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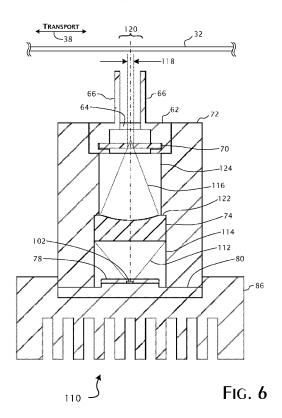
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[Continued on next page]

(54) Title: HIGH INTENSITY, STROBED LED MICRO-STRIP FOR MICROFILM IMAGING SYSTEM AND METHODS



(57) Abstract: A light source, for use in a high-speed, continuous transport microfilm imaging system, includes an LED emitter element coupled to a heat sink, mounted within a light source housing. An opening in the housing, defined by a narrow width light transfer channel, defines a narrow width active illumination area on the microfilm media. An optical diffusion plate, providing a randomized directional distribution of light, is mounted within the housing in an optical path between the opening and the LED element. A switched current source is coupled to the LED element to enable strobed operation synchronous with the periodic operation of a line imaging camera. The LED element can be a linear micro-strip array of LEDs. A cylindrical lens can be placed in the optical path between the LED element and diffuser to narrow and increase the intensity of light incident on and transmitted through the diffusion plate.



FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, 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				
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8): H04N 1/04 (2010.01) (text search - see terms below) USPC: 235/454; 250/570; 358/471,474,482,484,487,494,496,505,506,509,513,527; 362/227,236,246,294,345,355,558,800 (text search - see terms below)				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST(USPT,PGPB,EPAB,JPAB); Google Patents, Google Scholar Search terms: led array, substrate, heat sink, line scan, imager, camera, diffuser, reflect, lens, cylindrical, strobe, pulse, cycle, period, pulse width, control circuit				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.	
Y	US 6,606,171 A (Renk et al.) 12 August 2003 (12.08.20 40 to col 12, ln 13	003), Figs 1, 4; col 4, ln 50-67; col 10, ln	1-20	
Y	US 7,225,988 B2 (Zhu et al.) 05 June 2007 (05.06.2007), Figs 3A-3E, 5C3, 7C1-7C3, 7D, 7E2; col 14, ln 35-44; col 30, ln 60 to col 31, ln 44; col 39, ln 12-21; col 43, ln 11-37; col 44, ln 37-53		1-17, 19, 20	
Y	US 2005/0152146 A1 (Owen et al.) 14 July 2005 (14.07.2005), Figs 5-7; paras [0009], [0041], [0042], [0044]		3-9, 11-20	
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