

LICENSING OPPORTUNITY: SPATIO-TEMPORAL PROFILOMETER AND PERFORMING TIME-RESOLVED SPATIAL PROFILOMETRY FOR PRODUCING A UNIFORM LIGHT PROFILE

DESCRIPTION

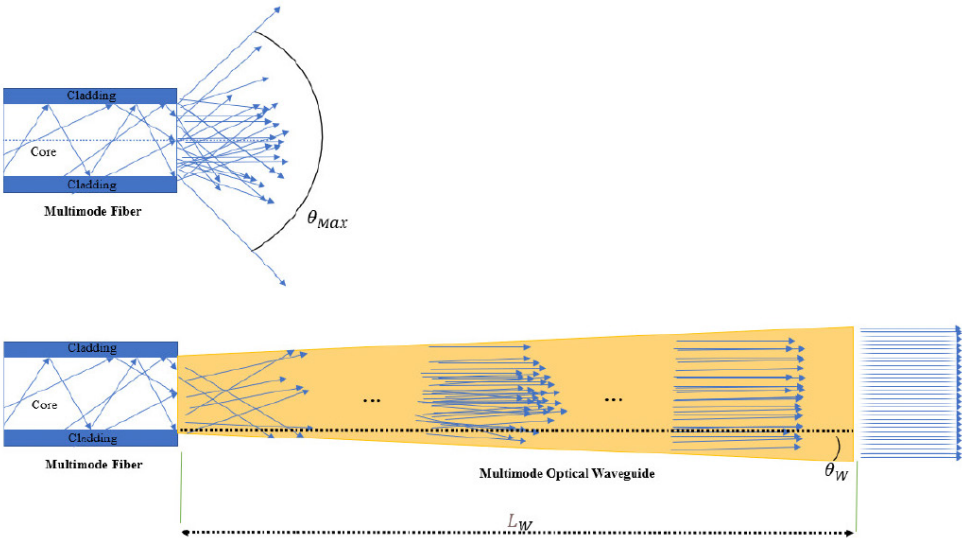
Problem

The invention solves the problem of creating wide, optical beams that have uniform intensity through their cross-section.

Invention

The invention is a device that creates uniform illumination profiles using a single waveguide structure. Input light can be from another waveguide (e.g., an optical fiber) or a free-space light source.

Ray tracings of light exiting optical fiber in free space (above) or into NIST's waveguide structure that both collimates and uniformly distributes output light rays from an input optical fiber.



BENEFITS

Potential Commercial Applications

This invention is useful in optical measurement systems, including optofluidic applications such as cytometry and imaging.

Competitive Advantage

The invention is easy and inexpensive to manufacture and adapt to other systems, is robust (durable), and is small in size and does not require additional optical components.

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