



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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 July 2002 (18.07.2002)

PCT

(10) International Publication Number
WO 02/056361 A1

(51) International Patent Classification⁷: **H01L 21/52**,
B81B 7/04, B81C 1/00, H01S 5/022

(21) International Application Number: PCT/AU02/00016

(22) International Filing Date: 8 January 2002 (08.01.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PR 2456 10 January 2001 (10.01.2001) AU

(71) Applicant (for all designated States except US): **SILVERBROOK RESEARCH PTY. LTD.** [AU/AU]; 393 Darling Street, Balmain, New South Wales 2041 (AU).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SILVERBROOK, KIA** [AU/AU]; Silverbrook Research Pty Ltd, 393 Darling Street, Balmain, New South Wales 2041 (AU).

(74) Agent: **SILVERBROOK, KIA**; Silverbrook Research Pty Ltd, 393 Darling Street, Balmain, New South Wales 2041 (AU).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

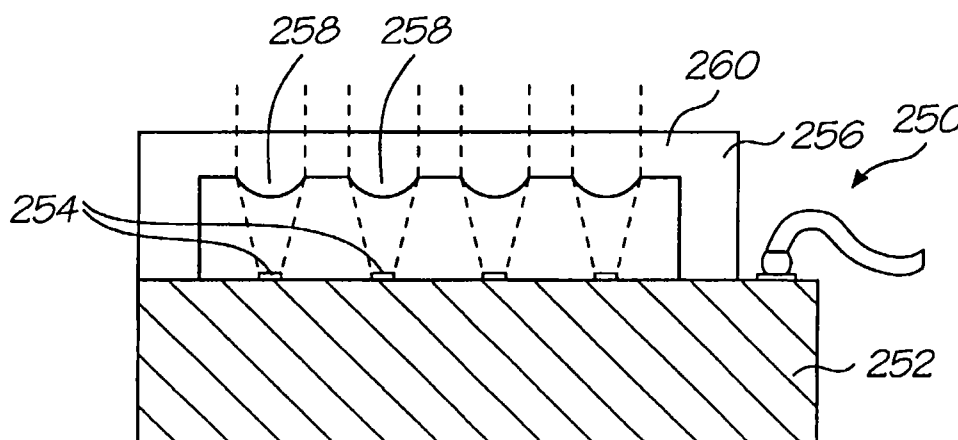
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, 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.

(54) Title: LIGHT EMITTING SEMICONDUCTOR PACKAGE



(57) Abstract: A light emitting semiconductor package (250) has a semiconductor chip (252) with a surface with one or more light emitting devices (254) formed on or in the surface. A cap (256) is bonded to the surface of the chip (252) to encapsulate the devices (254). The cap has one or more regions (258) transparent to light emitted by the light emitting devices (254). The cap has been bonded to the semiconductor chip (252) at the wafer stage prior to separation of the wafer into individual packages.

WO 02/056361 A1

