

**METHOD FOR DETECTING THE END FACE OF HOLLOW-CORE
MICROSTRUCTURED OPTICAL FIBER AND MARKED HOLLOW-CORE
MICROSTRUCTURED OPTICAL FIBER**

Abstract

The present disclosure discloses a method for detecting the end face of a hollow-core microstructured optical fiber and a marked hollow-core microstructured optical fiber. The method comprises the following steps: (1) Imaging the end face of the hollow-core microstructured optical fiber to obtain an image of the end face of the hollow-core microstructured optical fiber; (2) Marking individual anti-resonant microstructure units in the image of the end face of the hollow-core microstructured optical fiber according to an asymmetry of the end face of the hollow-core microstructured optical fiber; (3) performing geometric parameter extraction, and Evaluating a geometric uniformity of the hollow-core microstructured optical fiber. According to the method for detecting the end face of the hollow-core microstructured optical fiber provided by the present disclosure, an axial uniformity and/or difference of the microstructure units is evaluated, such that the geometric uniformity of the hollow-core optical fiber is monitored. With the marked hollow-core microstructured optical fiber provided by the present disclosure, an image of an asymmetric end face may be obtained without affecting transmission loss, thereby achieving geometric uniformity detection or monitoring.

Fig 3.