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**Tang et al.**

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(54) **OPTICAL LENS SYSTEM**

(56) **References Cited**

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**Tsung Han Tsai**, Taichung (TW); **Hsin Hsuan Huang**, Taichung (TW)

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(73) Assignee: **Largan Precision Co., Ltd.**, Taichung (TW)

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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 163 days.

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(21) Appl. No.: **12/980,508**

*Primary Examiner* — William Choi

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(65) **Prior Publication Data**

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(30) **Foreign Application Priority Data**

Oct. 6, 2010 (TW) ..... 99133981 A

(51) **Int. Cl.**

<b>G02B 3/02</b>	(2006.01)
<b>G02B 13/18</b>	(2006.01)
<b>G02B 9/60</b>	(2006.01)

(52) **U.S. Cl.** ..... **359/714; 359/764**

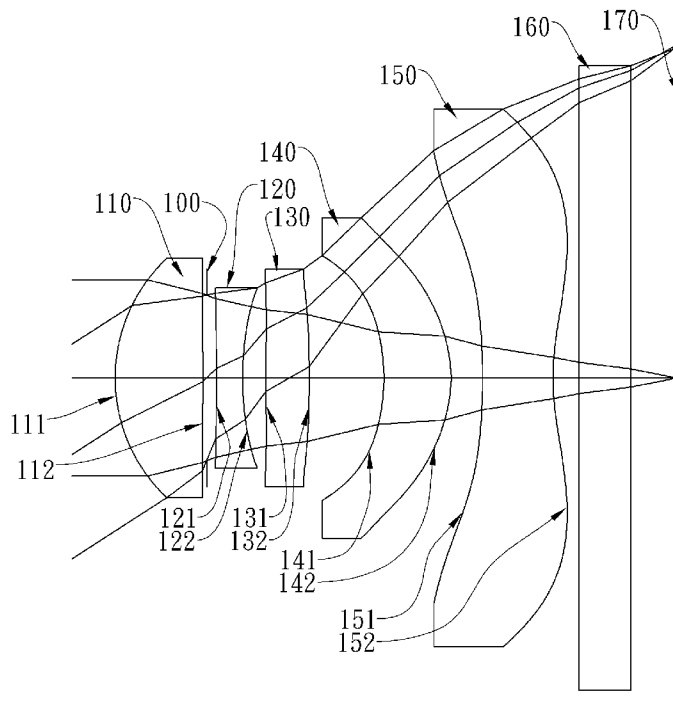
(58) **Field of Classification Search** ..... 359/714, 359/753, 764

See application file for complete search history.

(57) **ABSTRACT**

The present invention provides an optical lens system comprising, in order from an object side to an image side: a first lens element with positive refractive power having a convex object-side surface; a second lens element with negative refractive power; a third lens element with positive refractive power having a convex object-side surface and a convex image-side surface; a fourth lens element; and a fifth lens element having a concave image-side surface, the object-side and image-side surfaces thereof being aspheric and at least one inflection point being formed on the image-side surface. Such arrangement of optical elements can effectively minimize the size of the optical lens system, lower the sensitivity of the optical system, and obtain higher image resolution.

