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[Continued on next page]

(54) Title: DISSIPATIVE SOLITON MODE FIBER BASED OPTICAL PARAMETRIC OSCILLATOR

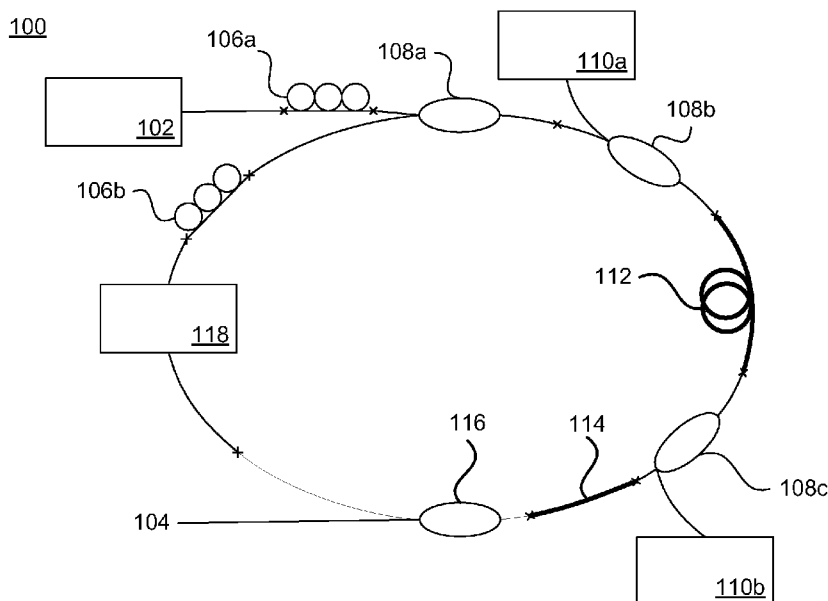


FIG. 1

(57) Abstract: A fiber optic parametric amplifier that includes a resonating cavity. The resonating cavity includes linear fiber optic gain medium, with negative chromatic dispersion; and a nonlinear fiber optic gain medium with positive chromatic dispersion.



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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H01S 3/067 (2014.01)

CPC - H01S 3/06754

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8):H01S 3/067 (2014.01)

CPC: H01S 3/06754

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(8):H01S 3/067 (2014.01)

CPC: H01S 3/302; H04B 10/291; H04B 10/2916; USPC:359/333, 359/334 (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Patbase, Google patents, Google Scholar Search terms used: Fiber, optic, light, amplify, gain, oscillator, pump, pulse, dispersion, positive, negative, linear, nonlinear, resonating cavity, input, idler, signal, frequency, split, repetition rate, wavelength, peak, center, dissipative, soliton, length, wavelength division multiplexer, WDM

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y -- A	US 2012/0205352 A1 (FERMANN) 16 August 2012 (16.08.2012) para [0009]-[0010], [0023], [0038], [0045].	1-6, 9-11, 13, 14 ----- 7, 8, 12
Y -- A	US 2004/0190119 A1 (TAUSER et al.) 30 September 2004 (30.09.2004) entire document, especially para [0009], [0012], [0030]-[0031].	1-6, 9-11, 13, 14 ----- 7, 8, 12
Y -- A	Abramczyk, "Dispersion Phenomena in Optical Fibers." Technical University of Lodz, Laboratory of Laser Molecular Spectroscopy, 2005 (2005), pg 27-28 [online][retrieved on 6.10.2014] URL: <http://www.mitr.p.lodz.pl/evu/lectures/Abramczyk3.pdf>	1-6, 9-11, 13, 14 ----- 7, 8, 12
Y	US 2012/0301148 A1 (WATANABE) 29 November 2012 (29.11.2012) para [0025], [0029], [0035], [0037]-[0038], [0126].	9-11
Y	US 2012/0327960 A1 (WISE et al.) 27 December 2012 (27.12.2012) para [0024], [0027], [0041].	13, 14
Y	US 2010/0328761 A1 (REID et al.) 30 December 2010 (30.12.2010) para [0050], [0131].	14
A	US 5,513,194 A (TAMURA et al.) 30 April 1996 (30.04.1996) entire document, especially col 3, ln 14-26, ln 36-54; col 5, ln 5-25; col 6, ln 57-col 7, ln 2, ln 20-35; col 13, ln 38-59.	1-14
A	US 2012/0062983 A1 (IMESHEV et al.) 15 March 2012 (15.03.2012) para [0014], [0084].	4

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"&" document member of the same patent family

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