

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 April 2004 (22.04.2004)

PCT

(10) International Publication Number
WO 2004/034153 A2

(51) International Patent Classification⁷:

G04B

(21) International Application Number:

PCT/JP2003/012989

(22) International Filing Date: 9 October 2003 (09.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2002-296076

9 October 2002 (09.10.2002)

JP

(71) Applicant (for all designated States except US): **CASIO COMPUTER CO., LTD** [JP/JP]; 6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo 151-8543 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **USUI, Norihisa** [JP/JP]; 9-39, Fujimicho 3-chome, Higashimurayama-shi, Tokyo 189-0024 (JP).

(74) Agent: **KIMURA, Mitsuru**; 2nd Floor, Kyohan Building, 7, Kandanishiki-cho 2-chome, Chiyoda-ku, Tokyo 101-0054 (JP).

(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, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

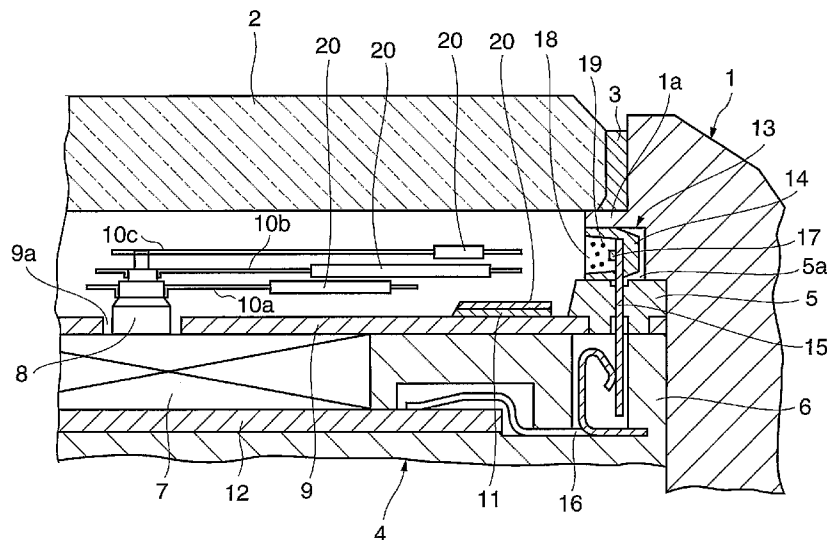
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ,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

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: ILLUMINING DEVICE INCLUDING ULTRAVIOLET RAY EMITTING ELEMENT, AND ELECTRONIC APPARATUS USING THE ILLUMINING DEVICE



(57) Abstract: An illuminating device illuminating a whole indicator brightly, using a light emitting element that emits rays of light in an ultraviolet ray region, and an electronic apparatus using the illuminating apparatus. The illuminating device comprises a light emitting element (17) disposed within a case (14) for emitting rays of light in an ultraviolet ray region, optically transparent sealing resin (18) with which the case is filled so as to cover the light emitting element, and a luminous material (19, 22) mixed into the sealing resin for reacting to the rays of light in the ultraviolet ray region to thereby emit rays of light in a visible ray region. The rays of light in the ultraviolet ray region emitted by the light emitting element pass through the sealing resin and then exits from the illuminating device. Furthermore, they illumines the luminous material mixed into the sealing resin to cause the same to emit rays of light in the visible ray region.

WO 2004/034153 A2



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.