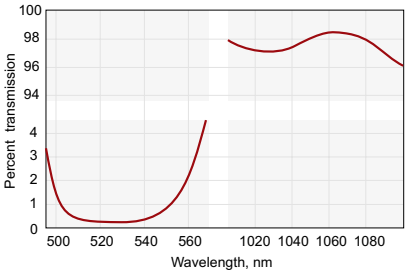
Related Products

Pellin-Broca Prisms
See page 1.52

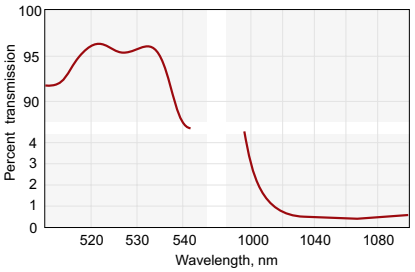
Housing accessories

Adapter for Beamsplitter at 45° 840-0116
Find more at EksmaOptics.com

Kinematic Mirror and Beamsplitter Mount 840-0020
Find more at EksmaOptics.com



031-5105.
HR > 99.5% @ 532 nm, HT > 95% @ 1064 nm, AOI = 45°



031-6500.
HR > 99.5% @ 1064 nm, HT > 93% @ 532 nm, AOI = 0°

LASER OUTPUT COUPLERS

An output coupler is a partially reflecting dielectric mirror used in a laser cavity. It transmits a part of the circulating intracavity power for generating a useful output from the laser.

A low transmission output coupler leads to a low laser threshold, but also possibly to poor laser efficiency if the losses due to output coupling do not dominate over other parasitic losses in the laser cavity. The output coupler transmission is often chosen to maximize the achieved output power, although its optimum value may be lower or higher if there are other design purposes (minimizing the intracavity intensities or suppressing Q-switching instabilities in a passively mode-locked laser).

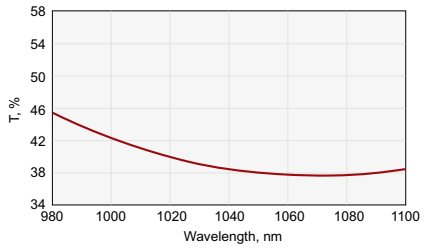
Substrate

Material	UV grade Fused Silica or BK7 glass
S1 Surface Flatness	λ/10 typical at 633 nm
S1 Surface Quality	20 –10 scratch & dig (MIL-PRF-13830B)
S2 Surface Flatness	λ/10 typical at 633 nm
S2 Surface Quality	20 –10 scratch & dig (MIL-PRF-13830B)
Diameter Tolerance	+0.00 mm; -0.12 mm
Thickness Tolerance	±0.25 mm
Parallelism	30 arcsec
Chamfer	0.3 mm at 45° typical

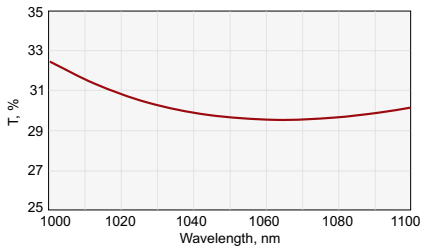
Coating

Technology	Electron beam multilayer dielectric
Adhesion and Durability	Per MIL-C-675A. Insoluble in lab solvents
Clear Aperture	Exceeds central 85% of diameter
Damage Threshold:	
BK7	>3 J/cm², 8 nsec pulse, 1064 nm typical
UV FS	>6 J/cm², 8 nsec pulse, 1064 nm typical
Coated Surface Flatness	λ/10 at 633 nm over clear aperture
Angle of Incidence	0 – 8° (normal)
Back side antireflection coated	R < 0.2%

