



(12) **United States Patent**  
**Olsen et al.**

(10) **Patent No.:** **US 9,232,158 B2**  
(45) **Date of Patent:** **Jan. 5, 2016**

(54) **LARGE DYNAMIC RANGE CAMERAS**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 176 days.

(21) Appl. No.: **14/063,236**

(22) Filed: **Oct. 25, 2013**

(65) **Prior Publication Data**

US 2014/0049660 A1 Feb. 20, 2014

**Related U.S. Application Data**

(63) Continuation of application No. 13/681,603, filed on Nov. 20, 2012, now Pat. No. 8,598,504, which is a continuation of application No. 13/465,229, filed on May 7, 2012, now Pat. No. 8,334,494, which is a

(Continued)

(51) **Int. Cl.**  
**H01L 27/00** (2006.01)  
**H04N 5/335** (2011.01)

(Continued)

(52) **U.S. Cl.**  
CPC ..... **H04N 5/3355** (2013.01); **G02B 3/0062** (2013.01); **G02B 3/0075** (2013.01); **G02B 9/12** (2013.01); **H01L 27/14618** (2013.01); **H01L 27/14621** (2013.01); **H01L 27/14625** (2013.01); **H01L 27/14645** (2013.01); **H01L 31/0232** (2013.01); **H04N 5/2253** (2013.01); **H04N 5/2254** (2013.01); **H04N 5/2353** (2013.01);

(Continued)

(58) **Field of Classification Search**

CPC ..... H01L 27/14618; H01L 27/14621; H01L 27/14625; H01L 27/14634; H01L 27/14645; H04N 5/2253; H04N 5/2254; H04N 5/2353; H04N 5/332; H04N 5/335  
USPC ..... 250/208.1; 348/273, 302, 308  
See application file for complete search history.

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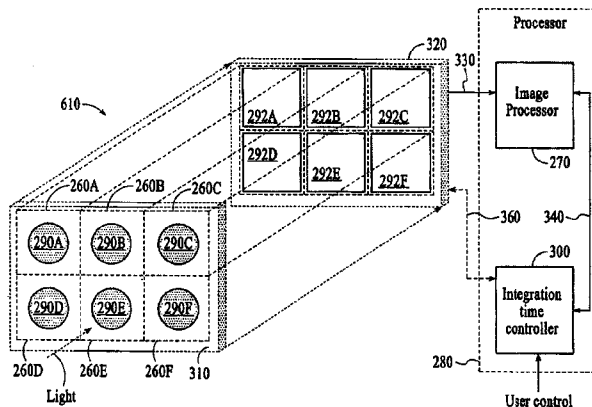
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(57) **ABSTRACT**

A digital camera includes a plurality of channels and a processing component operatively coupled to the plurality of channels. Each channel of the plurality of channels includes an optics component and a sensor that includes an array of photo-detectors. The processing component is configured to separately control an integration time of each channel, where a first integration time of a first channel is less than a second integration time of a second channel. The processing component is also configured to combine data from the plurality of channels to generate an image.

**20 Claims, 24 Drawing Sheets**



**Related U.S. Application Data**

- continuation of application No. 12/496,854, filed on Jul. 2, 2009, now Pat. No. 8,198,574, which is a continuation of application No. 11/788,122, filed on Apr. 19, 2007, now Pat. No. 7,564,019, and a continuation-in-part of application No. 11/212,803, filed on Aug. 25, 2005, now abandoned.
- (60) Provisional application No. 60/795,882, filed on Apr. 28, 2006, provisional application No. 60/604,854, filed on Aug. 25, 2004, provisional application No. 60/695,946, filed on Jul. 1, 2005.
- (51) **Int. Cl.**  
*G02B 9/12* (2006.01)  
*H01L 27/146* (2006.01)  
*H01L 31/0232* (2014.01)  
*H04N 5/225* (2006.01)  
*H04N 5/235* (2006.01)  
*H04N 5/33* (2006.01)  
*H04N 5/353* (2011.01)  
*H04N 9/04* (2006.01)  
*H04N 9/09* (2006.01)  
*H04N 9/097* (2006.01)  
*G02B 3/00* (2006.01)

- (52) **U.S. Cl.**  
 CPC ..... *H04N 5/332* (2013.01); *H04N 5/335* (2013.01); *H04N 5/3532* (2013.01); *H04N 9/045* (2013.01); *H04N 9/09* (2013.01); *H04N 9/097* (2013.01); *G02B 3/0031* (2013.01); *G02B 3/0043* (2013.01); *H01L 27/14634* (2013.01); *H01L 2924/0002* (2013.01); *H04N 2209/049* (2013.01)

