

Airy Beam



An Airy beam is a non-diffracting waveform which doesn't spread out as the beam propagates and gives the appearance of curving as it travels.

The Airy beam also has the characteristic of freely accelerating. As it propagates, it bends so as to form a parabolic arc.

A cross section of an ideal Airy beam would reveal an area of principal intensity, with a series of adjacent, less luminous areas trailing off to infinity.

HOLO/OR suggests special DOE elements which transform Gaussian beam to Airy beam.

Part Number	Wavelength (nm)	Dimensions (mm)	number of levels	Material
PE-203-1-Y-A*	1600	25.4	2	FS
PE-206-I-Y-A	1064	11	16**	FS
* Separation angle between the 2 Airy Beams: 9.2 Degrees				
** High Efficiency				

Articles on Airy Beam:

- Airy Beam Laser
- Wikipedia: Airy Beam
- Laser "Light Bullets" Made to Curve
- Solid-state lasers: The Airy beam laser
- Sharply autofocused ring-Airy beams transforming into non-linear intense light bullets
- Ultrafast Airy beam optical parametric oscillator