85 μm core rod fiber amplifier delivering 350 W/m - DTU Orbit (25/02/2019)

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An improved version of the distributed modal filtering (DMF) rod fiber is tested in a high power setup delivering 350 W/m of extracted signal average power limited by the available pump power. The rod fiber is thoroughly tested to record the transverse modal instability (TMI) behavior and also measure degradation of the TMI threshold with operation time due to induced absorption in the active material increasing the thermo-optical heat load. Multiple testing degrades the rod fiber and TMI threshold from >360 W to a saturated power level of roughly 240 W.

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