOTE: To avoid damage, a dot placed on the side indicating beam must enter prism.

Order Information

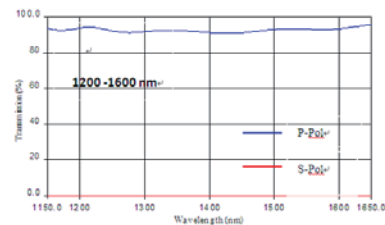
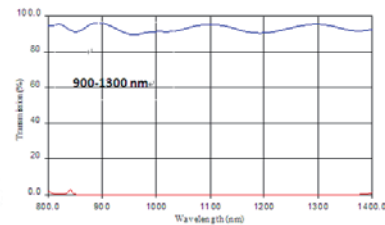
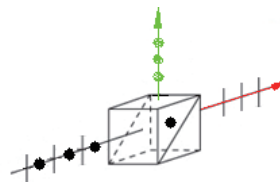
BPBC — 127 — W420-680

Product Code Dimension "A"=12.7mm Wavelength Range
"λ"=420-680 nm



Broadband Polarization Beamsplitter Cubes

Part Number	Dimension A (mm)
BPBC-063-λ	6.35
BPBC-127-λ	12.7
BPBC-150-λ	15.0
BPBC-200-λ	20.0
BPBC-254-λ	25.4



Standard Wavelength Range(λ)

420-680 nm	620-1000 nm	900-1300nm	1200-1600 nm
------------	-------------	------------	--------------

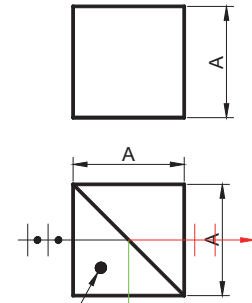
Note:

- Custom designs for other sizes and coatings are also available upon request.

UV Laser Line Polarization Beamsplitter Cubes

Specifications

Material:	UV fused silica
Dimension Tolerance:	± 0.25mm
Surface Quality:	40/20 scratch / dig
Wavefront Distortion:	$\lambda/4@632.8\text{nm}$ over the clear aperture
Clear Aperture:	>central 80% of diameter
Transmitted Beam Deviation:	<5 arc min
Reflected Beam Deviation:	90° ± 5 arc min
Efficiency:	$T_p > 90\%$, $R_s > 99\%$
Extinction Ratio:	$T_p : T_s > 100:1$
Antireflective Coating:	Multilayer coating : $R_{\text{avg}} < 0.25\%$ per surface
Chamfers:	<0.5mm face width × 45° typical
Damage Threshold:	100 W/cm ² , 0.1J/cm ² with 10nsec pulses typical



NOTE: To avoid damage, a dot placed on the side indicating beam must enter prism.

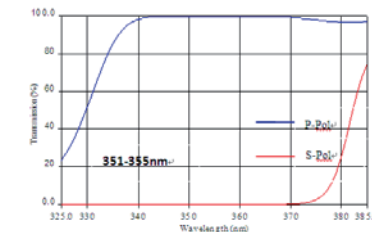
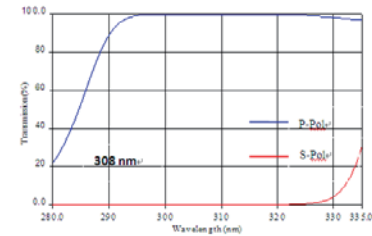
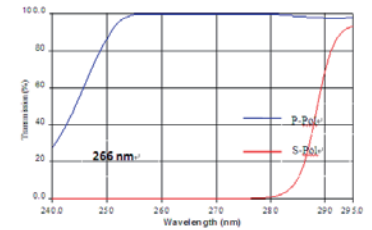
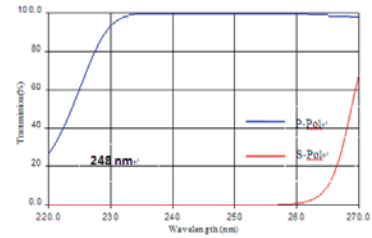
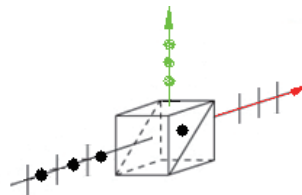
Order Information



