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Flattop beam shaping for use in optical fiber.

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Laser beams structured with a uniform flattop profile have become a topic of interest in industrial fields such as high-power beam delivery directly to the point of contact for laser cutting, welding and additive manufacturing. These applications require fibre delivery of the optical mode to the point of contact. Here, we generate and tailor a flattop profile using a spatial light modulator. We propagate the flattop into a few mode fiber and compare the Stokes polarimetry measurements before and after the fiber, as well as the modal decomposition of the initial and emerging flattop modes to determine their modal content.

Apply to be considered for a student ; award (Yes / No)?

Yes

Level for award;(Hons, MSc, PhD, N/A)?

Msc

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