(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 December 2000 (14.12.2000)

PCT

(10) International Publication Number
WO 00/76002 A1

(51) International Patent Classification[7]: H01L 31/0232, G02B 3/00, G03F 7/00, G02B 6/12

(21) International Application Number: PCT/US00/13086

(22) International Filing Date: 11 May 2000 (11.05.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/324,880 3 June 1999 (03.06.1999) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 09/324,880 (CON)
Filed on 3 June 1999 (03.06.1999)

(71) Applicant *(for all designated States except US)*: **INTEL CORPORATION** [US/US]; 2200 Mission College Boulevard, Santa Clara, CA 95052 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **ASSADI, Azar** [CH/US]; 22575 Parkfield, Mission Viejo, CA 92692 (US). **MOSSAHEBI, Parvin** [US/US]; 4615 North 64th Street, Scottsdale, AZ 85251 (US). **SENGUPTA, Kabul** [IN/US]; 1170 W. Lisa Lane, Tempe, AZ 85284 (US).

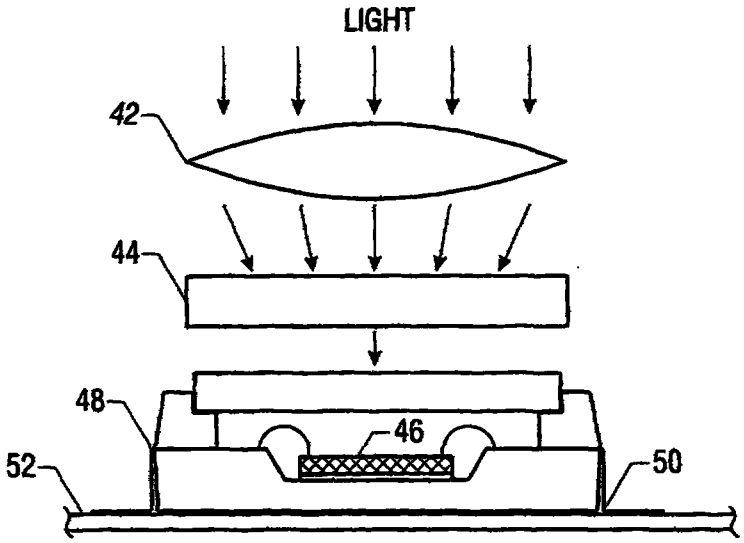
(74) Agent: **TROP, Timothy, N.**; Trop, Pruner, Hu & Miles, P.C., Suite 100, 8554 Katy Freeway, Houston, TX 77024 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,

[Continued on next page]

(54) Title: MICROLENS FOR SURFACE MOUNT PRODUCTS



(57) Abstract: A photosensitive device (46) with a microlens array (44) may be packaged for surface mount packaging (48) and subsequent mass reflow processing without significantly degrading the optical performance of the microlens. The microlens may be formed using a series of heat steps of increasing time and temperature. In addition, the microlens may be bleached to prevent degradation of its optical transmissivity at temperatures normally associated with surface mount techniques.

WO 00/76002 A1



MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— *With international search report.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.