

Title (en)  
OPTICAL MODE NOISE AVERAGING DEVICE

Title (de)  
EINRICHTUNG ZUM AUSGLEICH OPTISCHEN GLEICHTAKTRAUSCHENS

Title (fr)  
DISPOSITIF OPTIQUE D'ETABLISSEMENT DE MOYENNE DU BRUIT MODAL

Publication  
**EP 1730563 A1 20061213 (EN)**

Application  
**EP 05712335 A 20050202**

Priority  
• US 2005002853 W 20050202  
• US 2004010048 W 20040331

Abstract (en)  
[origin: WO2005103781A1] An optical mode noise averaging device (300) including a multimode optical fiber (302) and means (308) for averaging a modal noise induced signal level variation of light propagating within the multimode optical fiber (302). The device may average modal noise induced signal level variations by cyclically varying an index of refraction of the multimode optical fiber (302) over a select period of time, scrambling a light distribution within the multimode optical fiber (302), or both. The index of refraction of the multimode optical fiber may be cyclically varied by cyclically varying the temperature of the multimode optical fiber (302). Alternatively, the index for refraction may be varied or the light distribution within the multimode optical fiber may be scrambled by cyclically manipulating the multimode optical fiber (302).

IPC 8 full level  
**G01J 3/36** (2006.01); **G02B 6/26** (2006.01); **G01D 5/353** (2006.01); **G01J 3/10** (2006.01); **G01K 11/32** (2006.01); **G01N 21/359** (2014.01); **G01N 21/39** (2006.01); **G02B 27/48** (2006.01); **G02B 6/14** (2006.01)

CPC (source: EP KR)  
**C03B 37/07** (2013.01 - KR); **F23N 5/082** (2013.01 - EP); **G01J 3/02** (2013.01 - EP); **G01J 3/0218** (2013.01 - EP); **G01J 3/027** (2013.01 - EP); **G01J 3/0297** (2013.01 - EP); **G01J 3/108** (2013.01 - EP KR); **G01J 3/36** (2013.01 - KR); **G01J 3/42** (2013.01 - EP); **G01J 5/0014** (2013.01 - EP); **G01J 5/0018** (2013.01 - EP); **G01J 5/58** (2013.01 - EP); **G01K 11/32** (2013.01 - EP); **G01N 21/3504** (2013.01 - EP); **G01N 21/359** (2013.01 - KR); **G01D 5/35345** (2013.01 - EP); **G01J 5/0821** (2013.01 - EP); **G01N 21/39** (2013.01 - EP); **G02B 6/14** (2013.01 - EP)

Cited by  
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**WO 2005103781 A1 20051103**; AU 2005236385 A1 20051103; CA 2561711 A1 20051103; CA 2561711 C 20121218; CN 1938621 A 20070328; CN 1938621 B 20150401; EP 1730563 A1 20061213; EP 1730563 A4 20111116; JP 2007534983 A 20071129; KR 101212439 B1 20121214; KR 20060135850 A 20061229

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**US 2005002853 W 20050202**; AU 2005236385 A 20050202; CA 2561711 A 20050202; CN 200580010448 A 20050202; EP 05712335 A 20050202; JP 2007506152 A 20050202; KR 20067020404 A 20060929