

Title (en)
OPTICAL FIBER DIFFUSER

Title (de)
FASEROPTISCHER LICHTSTREUER

Title (fr)
DIFFUSEUR A FIBRE OPTIQUE

Publication
EP 1198727 A1 20020424 (EN)

Application
EP 00938428 A 20000616

Priority
• CA 0000733 W 20000616
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Abstract (en)
[origin: WO0079319A1] Optical fiber diffusers for emitting light cylindrically along a length of the fiber diffuser (38) with preselected light intensity distributions along the length of the diffuser. The diffuser portion is defined by forming a distribution of scattering centers in a section of the optical fiber core (34) having a modulated index of refraction which acts to couple light radially out of the fiber along the diffuser section. The intensity distribution of light coupled out of the diffuser section of the fiber is controlled by controlling the profile of the modulated index of refraction, namely the coupling coefficient, along the length of the grating. Writing a grating into a multimode fiber provides a method of monitoring transmission in the fiber since some of the light can be coupled out and detected and interrogated. The diffuser devices can be used as sensors, since they also couple light incident on the diffuser into the core where it is transmitted to a detector.

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Citation (search report)
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