

## CUBE POLARIZING BEAMSPLITTERS

- Durable and convenient
- Optimised for popular laser wavelengths

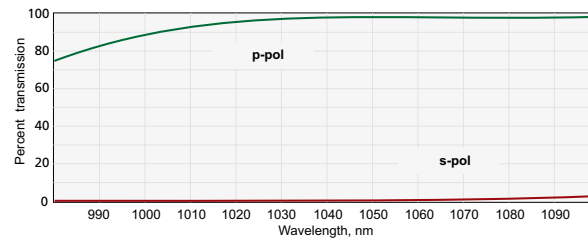
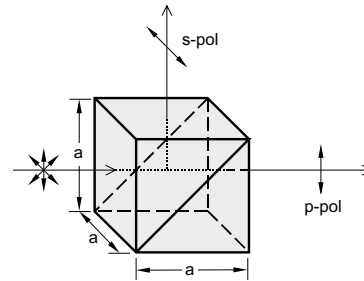
Polarizing film is coated on the internal face of a cube beamsplitter. Thin film polarizers utilize the polarization which occurs on reflection deviated by 90° angle. Cube polarizing beamsplitters can be optimized for a particular wavelength to give superior performance for laser application can be optimised for a particular wavelength to give superior performance for laser applications.

Please contact us for polarizing cubes with an extinction ratio of up to  $T_p/T_s > 500:1$

### SPECIFICATIONS

Material	BK7, UV FS
Surface quality	40-20 scratch & dig (MIL-PRF-13830B)
Surface flatness	$\lambda/4 @ 633 \text{ nm}$
Clear aperture	90% of the face size
Beam deviation	<3 arcmin
Dimension tolerance	$\pm 0.3 \text{ mm}$
Laser damage threshold	0.3 J/cm <sup>2</sup> 10 ns pulses at 1064 nm

The four outer faces are all anti-reflection coated.



Typical transmission curve @ 1064 nm

### BK7 glass, $T_p/T_s > 200:1$

Catalogue number		Wavelength range, nm	Reflection s-pol, %	Transmission p-pol, %	Side a×a, mm	Price, EUR	
Unmounted	Mounted					Unmounted	Mounted
430-0101	430-0101-M2Ps	532	$R_s > 99.5$	$T_p > 95$	10 × 10	135	185
430-0151	430-0151-M2P	532	$R_s > 99.5$	$T_p > 95$	15 × 15	165	215
430-0201	430-0201-M2P	532	$R_s > 99.5$	$T_p > 95$	20 × 20	185	235
430-0251	430-0251-M2P	532	$R_s > 99.5$	$T_p > 95$	25 × 25	215	265
430-0104	430-0104-M2Ps	633	$R_s > 99.5$	$T_p > 95$	10 × 10	135	185
430-0154	430-0154-M2P	633	$R_s > 99.5$	$T_p > 95$	15 × 15	165	215
430-0204	430-0204-M2P	633	$R_s > 99.5$	$T_p > 95$	20 × 20	185	235
430-0254	430-0254-M2P	633	$R_s > 99.5$	$T_p > 95$	25 × 25	215	265
430-0102	430-0102-M2Ps	780	$R_s > 99.5$	$T_p > 95$	10 × 10	135	185
430-0152	430-0152-M2P	780	$R_s > 99.5$	$T_p > 95$	15 × 15	165	215
430-0202	430-0202-M2P	780	$R_s > 99.5$	$T_p > 95$	20 × 20	185	235
430-0252	430-0252-M2P	780	$R_s > 99.5$	$T_p > 95$	25 × 25	215	265
430-0103	430-0103-M2Ps	1064	$R_s > 99.5$	$T_p > 95$	10 × 10	135	185
430-0153	430-0153-M2P	1064	$R_s > 99.5$	$T_p > 95$	15 × 15	165	215
430-0203	430-0203-M2P	1064	$R_s > 99.5$	$T_p > 95$	20 × 20	185	235
430-0253	430-0253-M2P	1064	$R_s > 99.5$	$T_p > 95$	25 × 25	215	265

