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- (71) Applicant (for all designated States except US):
KONINKLIJKE PHILIPS N.V. [NL/NL]; High Tech Campus 5, NL-5656 AE Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HE, Jie** [CN/CN]; c/o High Tech Campus, Building 44, NL-5656 AE Eindhoven (NL). **WANG, Quanguo** [CN/CN]; c/o High Tech Campus, Building 44, NL-5656 AE Eindhoven (NL). **GU, Ming Qiong** [CN/CN]; c/o High Tech Campus, Building 44, NL-5656 AE Eindhoven (NL).
- (74) Agents: **VAN EEUWIJK, Alexander** et al.; c/o High Tech Campus, Building 44, NL-5656 AE Eindhoven (NL).
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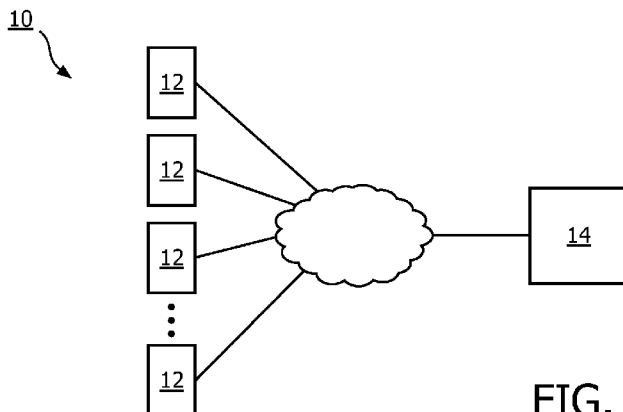


FIG. 1

(57) Abstract: The disclosure provides a charging module for use with an outdoor lighting device, the charging module comprising: an electrical connector coupled to a power supply and configured to receive a charging coupler of a target object to be charged; a switch arranged between the electrical connector and the power supply and configured to connect or disconnect the power supply to or from the electrical connector; and a controller coupled to the switch and configured to control the switch to close in response to a first trigger signal. The disclosure also provides a server comprising: a receiving unit configured to receive a charging request; a processor configured to identify, based on the charging request, a charging module corresponding to the charging request; and a sending unit configured to send a first trigger signal to the charging module to enable the charging module to charge a target object to be charged. The disclosure also provides a charging system comprising a plurality of charging modules and a server.



INTERNATIONAL SEARCH REPORT

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B. FIELDS SEARCHED		
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010/013436 A1 (LOWENTHAL RICHARD [US] ET AL) 21 January 2010 (2010-01-21) paragraphs [0024], [0056]; figures 1,3,5,7 -----	1-11
X	US 2010/283426 A1 (REDMANN WILLIAM GIBBENS [US]) 11 November 2010 (2010-11-11) paragraph [0079] - paragraph [0082]; figure 7 -----	1,12-15
A	DE 10 2007 038245 A1 (LEHMANN MARIO [DE]) 5 March 2009 (2009-03-05) paragraph [0019]; figures 1,3 -----	1,11
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents :		
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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010013436 A1	21-01-2010	US 2010013436 A1 US 2011316478 A1	21-01-2010 29-12-2011
US 2010283426 A1	11-11-2010	NONE	
DE 102007038245 A1	05-03-2009	NONE	