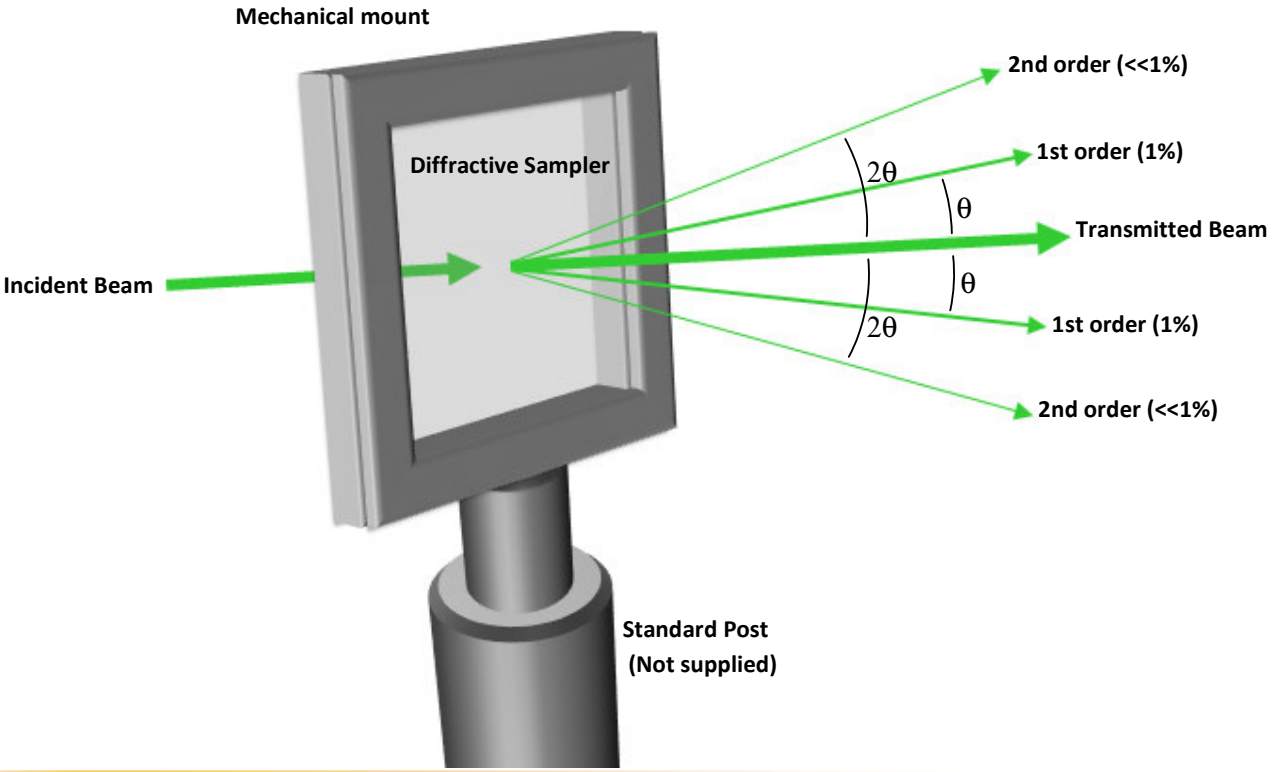
Diffractive Laser Beam Sampler

SILIOS Technologies proposes Diffractive Laser Beam Samplers for real-time beam parameters measurement and beam monitoring.

KEY ADVANTAGES

1. Allow to monitor the laser beam while the application is running.
2. Allow multiple different measurements simultaneously to fully characterize the Laser beam.
3. Achieve low power replicas of the main beam which preserves the spatial profile.
4. Polarization non-sensitive device.



Diffractive Laser Beam Sampler

SPECIFICATIONS

OPTICAL	Standard product	Custom product
Operating wavelength	355nm, 532 nm or 1064 nm	193 nm to 2µm
Type of grating	Binary	Binary
Diffraction orientations	2 (vertical or horizontal)	2 (vertical or horizontal)
1st order ratio		
355 nm	1%	<1% up to 10%
532 nm	1%	0.5% up to 10%
1064 nm	1% or 0.5%	0.5% up to 10%
2nd order ratio	<<1% (for all wavelengths)	<<1% (for all wavelengths)
1st order angle		
355 nm	5°	5° or less
532 nm	7.5°	7.5° or less
1064 nm	15°	15° or less
2nd order angle	2x 1st order angle	2x 1st order angle
Coatings	Both sides AR or uncoated	Both sides AR or uncoated
Insertion loss (uncoated)	4% per side	4% per side
Insertion loss (both sides AR coating)	<0.5% per side	<0.25% per side
Laser Damage threshold (uncoated)	Fused silica LDT level	Fused silica LDT level
Laser Damage Threshold (coated)		
355 nm, 10 ns	3 J/cm²	Upper LTD on request
532 nm, 10 ns	5 J/cm²	Upper LTD on request
1064 nm, 10 ns	8 J/cm²	Upper LTD on request

MECHANICAL	Standard product	Custom product
Diffractive part		
Shape	square	Square or Circular
Size	25x25 mm²	max diameter of 90mm
Thickness	1 mm	1 mm
Mechanical Mount		
External Sizes	35x35x10 mm³	On request
Fixing Threads	M4 or 8-32	On request

STANDARD MODELS

Model	Wavelength	1st Order angle	1st Order ratio	Coating
DS-355-1-NC	355	5°	1%	-
DS-355-1-AR	355	5°	1%	AR/AR@355nm
DS-532-1-NC	532	7.5°	1%	-
DS-532-1-AR	532	7.5°	1%	AR/AR@532nm
DS-1064-1-NC	1064	15°	1%	-
DS-1064-1-AR	1064	15°	1%	AR/AR@1064nm
DS-1064-0-NC	1064	15°	0.5%	-
DS-1064-0-AR	1064	15°	0.5%	AR/AR@1064nm