Product Code Dimension "A" = 12.7mm Wavelength "λ" = 248nm

UV Laser Line Polarization Beamsplitter Cubes

Part Number	Dimension A (mm)
UPBC-063-λ	6.35
UPBC-127-λ	12.7
UPBC-150-λ	15.0
UPBC-200-λ	20.0
UPBC-254-λ	25.4



Standard Wavelength(λ)

248 nm	266 nm	308 nm	351-355 nm
--------	--------	--------	------------

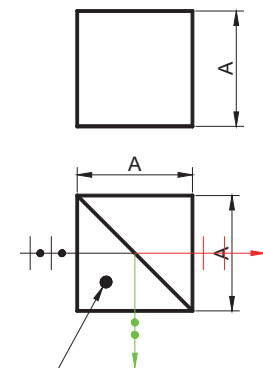
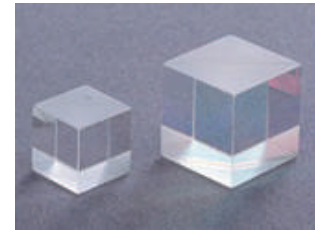
Note:

- Custom designs for other sizes and coatings are also available upon request.

Laser Line Polarization Beamsplitter Cubes

Specifications

Material:	BK7
Dimension Tolerance:	$\pm 0.25\text{mm}$
Surface Quality:	40/20 scratch / dig
Wavefront Distortion:	$\lambda/4@632.8\text{nm}$ over the clear aperture
Clear Aperture:	>central 80% of diameter
Transmitted Beam Deviation:	<5 arc min
Reflected Beam Deviation:	$90^\circ \pm 5$ arc min
Efficiency:	$T_p > 95\%$, $R_s > 99.8\%$
Extinction Ratio:	$T_p:T_s > 100:1$
Antireflective Coating:	Multilayer coating : $R_{\text{avg}} < 0.25\%$ per surface
Chamfers:	<0.5mm face width $\times 45^\circ$ typical
Damage Threshold:	2KW/cm ² , 1J/cm ² with 10nsec pulses typical



NOTE: To avoid damage, a dot placed on the side indicating beam must enter prism.

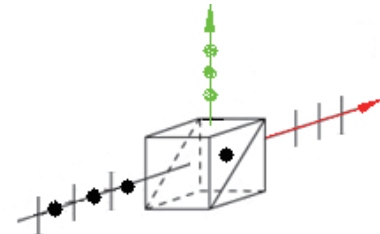
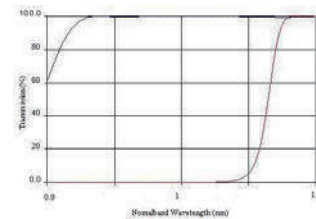
Order Information

PBC — 127 — W1064

Product Code Dimension "A"= 12.7mm Wavelength "λ"=1064nm

Laser Line Polarization Beamsplitter Cubes

Part Number	Dimension A (mm)
PBC-063-λ	6.35
PBC-127-λ	12.7
PBC-150-λ	15.0
PBC-200-λ	20.0
PBC-254-λ	25.4



Standard Wavelength(λ)

441-458 nm	488-514.5 nm	532 nm	632.8 nm	670 nm
780 nm	830 nm	1064 nm	1300 nm	1550 nm



福建福晶科技股份有限公司
CASTECH INC.

ADD: Building No.9, Zone F, 89 Ruan
jian Avenue, Fuzhou, Fujian
350003, China

TEL: +86-591-83710533

FAX: +86-591-83711593

E-mail: SALES@CASTECH.COM



GWU-Lasertechnik Vertriebsges. mbH

Bonner Ring 9
50374 Erftstadt
Germany

Fon +49 . (0)22 35 . 9 55 22-0
Fax +49 . (0)22 35 . 9 55 22-99

info@gwu-group.de
www.gwu-group.de



www.gwu-group.de

WWW.CASTECH.COM
WWW.CASTECH.COM