



PRESS RELEASE

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Radially and azimuthally polarized beams generated by liquid crystal elements

ARCOptix's Radial Polarizer converts a linearly polarized beam into a beam that has a continuous radial or azimuthal polarization distribution. This unique technology is based on a special alignment of the nematic liquid crystal molecules which are capable of locally rotating the orientation of the linearly polarized laser beam. Either azimuthally or radially distributed polarization is obtained depending on the orientation of the device with respect to the laser polarization.

This device has a working wavelength range from 350 to 1,700 nm, contained in a compact 6 x 4 x 1.5 cm housing with a 10 mm diameter active area. The input/output extinction ratio is ~100 at 633nm. It can be driven with a standard function generator or the ARCOptix USB liquid crystal driver.

Potential applications for the Radial Polarizer include creating Laguerre-Gaussian beams for superresolution microscopy, optical trapping and laser cutting, as well as being a key component for a polarization axis finder system.

For more information, contact Warsash Scientific on +61 2 9319 0122 or sales@warsash.com.au.

