Title: MULTI-FIBER FERRULE WITH GUARD HBER

Abstract: A multi-fiber fiber optic ferrule comprising a ferrule body (22), at least one optically functional optical fiber received within at least one optical fiber bore defined by the ferrule body, and at least one optically non-functional guard fiber received within at least one guard fiber bore defined by the ferrule body. A multi-fiber ferrule defining at least one optical fiber bore opening through a front face, at least one optically functional optical fiber received within the ferrule and maintained within the at least one optical fiber bore, at least one guard fiber bore opening through the front face, and at least one optically non-functional guard fiber received within the at least one guard fiber bore.
Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 4 September 2008
INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/023007

A. CLASSIFICATION OF SUBJECT MATTER

INV. G02B6/38 G02B6/25

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

B. RELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G02B

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 6 950 570 B1 (NOVOTNY VLAD [US]) 27 September 2005 (2005-09-27) column 30, line 38 - line 49; figure 27</td>
<td>1,2,4,7, 12,13, 15,16</td>
</tr>
<tr>
<td>Y</td>
<td>JP 2002 072016 A (SUMITOMO ELECTRIC INDUSTRIES) 12 March 2002 (2002-03-12) abstract; figures 1-5</td>
<td>8,19</td>
</tr>
<tr>
<td>X</td>
<td>JP 03 155503 A (NIPPON SHEET GLASS CO LTD) 3 July 1991 (1991-07-03) abstract; figures 1,2</td>
<td>1,2,4,7, 12,13, 15,16</td>
</tr>
</tbody>
</table>

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

* Special categories of cited documents
  *' 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

Date of the actual completion of the international search: 25 April 2008

Date of mailing of the international search report: 16/07/2008

Name and mailing address of the ISA/
European Patent Office, P.a. 5818 Patentlaan 2 NL - 2280 HV Rijswijk
Tel (+31-70) 340.2040. TX 31 651 epi nl
Fax. (+31-70) 340.3016

Authorized officer
Frisch, Anna Maria

Form PCT/ISA/210 (second sheet) (April 2005)
## DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>WO 2004/017114 A (OZ OPTICS LTD [CA]; SEZERMAN OMUR M [CA]; AGHDAM NASSER Y [CA]; NGUYEN) 26 February 2004 (2004-02-26) page 5, paragraph 2 - paragraph 5; figures 3,4</td>
<td>1-3,7, 12-14,16</td>
</tr>
<tr>
<td>Y</td>
<td>JPO 09 090171 A (NIPPON TELEGRAPH &amp; TELEPHONE) 4 April 1997 (1997-04-04) abstract; figures 1-4</td>
<td>8,19</td>
</tr>
<tr>
<td>X</td>
<td>JPO 09 090171 A (NIPPON TELEGRAPH &amp; TELEPHONE) 4 April 1997 (1997-04-04) abstract; figures 1-4</td>
<td>1-3,7, 12-14,16</td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td>8,19</td>
</tr>
</tbody>
</table>

Form PCT/ISA/02/10 (continuation of second sheet) (April 2005)
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☑️ I 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).

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

see additional sheet

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

2. ☑️ I 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. ☑️ ☑️ ☑️ I 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.: 

see annex

Remark on Protest

1. ☑️ I The additional search fees were accompanied by the applicant’s protest and, where applicable, the payment of a protest fee.

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

1. claims: 1-4,7,8,12-16,19

Subject 1 relates to multifibre ferrules with bores for functional and dummy fibres, to the position of the dummy fibres, their materials, and the number of functional to dummy fibres.

2. claims: 9,18

Subject 2 also relates to multifibre ferrules with bores for functional and dummy fibres, and to a shoulder positioned on the ferrule.

3. claims: 10,17

Subject 3 also relates to multifibre ferrules with bores for functional and dummy fibres, and to pivot protrusions.

4. claims: 11,20

Subject 4 also relates to multifibre ferrules with bores for functional and dummy fibres, and to a slot for receiving a ribbon.

5. claims: 5,6

Subject 5 also relates to multifibre ferrules with bores for functional and dummy fibres, and to aligning pins.
<table>
<thead>
<tr>
<th>Patent document cited in search report</th>
<th>Publication date</th>
<th>Patent family member(s)</th>
<th>Publication date</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP 2002072016 A</td>
<td>12-03-2002</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>JP 3155503 A</td>
<td>03-07-1991</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>US 2004017114 A</td>
<td>26-02-2004</td>
<td>AU 2002322906 A1</td>
<td>03-03-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CA 2495223 A1</td>
<td>26-02-2004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US 2005213922 A1</td>
<td>29-09-2005</td>
</tr>
</tbody>
</table>