

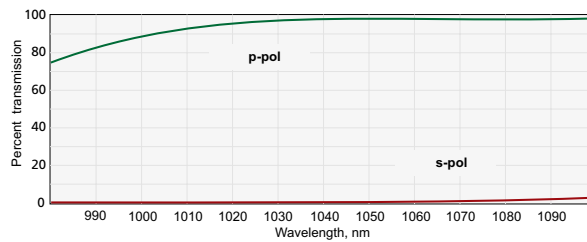
CUBE POLARIZING BEAMSPLITTERS

Features

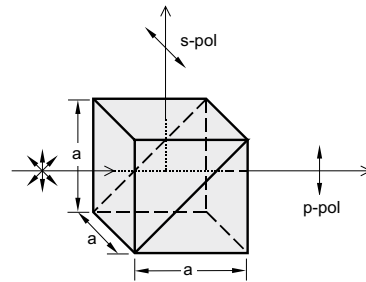
- Durable and convenient
- Optimised for popular laser wavelengths

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 optimized for a particular wavelength to give superior performance for laser applications.

The four outer faces are all anti-reflection coated.



Typical transmission curve @ 1064 nm



Specifications

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

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

BK7 GLASS, $T_p/T_s > 200:1$

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

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

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

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

Housing accessories

for unmounted cube polarizing beamsplitters

Prism Holders

840-0160, 840-0170

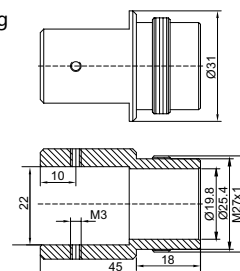
Find more at
EksmaOptics.com

Mounting Suggestion



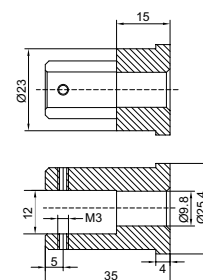
Mounting

Example of **M2P** mount for Cube 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 Cube Polarizing Beamsplitters of 10×10 mm dimensions.



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

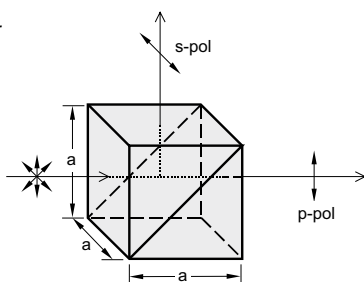
Drawings of M2P and M2Ps for prisms of other dimensions are available on request.

HIGH ENERGY POLARIZING CUBE BEAMSPLITTERS

Features

- Optically contacted for high power applications
- Typical damage threshold: >15 J/cm², 10 ns, 10 Hz at 1064 nm
- Precision surface quality
- High extinction ratio

The four outer faces are all anti-reflection coated.



Specifications

Material	UV FS (laser line) N-SF2 (broadband) N-SF15 (dual wavelength)
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

Find more at EksmaOptics.com



Operating wavelength, nm	Material	Laser Damage threshold, 10 ns, 10 Hz	Side a × a, mm	Unmounted		Mounted	
				Catalogue number	Price, EUR	Catalogue number	Price, EUR
343	UV FS	>3 J/cm ² at 343 nm	12.7 × 12.7	435-1128	375	435-1128-M2Ps	425
355	UV FS	>3 J/cm ² at 355 nm	12.7 × 12.7	435-1127	375	435-1127-M2Ps	425
515	UV FS	>6 J/cm ² at 515 nm	12.7 × 12.7	435-1128	350	435-1128-M2Ps	400
532	UV FS	>6 J/cm ² at 532 nm	12.7 × 12.7	435-1121	350	435-1121-M2Ps	400
800	UV FS	>8 J/cm ² at 800 nm	12.7 × 12.7	435-1122	350	435-1122-M2Ps	400
800	UV FS	>8 J/cm ² at 800 nm	25.4 × 25.4	435-1222	450	435-1222-M2P	500
1030	UV FS	>15 J/cm ² at 1030 nm	12.7 × 12.7	435-1124	350	435-1124-M2Ps	400
515 + 1030	N-SF15	>10 J/cm ² at 1030 nm	25.4 × 25.4	435-1224D	550	435-1224D-M2P	600
1064	UV FS	>15 J/cm ² at 1064 nm	12.7 × 12.7	435-1123	350	435-1123-M2Ps	400
420 – 680	N-SF2	>1 J/cm ² at 532 nm	12.7 × 12.7	436-1121	375	436-1121-M2Ps	425
700 – 1080	N-SF2	>2 J/cm ² at 1064 nm	12.7 × 12.7	436-1123	375	436-1123-M2Ps	425