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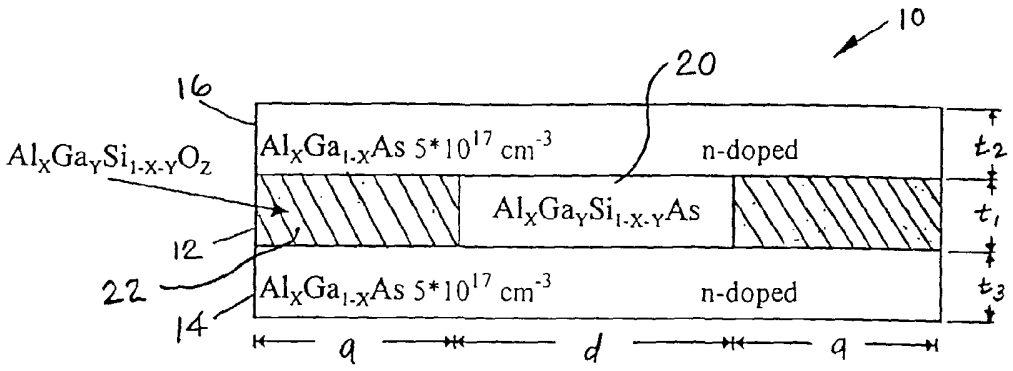
(54) Title: OPTOELECTRONIC DEVICE HAVING A HIGHLY CONDUCTIVE CARRIER TUNNELING CURRENT APERTURE



(57) Abstract: An optoelectronic device having a highly conductive carrier tunneling current aperture. The device includes a centrally positioned current aperture formed from a quantum layer made of a III-IV-V semiconductor compound, which is doped with a first doping type. The current aperture is laterally confined by an oxide of the III-IV-V semiconductor compound. Adjacent layers are also formed of a semiconductor material that is doped with the first doping type.

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INTERNATIONAL SEARCH REPORT

Int[illegible]nal Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01S5/183

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 7 H01S

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

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

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 493 577 A (LEAR KEVIN L ET AL) 20 February 1996 (1996-02-20) cited in the application the whole document	1
A	US 5 594 751 A (SCOTT JEFFREY W) 14 January 1997 (1997-01-14) cited in the application the whole document	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
19 July 2002	30/07/2002

Name and mailing address of the ISA	Authorized officer
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INTERNATIONAL SEARCH REPORT

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Inte[illegible]nal Application No
PC[illegible]B 01/02001

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