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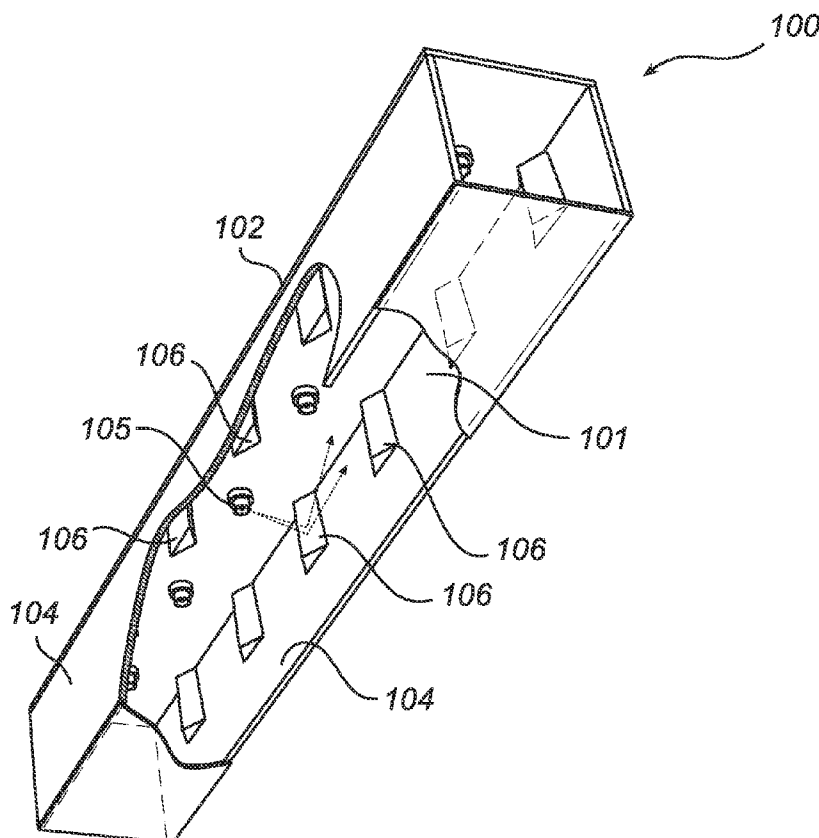
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[Continued on next page]

(54) Title: DEVICE FOR MIXING LIGHT OF SIDE EMITTING LEDS



(57) Abstract: A light emitting device (100) is provided that comprises a longitudinally elongated housing (101) comprising a top wall (102) and opposing diffusing surface (103), and two mutually opposing reflective longitudinally elongated sidewalls (104) connecting said top wall (102) with said diffusing surface (103). An array of mutually spaced apart light emitting diodes (105) arranged is in said housing along the longitudinal extension thereof, and at least one of said sidewalls (104) is provided with an array of mutually spaced apart light redirecting means (106). The light redirecting means reflect light away from the LED that emitted the light, leading to a good mixing of light from the LEDs in the array.

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B. FIELDS SEARCHED

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 F21V F21S

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

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

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 135 471 A (CLAPP ROY A) 2 June 1964 (1964-06-02) column 3, line 5 - line 25 figure 3	10
A	DE 202 05 818 U1 (RUCO LICHT GMBH [DE]) 21 August 2003 (2003-08-21) abstract figures 3-5	1, 4, 5, 8, 9
A	EP 1 092 919 A (KRONENBERG GMBH H & J [DE]) 18 April 2001 (2001-04-18) figures 1, 2 column 6, line 41 - line 49 column 7, line 11 - line 19	1

 Further documents are listed in the continuation of Box C.

 See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 3135471	A	02-06-1964	BE 605689 A2 GB 988092 A	03-11-1961 07-04-1965
DE 20205818	U1	21-08-2003	NONE	
EP 1092919	A	18-04-2001	NONE	