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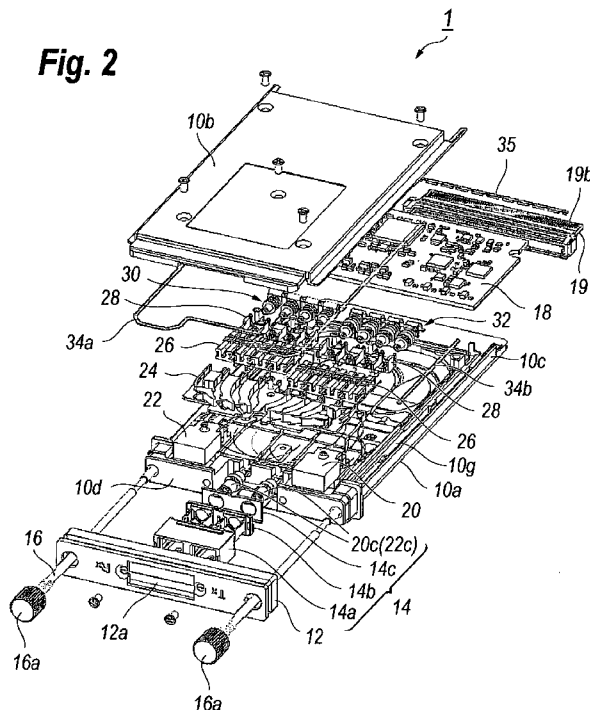
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(54) Title: PLUGGABLE OPTICAL TRANSCEIVER AND METHOD FOR MANUFACTURING THE SAME

Fig. 2



(57) Abstract: A pluggable optical transceiver is disclosed. The transceiver comprises a plurality of optical sub-assemblies (OSAs), an optical unit and a plurality of inner fibers to couple the optical unit with OSAs. The inner fibers each provides an inner connector to couple with one of OSAs. The housing, which installs the OSAs, the optical member and the inner fiber, is made of metal and has a grooves into which the inner fibers is set so as to arrange them orderly.

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A. CLASSIFICATION OF SUBJECT MATTER INV. G02B6/42 H04B10/24 G02B6/293 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
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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		
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 2009/016685 A1 (HUDGINS CLAY E [US] ET AL) 15 January 2009 (2009-01-15) abstract paragraphs [0040] - [0046]; figure 1 -----	1-3,11, 12,15, 16,18,20 4-10,21
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed		"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search 24 January 2011		Date of mailing of the international search report 29/07/2011
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Cohen, Adam

INTERNATIONAL SEARCH REPORT

International application No.
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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-12, 15, 16, 18, 20, 21

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12, 15, 16, 18, 20, 21

Wavelength division multiplexing optical communication apparatus having a latch to facilitate dismount of internal connectors

2. claims: 13, 14, 19

Wavelength division multiplexing optical communication apparatus having a plurality of terraces for mounting plural optical components

3-5. claims: 17, 29-38

Claims 17, 29-35 and 39-43: Optical communication apparatus in general (or transceiver in particular) having a conductive sheet placed between the optical receptacle and the remainder of the housing - aspects relating to the attachment thereof and of the receptacle to the housing.
Claims 36, 37: Aspects relating to the material of the conductive sheet.

Claim 38: Aspect relating to the arrangement of cuts in the wall adjacent the receptacle linked to the pitch of different types of mutually adjacent fibre connectors

6. claims: 22-28

Optical transceiver comprising connectorised inner fibres and corresponding connector receptacles

7. claims: 44-53

Optical transceiver wherein the housing thereof rigidly supports the plug board and softly supports the circuit board

8. claim: 54

Pluggable optical transceiver mounted on a host system having a mechanism that prevents the optical transceiver from releasing from the host system when the optical receptacle receives an external connector

9. claims: 55-67

Pluggable optical transceiver mounted on a host system

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

comprising a screw latch for fastening the optical transceiver with the host system and wherein the optical receptacle is prevented from receiving an external connector when the optical transceiver is free from the host system.

10. claims: 68-73

Connector assembly

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009016685	A1	US 2009162051 A1	25-06-2009
