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Shabtay et al.

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(54) **ZOOM DUAL-APERTURE CAMERA WITH FOLDED LENS**

H04N 5/23212; H04N 5/2254; H04N 5/2257; H04N 5/2258; H04N 5/247; H04N 5/2253

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See application file for complete search history.

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(58) **Field of Classification Search**

CPC G02B 13/0065; G02B 13/04; G02B 7/102; G02B 13/009; G02B 13/02; G02B 7/09;

(57) **ABSTRACT**

Zoom digital cameras comprising a Wide sub-camera and a folded fixed Tele sub-camera. The folded Tele sub-camera may be auto-focused by moving either its lens or a reflecting element inserted in an optical path between its lens and a respective image sensor. The folded Tele sub-camera is configured to have a low profile to enable its integration within a portable electronic device.

19 Claims, 15 Drawing Sheets