**18 Claims, 29 Drawing Sheets**



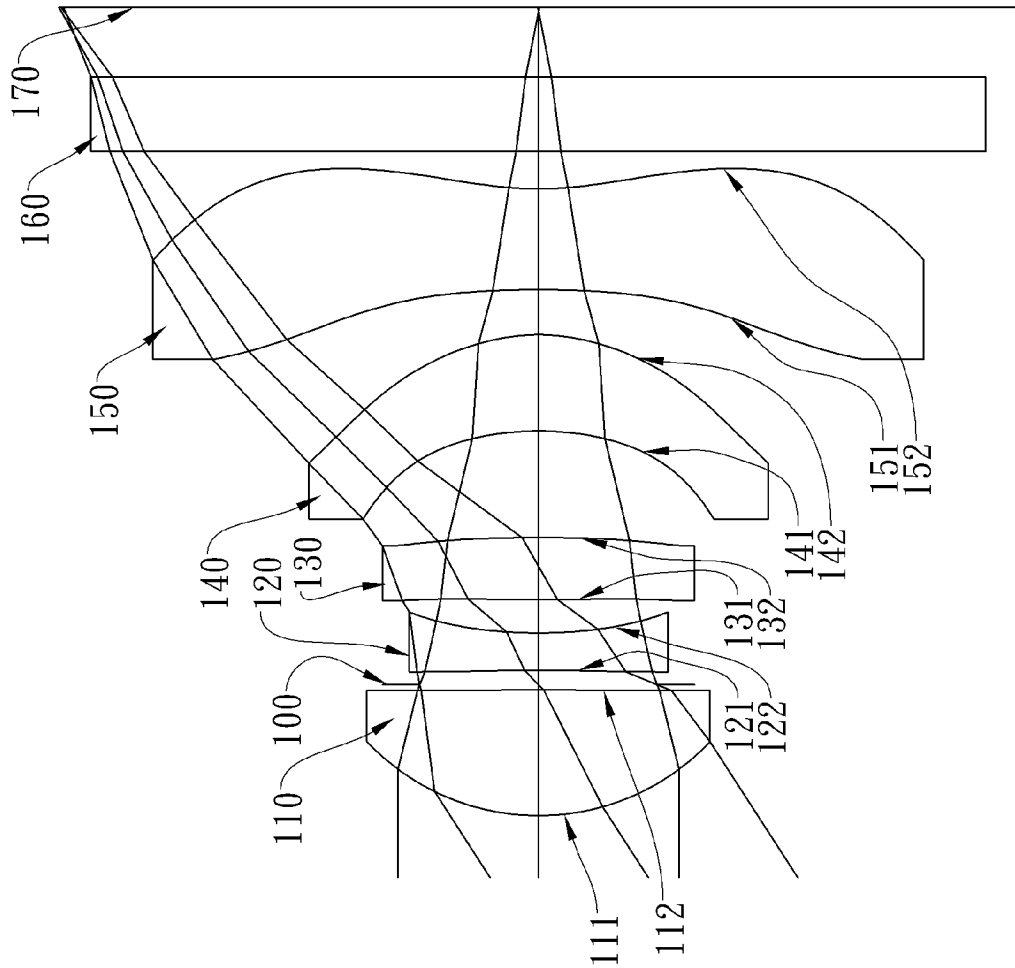


Fig. 1A

