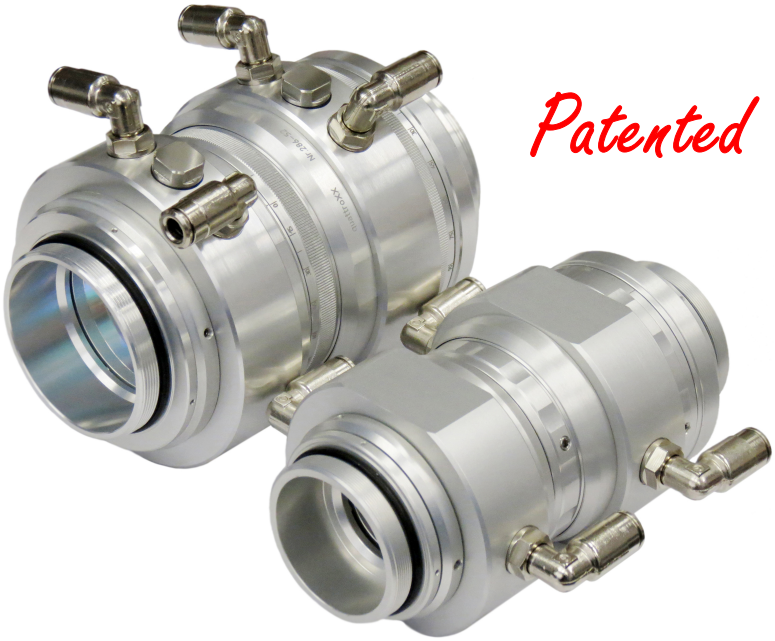
quattroXX

lossless beam splitting for multi kW lasers

Applications:

- **Welding**
- **Cladding**
- **Brazing**
- **Multi-spot processing**



Patented

Features:

- **Splitting in 4 spots**
- **High transmission**
- **Lossless operation**
- **CA up to 48 mm**
- **TEM_{00} and multimode lasers**
- **Power up to 6 kW**
- **Free of thermal lensing effects**
- **Operation with scanners**
- **Spectrum: NIR, VIS, NUV**

Specifications

Common for quattroXX optics							
Description	• lossless beam splitting in several foci perpendicular to the optical axis • to be applied between a Collimator and a Focusing Lens • can be used with scanning optics • variable quattroXX-spot layouts, incl. Doughnut-like • independence of operation from beam quality and size • insensitive to misalignments						
Number of foci	4						
quattroXX-spot layouts	Square, Rhomb, Line, Twin-spots						
Input	collimated or low divergent/convergent beam						
Laser	multimode or TEM_{00}, any M^2 or BPP, any beam size within clear aperture						
Spectrum	near-IR, visible (incl. 450 nm, 515 nm), near-UV						
Angular field of view	± 3°						
Adjustment rings	variation of geometry and energy distribution of quattroXX-spots, supplied with angular scale, fixation using a screw						
Water cooling	by 6-1/8 fittings						
Recommended maximum power	6 kW						
Features							
Model	Spectral band nm	Splitting angle, mrad		CA mm	Diameter mm	Length mm	Mounting
		square side	diagonal				
quattroXX 4_D48_1030/1070	1025 - 1035 / 1065 - 1075	2.76 x 2.76	3.9	48	94	140	M58x1
quattroXX 1.9_D48_1080	1075 - 1085	1.33 x 1.33	1.88				
quattroXX 1.9_D48_1030	1025 - 1035						
quattroXX 0.754_D48_1070	1065 - 1075	0.533 x 0.533	0.754				
quattroXX 0.754_D48_1030	1025 - 1035						
quattroXX 6_D29_1070	1065 - 1075	4.25 x 4.25	6	29	< 75	< 138	M47 x 0.75
quattroXX 8_D29_1070	1065 - 1075	5.68 x 5.68	8				
quattroXX 8_D29_1064	1060 - 1073						
quattroXX 6_D30_1030/1070	1025 - 1035 / 1065 - 1075	4.25 x 4.25	6	30			
quattroXX 8_D30_1030/1070		5.68 x 5.68	8				

Beam Shaping of multi-kW lasers never was so easy!

