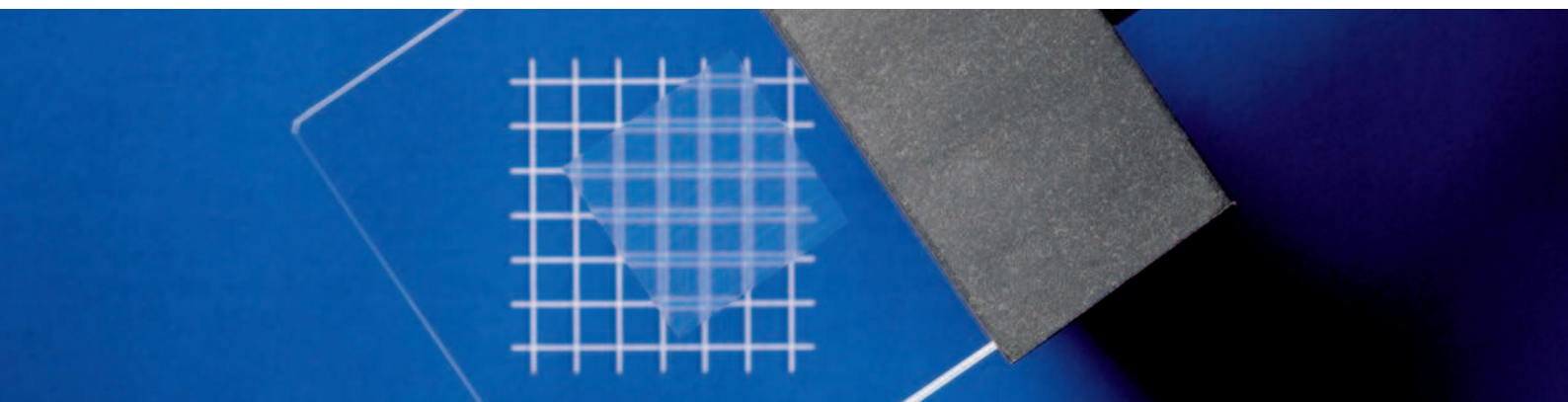




Diffraction Beam Splitters



Diffraction Beam Splitters are periodic phase structures that split the input beam into multiple diffraction orders while retaining the divergence angle, diameter and polarization of the input beam.

Applications such as LIDAR, colour separation, materials processing, surgery or metrology can benefit from the use of beam splitters to better distribute the energy emitted by a laser and thus improve efficiency and performance. Furthermore processes like welding can show better results by using multiple laser beams with given spacing angles and power ratios.

Jenoptik Diffraction Beam Splitters efficiently divide a single laser beam into multiple beams with well-specified spacing, intensity ratios and beam pattern symmetries. Polarizing beam splitters are also available allowing the s and p polarization to be split.

Features:

- Almost any number of beams
- Any symmetry or even arbitrary beam patterns
- High efficiency
- Materials for high damage threshold
- Infrared materials
- Off-axis design available
- Precisely controlled power ratios
- Custom designs with short delivery time

Applications:

- Parallel laser materials processing
- Medical laser treatment
- Laser metrology, machine vision, sensors
- Targeting, alignment
- Laser Radar applications (LIDAR, LADAR)
- Illumination

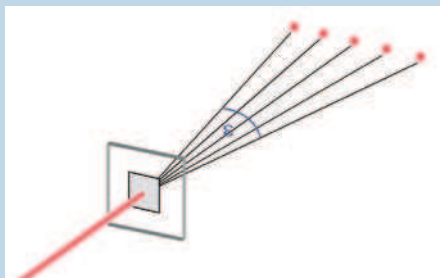
Diffraction Beam Splitters

Specifications

Number of beams:	Custom specific
Split angles:	< 1° to 18°
Beam patterns:	Any symmetry or arbitrary
Efficiency:	75 % to 90 % for different patterns
Uniformity:	< 5 %
Ghost level:	down to 0.2 %
Wavelength:	193 nm to 14 μm
Clear aperture:	5 mm to 150 mm
Materials:	Fused Silica, ZnSe, Ge, Si, GaP, Sapphire
AR-Coating:	Laser line
Custom designs:	2D design, arbitrary power ratio and beam spacing, off-axis
Product number:	029120

Diffraction Beam Splitters

One dimensional

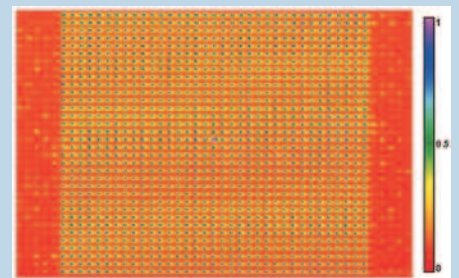


1 to 7 beam splitting



Number of Beams:	7
Efficiency:	60 % (binary)
Uniformity:	±2.5 %
Ghost level:	< 0.2 %

1 to 35 x 35 beam splitting @ 193 nm



Number of Beams:	35 x 35
Efficiency:	70 % (binary)
Uniformity:	< ±5 %
Zero order:	< 1 %
Ghost level:	< 0.5 %

It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



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