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**(57) Abstract:** A light source system including a driver system and a light emitter (such as one or more laser diodes) connectable at the output of the driver system. The driver system includes: an energy limiter adapted for limiting the energy supply to the light emitter. The energy limiter includes: a current integrator circuitry adapted to measure and integrate a current supplied to the light emitter over time; and a comparator comparing the integrated value of the current with a reference signal for generating a *maximal energy exceeded* switching signal, in case a the energy supplied to the light source exceeded a predetermined threshold. The light source system may also include a buffering electric circuit connectable at a power input of the driver system for providing electrical power thereto. The buffering electric circuit includes an energy storage module electrically connected for supplying electric energy to the light emitter; and a controllable current source connectable to an electric power source and to the energy storage module. A controller controls the current flow through said controllable current source so as enable proper operation of said light source while restricting the current drawn from the power source from exceeding a predetermined value.

INTERNATIONAL SEARCH REPORT

International application No  
PCT/IL2014/050529

A. CLASSIFICATION OF SUBJECT MATTER  
INV. H05B33/08  
ADD.  
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)  
H05B

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 practicable, search terms used)  
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP H01 206875 A (TOSHIBA CORP) 21 August 1989 (1989-08-21) abstract	1-19
X	US 7 742 514 B1 (SANDERS STEVEN [US]) 22 June 2010 (2010-06-22) column 6, line 15 - column 9, line 10; figures 7-8	1,2
X	WO 2010/094196 A1 (MEDIATEK INC [CN]; WU GWO HUEI [CN]; LIU PI HAI [CN]; CHEN CHIH CHING) 26 August 2010 (2010-08-26) page 6, line 13 - page 10, line 9; figures 3-5	1
X	US 2008/136779 A1 (GROSJEAN SYLVAIN [FR] ET AL) 12 June 2008 (2008-06-12) paragraphs [0014] - [0025]; figure 1	1
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Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search  4 November 2014	Date of mailing of the international search report  23/01/2015
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Villafuerte Abrego
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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/IL2014/050529

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/230525 A1 (SANDERS STEVEN [US] ET AL) 4 October 2007 (2007-10-04) paragraph 19-29 - page 1 -----	1

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IL2014/050529

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-19

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

## 1. claims: 1-19

A buffering electric circuit comprising:

- an energy storage module;
- a controllable current source;
- a controller:
- controlling the current to a maximum value, and
- the stored energy within a predetermined value.

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## 2. claims: 20-36

A driver system with;

- an energy limiter for limiting the current to a load comprising:
- a load current measurement;
- a current integrator, generating an integration signal;
- a comparator, comparing the signal with a reference;
- generating from the comparison a switching signal;
- a switch module operating based on the switching signal.

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## 3. claims: 37-41

An apparatus configured to obtain distance data from a two dimensional image of a scene comprising:

- a projector comprising:
- a laser system;
- projecting a coded light pattern on a scene;
- an image processing module:
- to capture a 2D image of the illuminated scene;
- to process the 2D image to obtain distance data.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/IL2014/050529
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Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
JP H01206875	A	21-08-1989	NONE	
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US 7742514	B1	22-06-2010	NONE	
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			EP 1944680 A1	16-07-2008
			TW 200839585 A	01-10-2008
			US 2008136779 A1	12-06-2008
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			JP 2009532767 A	10-09-2009
			KR 20090034299 A	07-04-2009
			TW I352919 B	21-11-2011
			US 2007230525 A1	04-10-2007
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