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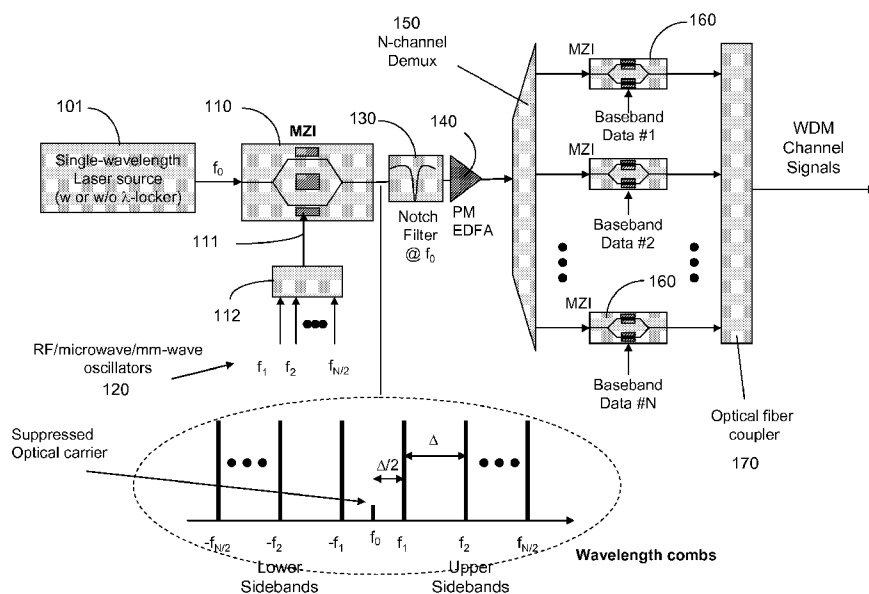
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(54) Title: OPTICAL WAVELENGTH-DIVISION-MULTIPLEXED (WDM) COMB GENERATOR USING A SINGLE LASER

FIG. 1



(57) Abstract: Apparatus, systems and techniques that use a single laser to generate desired optical WDM comb frequencies.

A. CLASSIFICATION OF SUBJECT MATTER***H04J 14/02(2006.01)i***

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 H04J 14/02

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

Korean Utility models and applications for Utility Models since 1975

Japanese Utility models and applications for Utility Models since 1975

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

eKIPASS(KIPO internal) "optical, wavelength, division, multi-wavelength, laser, comb"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 5963567 A (JOHN J. VESELKA et al.) 05 October 1999 See abstract, figures 1,2,7 and 8, column 2 line 25 - column 5 line 67, and claims 1-7	1-14, 20-28,30 15-19,29,31-33
A	US 2004-0052276 A1 (JANET W. LOU et al.) 18 March 2004 See abstract, figures 1-3, paragraphs [0001]-[0040], and claims 1-14	1-33
A	US 2007-0030556 A1 (TETSUYA KAWANISHI) 08 February 2007 See abstract, figures 3-4, paragraphs [0017]-[0057], and claims 1,5	1-33
A	US 6788716 B2 (NIMA AHMADVAND et al.) 07 September 2004 See abstract, figures 1-6, column 1 line 65 - column 3 line 54, and claims 1-7	1-33



Further documents are listed in the continuation of Box C.



See patent family annex.

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5963567 A	05.10.1999	CA 2227207 A1 CA 2227207 C EP 0859266 A2 EP 0859266 A3 JP 10-228038 A KR 10-1998-0071330 A	13.08.1998 04.09.2001 19.08.1998 07.02.2001 25.08.1998 26.10.1998
US 2004-0052276 A1	18.03.2004	US 6937626 B2	30.08.2005
US 2007-0030556 A1	08.02.2007	US 7133190 B2 US 7317569 B2 US 2004-0218642 A1	07.11.2006 08.01.2008 04.11.2004
US 6788716 B2	07.09.2004	CA 2348346 A1 CA 2348346 C US 2002-0012366 A1	29.11.2001 29.11.2001 31.01.2002