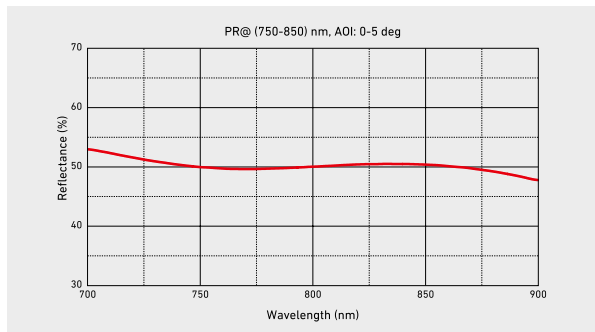


## Laser cavity output couplers



Output couplers are used in stable laser resonators in order to emit a part of the energy, which is circulating in the laser cavity. One has to carefully select the proper spatially constant reflection/transmission ratio of the output coupler in order to optimize the lasing operation and prevent from damaging intracavity optical elements. Front surface

of output couplers is partially reflective coated at a certain wavelength range, while the rear surface is antireflective coated in order to prevent Fresnel reflection losses. What is more, these laser cavity output couplers can be successfully implemented as fixed ratio laser power attenuators for a certain wavelength range.

### Main features

- Mirror substrates fabricated from high-quality UV grade fused silica
- Standard substrate dimensions  $\varnothing 25,4 \times 5$  mm
- 50% - 99% reflectance selection at most popular wavelength ranges
- Custom coatings, substrate material and dimensions available upon request

### Application examples

- Output couplers for stable laser resonators
- Partial reflectors (beam attenuators)

### Standard specifications

LASER CAVITY OUTPUT COUPLERS	
Substrate material	UV grade fused silica
Clear aperture	>85%
Face dimensions tolerance	+0/-0,15 mm
Thickness tolerance	$\pm 0,25$ mm
Parallelism error	<30 arcsec
Protective chamfers	<0,35 mm at 45°
Surface quality	20-10 S-D
Surface flatness	< $\lambda/8$ @632,8 nm
Rear side	Antireflective coated at operating wavelength range
Laser induced damage threshold	>10 J/cm <sup>2</sup> @1064 nm, 10 ns (for 1020-1070 nm couplers)

### Standard products

MATERIAL	DIMENSIONS	WAVELENGTH RANGE	REFLECTANCE	AOI	SKU	PRICE
UVFS	$\varnothing 25,4 \times 5$ mm	770-830 nm	50% $\pm 3\%$	0-5°	6522	95 €
			75% $\pm 3\%$	0-5°	6523	95 €
			90% $\pm 3\%$	0-5°	6524	95 €
			95% $\pm 2\%$	0-5°	6525	95 €
			97% $\pm 1\%$	0-5°	6444	95 €
			99% $\pm 0,5\%$	0-5°	6526	95 €
		1020-1070 nm	50% $\pm 3\%$	0-5°	6527	95 €
			75% $\pm 3\%$	0-5°	6528	95 €
			90% $\pm 3\%$	0-5°	6529	95 €
			95% $\pm 2\%$	0-5°	6530	95 €
			97% $\pm 1\%$	0-5°	6531	95 €
			99% $\pm 0,5\%$	0-5°	6532	95 €
		1520-1570 nm	50% $\pm 3\%$	0-5°	6533	115 €
			75% $\pm 3\%$	0-5°	6534	115 €
			90% $\pm 3\%$	0-5°	6535	115 €
			95% $\pm 2\%$	0-5°	6536	115 €
			97% $\pm 1\%$	0-5°	6537	115 €
			99% $\pm 0,5\%$	0-5°	6538	115 €