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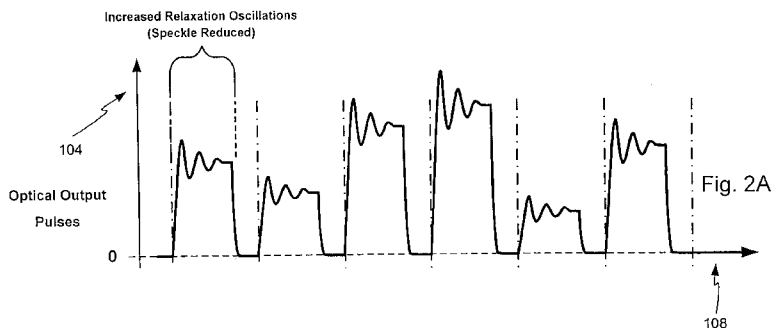
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(54) Title: METHOD AND APPARATUS FOR REDUCING OPTICAL SIGNAL SPECKLE



(57) Abstract: An optical signal generator is configured with an associated control system and driver configured to reduce speckle. Speckle reduction occurs by pulsing the drive signal between a first current level and a second current level. These pulses force the optical signal generator to introduce oscillations into the optical signal. The coherence of the emitted light is reduced during the period of oscillations in the optical signal, which reduces speckle. In one embodiment, the pulsing of the drive signal brings the drive signal down to a level near or below threshold, which in turn intermittently turns off the optical signal output. Returning the optical signal to a desired optical output intensity introduces the speckle reducing oscillation. The pulse frequency, and duty cycle is controlled by a duty cycle control signal to modulate overall optical power and adjust amount of despeckle.

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A. CLASSIFICATION OF SUBJECT MATTER*H01S 3/02(2006.01)i, H01S 3/00(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 H01S 3/02, H01S 3/00

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)

e-KOMPASS (KIPO internal); reduce, speckle, optical, generator

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,600,590 B2 (Roddy et al.) 29 July 2003 see abstract, Claims 1-9, Figs. 1-7	1 ~ 26
A	US 2007-0273969 A1 (Yoshikawa et al.) 29 November 2007 see abstract, Claims 1-4, Figs. 1-15	1 ~ 26
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A	US 5,313,479 A (Florence) 17 May 1994 see abstract, Claims 1-15, Figs. 1-2	1 ~ 26
A	US 5,274,494 A (Rafanelli et al.) 28 December 1993 see abstract, Claims 1-4, Figs. 1-2	1 ~ 26

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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