LASER OUTPUT COUPLERS



R = 60±2% @ 1064 nm, AOI=0°



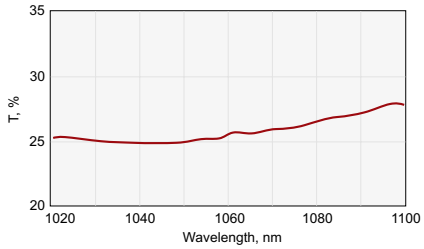
R = 70±2% @ 1064 nm, AOI=0°

Size – **Ø12.7 × 3 mm**

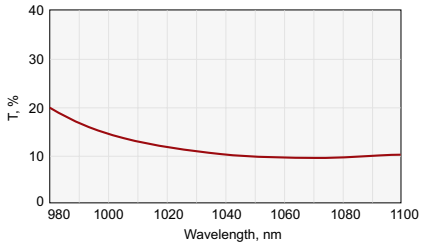
Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Catalogue number	Price, EUR
1064	15±3	85±3	BK7	**031-0015**	86
1064	20±3	80±3	BK7	**031-0020**	86
1064	25±3	75±3	BK7	**031-0025**	86
1064	30±3	70±3	BK7	**031-0030**	86
1064	40±3	60±3	BK7	**031-0040**	86
1064	50±3	50±3	BK7	**031-0050**	86
1064	60±3	40±3	BK7	**031-0060**	86
1064	65±3	35±3	BK7	**031-0065**	86
1064	70±3	30±3	BK7	**031-0070**	86
1064	75±3	25±3	BK7	**031-0075**	86
1064	80±3	20±3	BK7	**031-0080**	86
1064	85±3	15±3	BK7	**031-0085**	86
1064	90±2	10±2	BK7	**031-0090**	94
1064	95±2	5±2	BK7	**031-0095**	98
1064	97±1	3±1	BK7	**031-0097**	102
1064	98±1	2±1	BK7	**031-0098**	102
1064	99.0±0.5	1.0±0.5	BK7	**031-0099**	110

Size – **Ø12.7 × 3 mm**

Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Catalogue number	Price, EUR
1064	20±3	80±3	UV FS	041-0020	109
1064	30±3	70±3	UV FS	041-0030	109
1064	40±3	60±3	UV FS	041-0040	109
1064	50±3	50±3	UV FS	041-0050	109
1064	60±3	40±3	UV FS	041-0060	109
1064	65±3	35±3	UV FS	041-0065	109
1064	70±3	30±3	UV FS	041-0070	109
1064	75±3	25±3	UV FS	041-0075	109
1064	80±3	20±3	UV FS	041-0080	109
1064	85±3	15±3	UV FS	041-0085	109
1064	90±2	10±2	UV FS	041-0090	117
1064	95±2	5±2	UV FS	041-0095	117
1064	97±1	3±1	UV FS	041-0097	125
1064	98±1	2±1	UV FS	041-0098	125
1064	99.0±0.5	1.0±0.5	UV FS	041-0099	133



R = 75±3% @ 1064 nm, AOI=0°



R = 90±2% @ 1064 nm, AOI=0°

Size – **Ø25.4 × 6 mm**

Wavelength, nm	Reflection, %	Transmission, %	Substrate material	Catalogue number	Price, EUR
1064	15±3	85±3	BK7	032-0015	109
1064	20±3	80±3	BK7	032-0020	109
1064	25±3	75±3	BK7	032-0025	109
1064	30±3	70±3	BK7	032-0030	109
1064	40±3	60±3	BK7	032-0040	109
1064	50±3	50±3	BK7	032-0050	109
1064	60±3	40±3	BK7	032-0060	109
1064	65±3	35±3	BK7	032-0065	109
1064	70±3	30±3	BK7	032-0070	109
1064	75±3	25±3	BK7	032-0075	109
1064	80±3	20±3	BK7	032-0080	109
1064	85±3	15±3	BK7	032-0085	109
1064	90±2	10±2	BK7	032-0090	117
1064	95±2	5±2	BK7	032-0095	117
1064	97±1	3±1	BK7	032-0097	125
1064	98±1	2±1	BK7	032-0098	125
1064	99.0±0.5	1.0±0.5	BK7	032-0099	133
1064	15±3	85±3	UV FS	042-0015	132
1064	20±3	80±3	UV FS	042-0020	132
1064	25±3	75±3	UV FS	042-0025	132
1064	30±3	70±3	UV FS	042-0030	132
1064	40±3	60±3	UV FS	042-0040	132
1064	50±3	50±3	UV FS	042-0050	132
1064	60±3	40±3	UV FS	042-0060	132
1064	65±3	35±3	UV FS	042-0065	132
1064	70±3	30±3	UV FS	042-0070	132
1064	75±3	25±3	UV FS	042-0075	132
1064	80±3	20±3	UV FS	042-0080	132
1064	85±3	15±3	UV FS	042-0085	132
1064	90±2	10±2	UV FS	042-0090	140
1064	95±2	5±2	UV FS	042-0095	140
1064	97±1	3±1	UV FS	042-0097	148
1064	98±1	2±1	UV FS	042-0098	148
1064	99.0±0.5	1.0±0.5	UV FS	042-0099	156

Related Products

Uncoated Flat Windows See page 1.9

Kinematic Mirror and Beamsplitter Mount 840-0020

Find more at EksmaOptics.com