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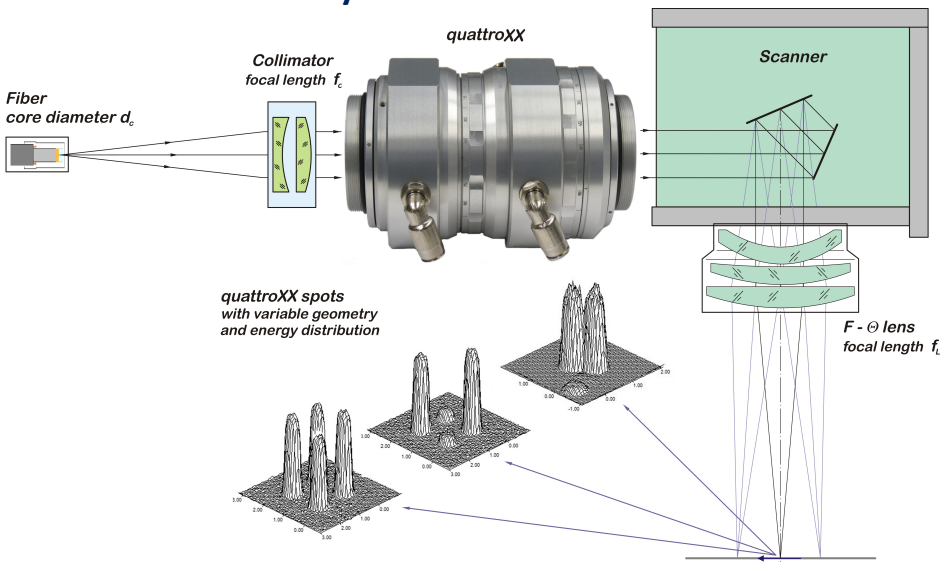
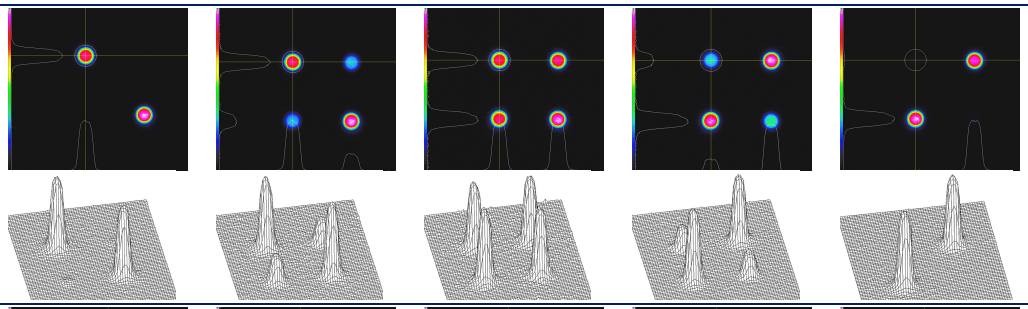
quattroXX
in optical system
with scanning optics

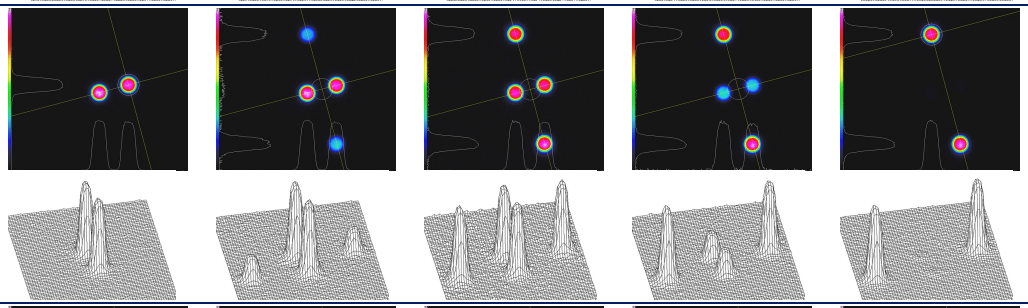


Examples of quattroXX-spots

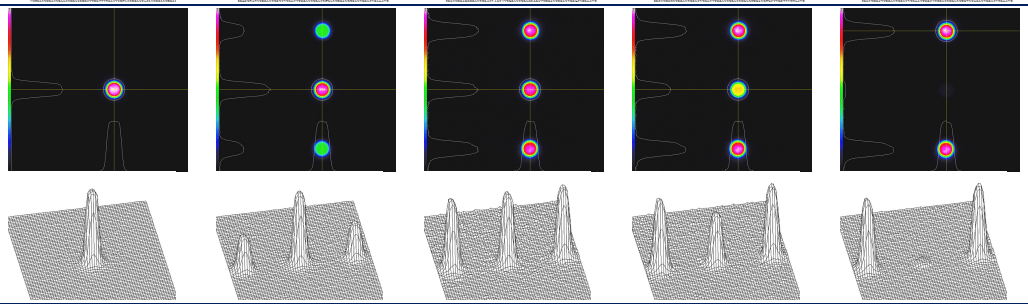
Square



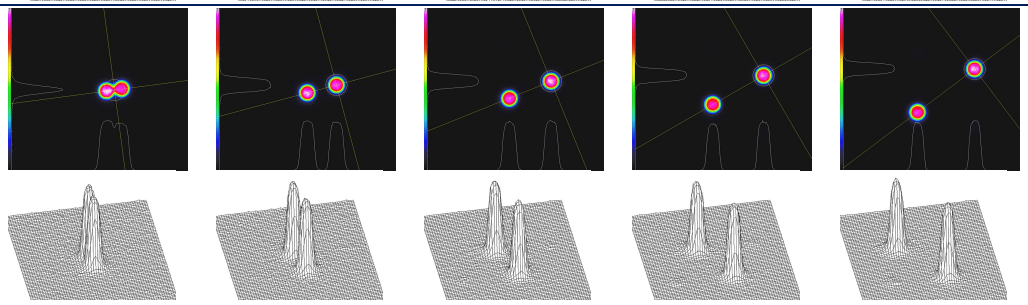
Rhomb



Line



Twin-Spot



AdlOptica
Rudower Chaussee 29, 12489 Berlin Germany
Tel. +49-30-565908880 E-mail: info@adloptica.com

www.adloptica.com