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(54) Title: LED LAMP FOR PRODUCING BIOLOGICALLY-CORRECTED LIGHT

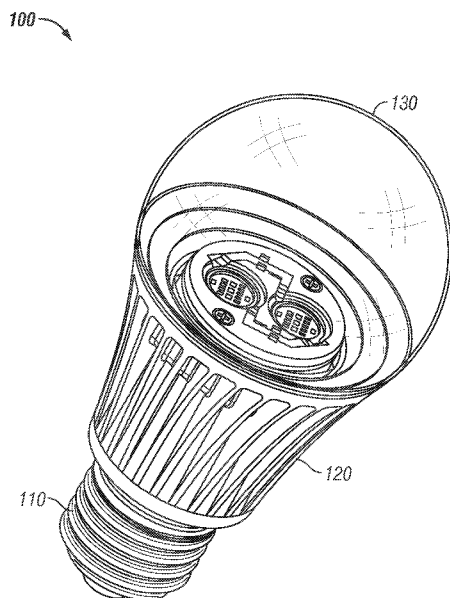


FIG. 2

(57) Abstract: A light-emitting diode (LED) lamp for producing a biologically-corrected light. In one embodiment, the LED lamp includes a color filter, which modifies the light produced by the lamp's LED chips, to increase spectral opponency and minimize melatonin suppression. In doing so, the lamp minimizes the biological effects that the lamp may have on a user. The LED lamp is appropriately designed to produce such biologically-correct light, while still maintaining a commercially acceptable color temperature and commercially acceptable color rendering properties. Methods of manufacturing such a lamp are provided, as well as equivalent lamps and equivalent methods of manufacture.



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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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)

F21V 9/10; H05B 37/02; H01J 1/62; H01L 33/00; H01J 63/04; F21V 9/02; F21V 9/00; F21V 7/04; F21S 5/00

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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: LED, lamp, color filter, and melatonin

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008-0231214 A1 (DO HYUNG KIM et al.) 25 September 2008	19-26
A	See the abstract; paragraphs [0002] - [0111]; claims 1, 18; and figures 6, 15	1-18, 27-36
A	US 2010-0085758 A1 (HIDENORI TAKAHASHI et al.) 08 April 2010	1-36
	See the abstract; paragraphs [0003] - [0032]; claims 1-3; and figures 4, 5, 8	
A	US 2004-0119086 A1 (TADASHI YANO et al.) 24 June 2004	1-36
	See the abstract; paragraphs [0082] - [0106]; claim 1; and figure 9	
A	US 6586882 B1 (GERARD HARBERS) 01 July 2003	1-36
	See the abstract; column 3, line 34 - column 5, line 7; claim 1; and figure 1	
A	US 2007-0262714 A1 (RICHARD B. BYLSMA) 15 November 2007	1-36
	See the abstract; paragraphs [0010] - [0021]; claim 1; and figures 1-4	



Further documents are listed in the continuation of Box C.



See patent family annex.

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Information on patent family members

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