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(54) Title: SPHERICALLY EMITTING REMOTE PHOSPHOR

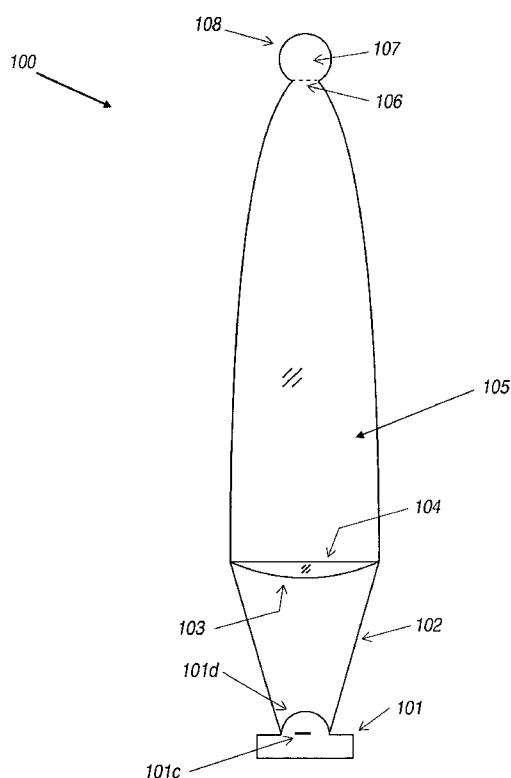


FIG. 1

(57) **Abstract:** Light sources comprise an emitter of photo stimulative light, such as one or more blue LEDs, a reflector, which may be a diverging cone, disposed to reflect light from the LEDs towards an exit aperture, a tailored aspheric lens that further collimates the light from the reflector, a short-pass filter receiving and transmitting the collimated light, a dielectric concentrator receiving the light transmitted by the filter from the LEDs and concentrating it upon the exit aperture, a dielectric emission optic on the outside of the exit aperture to receive the concentrated light, and a layer of photosensitive phosphor deposited on the outside of the emission optic, the phosphor responsive to the LED light to emit light of a longer wavelength.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, **TJ**, TM), European (AT, BE, BG, CH, CY, CZ, DE, **DK**, EE, ES, **FI**, FR, GB, Gi, **Hk**, HU, IE, IS, IT, LT, LU, LV, Md, **MK**, **kr**, NL, NO, PL, PT, kθ, SE, SI, SK, **TR**), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC F21V

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) &keywords LED, phosphor

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 2007/0081336 A1 (SERGE J BIERHUIZEN et al) 12 April 2007	1, 2, 4-11, 13-15
Y	See paragraph [0012] and [0025], and Fig 1 and 4B	3
Y	US 7,286,296 B2 (JULIO C CHAVES et al) 23 October 2007 See claim 5 and Fig 7E and 10	3
A	US 7,021,797 (JUAN C MINANO et al) 4 April 2006 See the whole document	1-15
A	US 2005/0270775 (GERARD HARBERS et al) See the whole document	1-15

 Further documents are listed in the continuation of Box C See patent family annex

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