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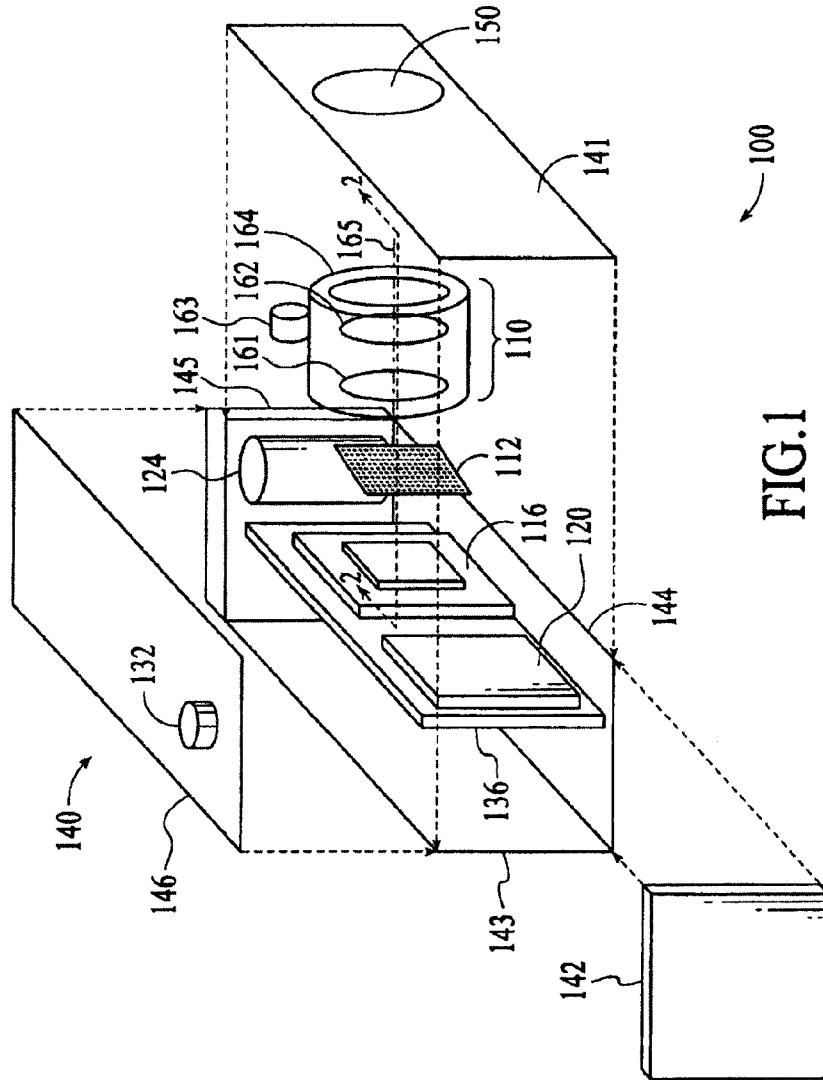
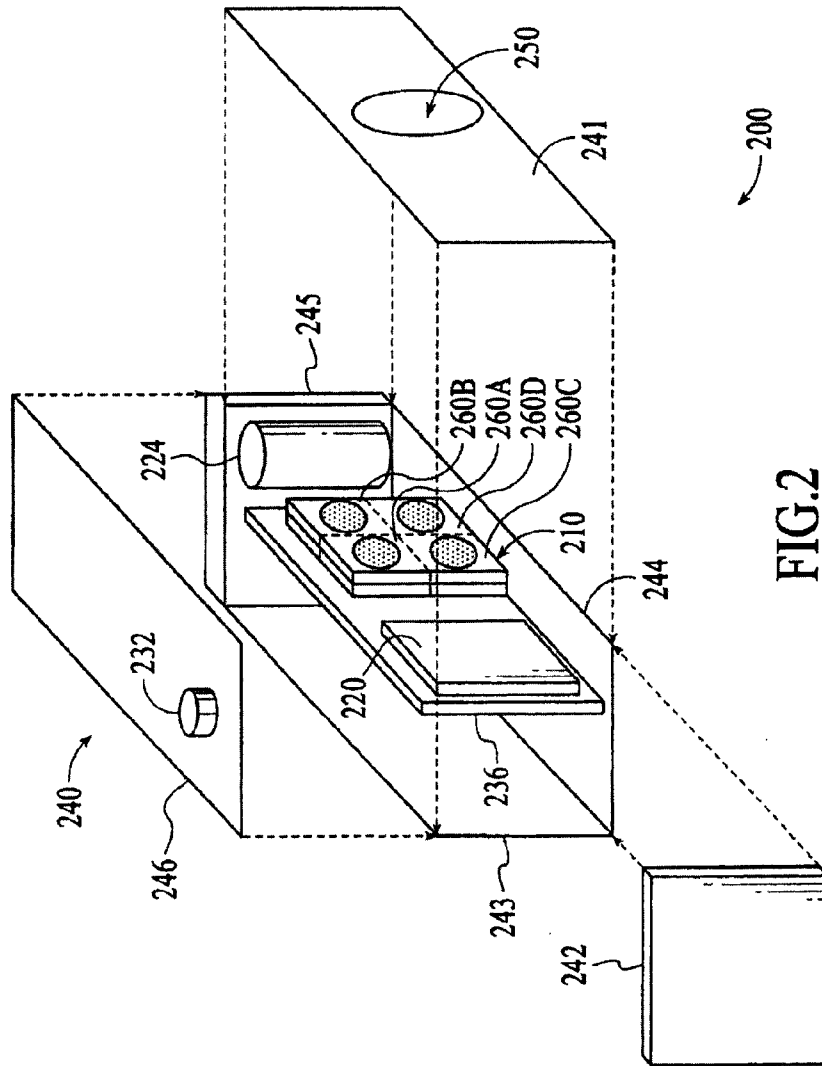


FIG. 1



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