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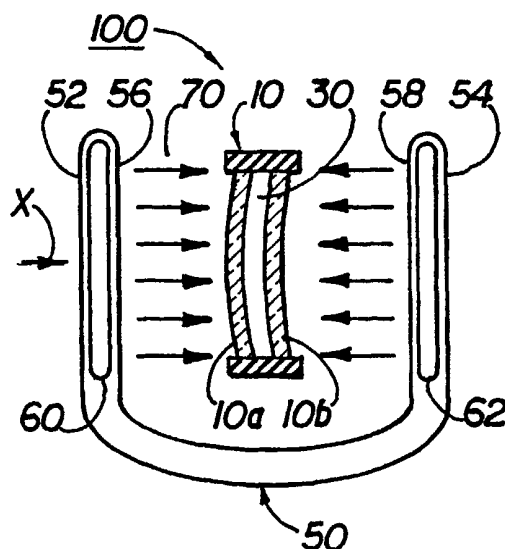
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(54) Title: POLYMERIZABLE COMPOSITION AND OPTICAL ARTICLES USING THE SAME



(57) Abstract: A polymerizable composition comprising an effective amount of at least one tetrafunctional acrylate monomer. In one embodiment of the invention, a polymerizable composition is a compound comprising of at least 50 percent by weight of at least one tetrafunctional acrylate monomer, from 5 to 20 percent by weight of at least one modified bisphenol A epoxy diacrylate monomer, from 0 to 25 percent by weight of at least one acrylate monomer selected from aliphatic difunctional and polyfunctional acrylates, from 0 to 3 percent by weight of at least one UV absorber, and a source of free radicals. The lens-forming material resulted from the polymerizable composition is introduced to a lens mold with a mold cavity having a configuration conforming to the optical lens to be molded. A radiation energy source is used to cure the lens-forming material in the filled mold. The radiation energy source comprises a U-shaped UV light. The U-shaped UV light has a first arm capable of delivering UV light in a first direction and a second arm capable of delivering UV light in an opposite second direction. The first and second arms are spaced apart and substantially parallel to each other, thereby defining a space therebetween. The filled mold is placed at the center of the space therebetween the first and second arms to receive the radiation energy from the first and second directions for curing. The resultant lens has an inherently integrated "hard-soft-hard" structure cross-sectionally.

INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :B29D 11/00; CO8F 18/14

US CL :264/1.1, 1.38, 2.5; 526/321, 326, 334

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)

U.S. : 264/1.1, 1.38, 2.5; 526/321, 326, 334

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 practicable, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,880,171 A (LIM et al.) 09 March 1999, Abstract; col. 3, lines 32-54; col. 8, lines 32-67; col. 9, lines 38 - col. 10, line 60; col. 13, line 46 - col. 16, line 26; Example 9; Claims 1-3,13,14 and 18.	1-21,33 and 43-47
Y	US 5,880,171 A (LIM et al.) 09 March 1999, col. 11, line 50 - col. 13, line 35.	22-32 and 42
X	US 4,912,185 A (TOH) 27 March 1990, col. 2, line 30 - col. 5, line 42; col. 7, TABLE, EXAMPLE 3; col. 11, lines 42-52; CLAIMS 6-8 AND 10-14.	1-10
X	US 5,415,816 A (BUAZZA et al.) 16 May 1995, col. 2, lines 1-20; col. 3, line 42 - col. 11, line 28.	22-45 and 47



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"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
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