### UV FS, $T_p/T_s > 100:1$

**HOUSING ACCESSORIES**  
for unmounted cube polarizing beamsplitters

Prism Holders  
840-0160, 840-0170

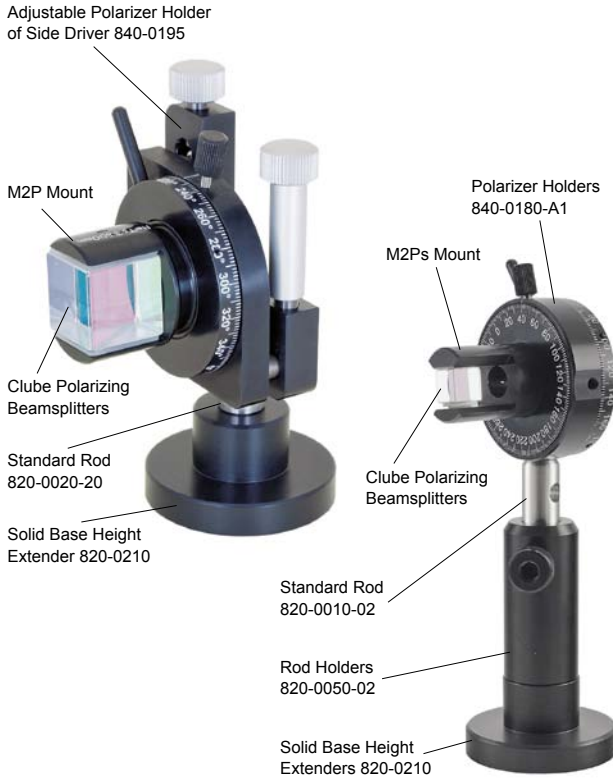
See page 7.47



Catalogue number		Wavelength range, nm	Reflection s-pol, %	Transmission p-pol, %	Side a×a, mm	Price, EUR	
Unmounted	Mounted					Unmounted	Mounted
430-1103	430-1103-M2Ps	280	$R_s > 99$	$T_p > 90$	10 × 10	290	340
430-1153	430-1153-M2P	280	$R_s > 99$	$T_p > 90$	15 × 15	350	400
430-1203	430-1203-M2P	280	$R_s > 99$	$T_p > 90$	20 × 20	390	440
430-1105	430-1105-M2Ps	308	$R_s > 99$	$T_p > 90$	10 × 10	280	330
430-1155	430-1155-M2P	308	$R_s > 99$	$T_p > 90$	15 × 15	340	390
430-1205	430-1205-M2P	308	$R_s > 99$	$T_p > 90$	20 × 20	380	430
430-1107	430-1107-M2Ps	355	$R_s > 99$	$T_p > 90$	10 × 10	270	320
430-1157	430-1157-M2P	355	$R_s > 99$	$T_p > 90$	15 × 15	330	380
430-1207	430-1207-M2P	355	$R_s > 99$	$T_p > 90$	20 × 20	380	430

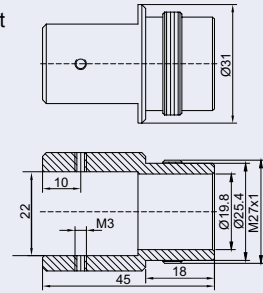
Please contact us if you need polarizing beamsplitters of other wavelengths, other sizes or other configurations.

### Mounting Suggestion



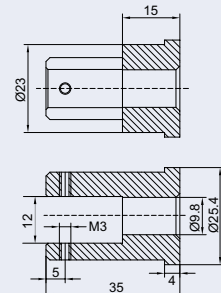
### MOUNTING

Example of **M2P** mount for Clube Polarizing Beamsplitters of 20×20 mm standard dimensions.



M2P mount can be used with 840-0180, 840-0195, 840-0020.

Example of **M2Ps** mount for Clube Polarizing Beamsplitters of 10×10 mm dimensions.



M2Ps mount can be used with 840-0180, 840-0020.

*Drawings of M2P and M2Ps for prisms of other dimensions are available on request.*

## HIGH ENERGY POLARIZING CUBE BEAMSPLITTERS

- Optically contacted for high power applications
- Typical damage threshold: >15 J/cm<sup>2</sup>, 10 ns, 10 Hz at 1064 nm
- Precision surface quality
- High extinction ratio

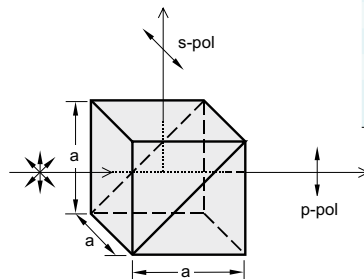
### SPECIFICATIONS

Material	UVFS
Size	12.7×12.7×12.7 mm
Size tolerance	±0.2mm
Extinction ratio	>1:500
Surface quality	20-10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	λ/10 at 633 nm
Beam deviation	<3 arcmin
Clear aperture	>85% of size
Reflection s-polarization	>99.5%
Transmission p-polarization	>97% for laser line >90% for broadband

**HOUSING ACCESSORIES**  
for unmounted cube polarizing beamsplitters

Prism Holders  
840-0160, 840-0170

See page 7.47



**The four outer faces are all anti-reflection coated.**

Catalogue number		Operating wavelength, nm	Laser Damage threshold, 10 ns, 10 Hz	Price, EUR	
Unmounted	Mounted			Unmounted	Mounted
435-1127	435-1127-M2Ps	355	>3 J/cm <sup>2</sup> at 355 nm	375	425
435-1121	435-1121-M2Ps	532	>6 J/cm <sup>2</sup> at 532 nm	350	400
435-1122	435-1123-M2Ps	800	>8 J/cm <sup>2</sup> at 800 nm	350	400
435-1123	435-1123-M2Ps	1064	>15 J/cm <sup>2</sup> at 1064 nm	350	400
436-1121	436-1121-M2Ps	420-680	>1 J/cm <sup>2</sup> at 532 nm	375	425
436-1123	436-1123-M2Ps	700-1080	>2 J/cm <sup>2</sup> at 1064 nm	375	425