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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

**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:  
31 December 2008

(54) Title: MASS PRODUCTION OF MICRO-OPTICAL DEVICES, CORRESPONDING TOOLS, AND RESULTANT STRUCTURES

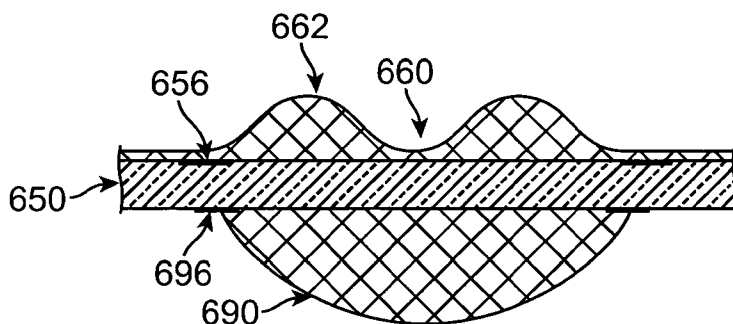


FIG. 9F

(57) Abstract: A micro-optical element includes a support substrate (650), a micro-optical lens (690) in a cured replication material on a first surface of the support substrate and optionally a second micro-optical lens (660) on a second, opposite surface of the support substrate and an opaque material (696, 656) aligned with and overlapping the micro-optical lens.

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**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/US2008/005151

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. B29D11/00

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)  
B29D 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**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 460 738 A (AVALON PHOTONICS AG [CH]) 22 September 2004 (2004-09-22)  paragraphs [0049] - [0058]; figures -----	1-6, 9-18, 20-27
X	JP 2005 227679 A (SHARP KK) 25 August 2005 (2005-08-25) abstract; figures -----	1,8
A	DE 10 2006 014200 A1 (SAMSUNG ELECTRO MECH [KR]) 7 December 2006 (2006-12-07) paragraphs [0060] - [0062]; figure 8 -----	3

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
- \*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

13 August 2008

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11/11/2008

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2008/005151

## 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 allsearchable 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.:

1-18, 20-27

### 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: 1-18, 20-27

A micro-optical element, replication tool and method of making  
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2. claim: 19

A method of mass-producing micro-optical lenses  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/005151

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1460738 A	22-09-2004	NONE	
JP 2005227679 A	25-08-2005	NONE	
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