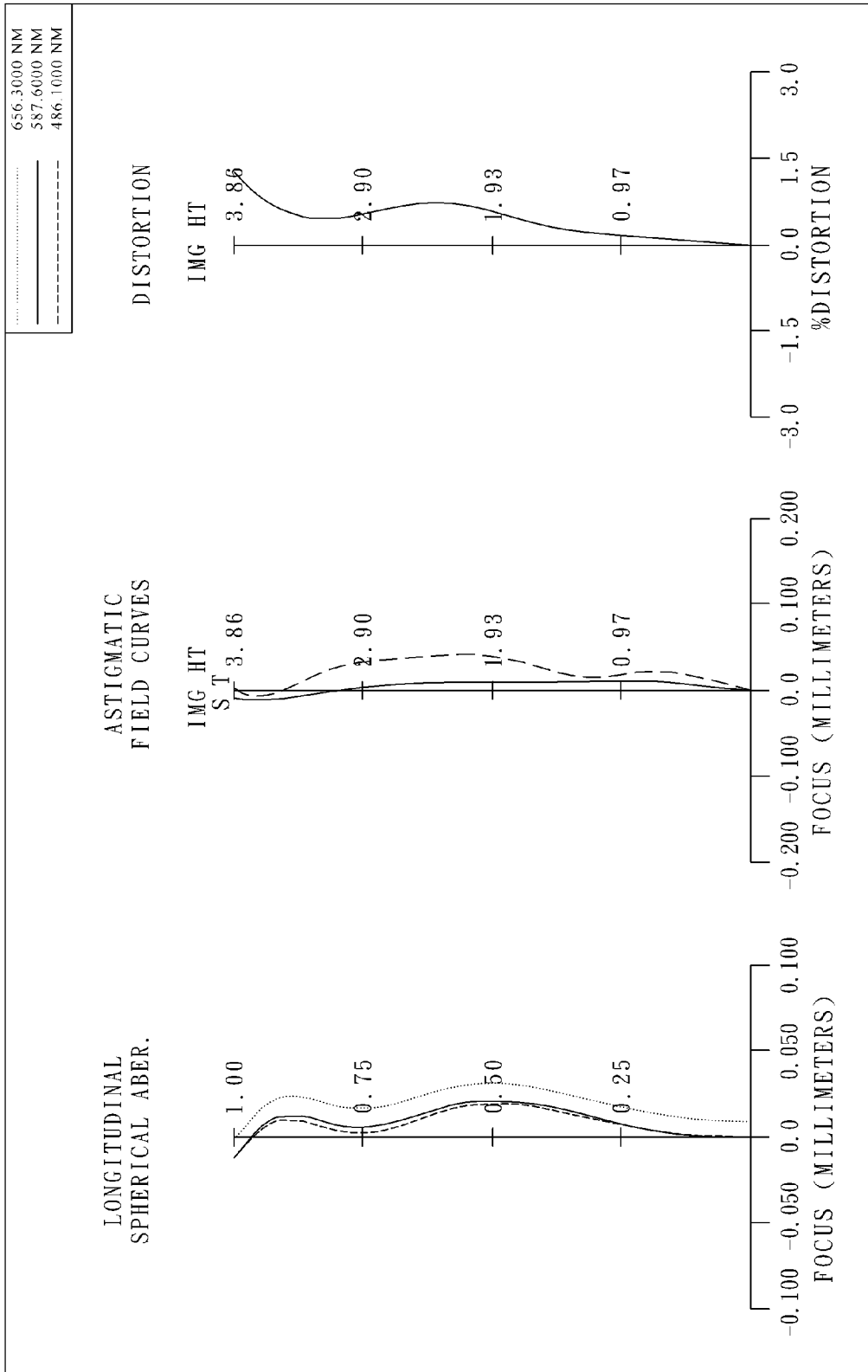


Fig. 1B

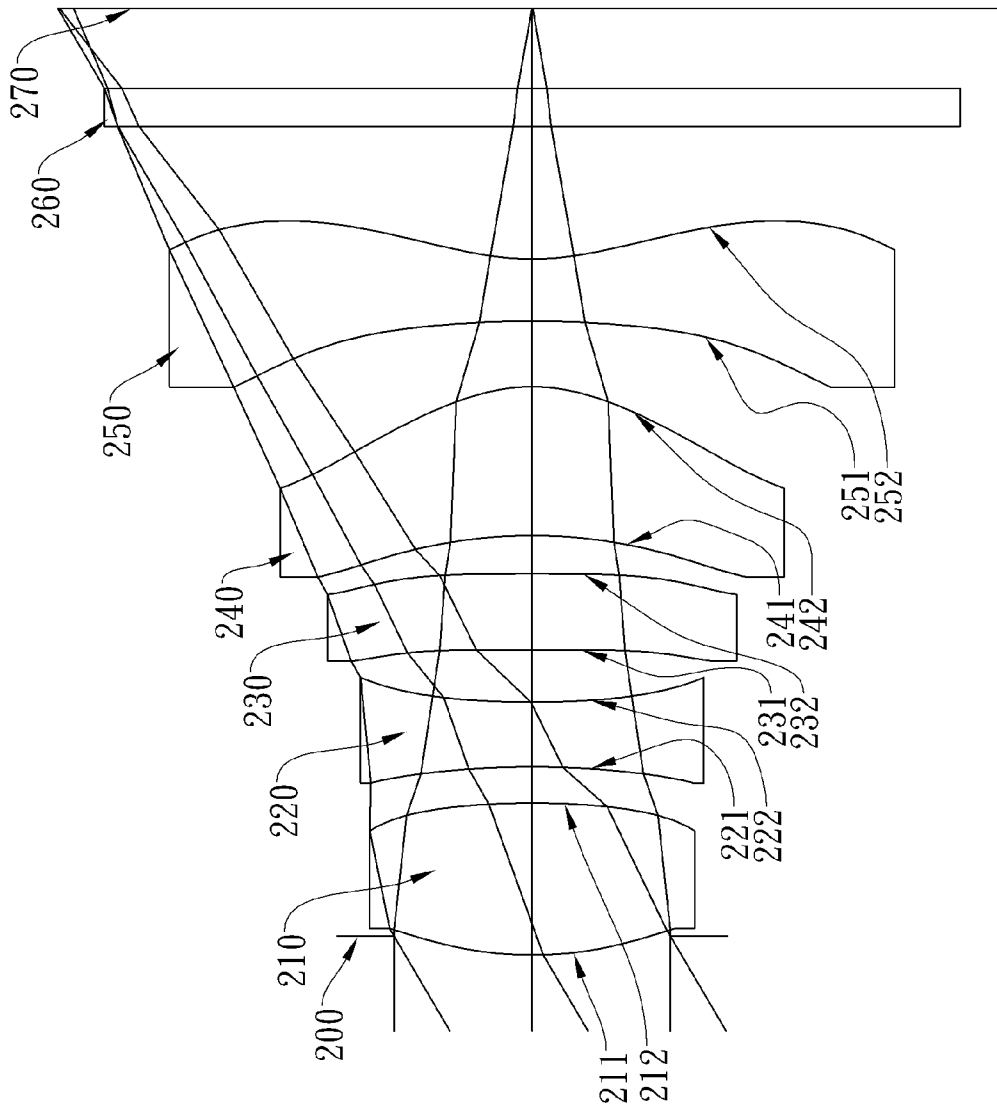


Fig. 2A

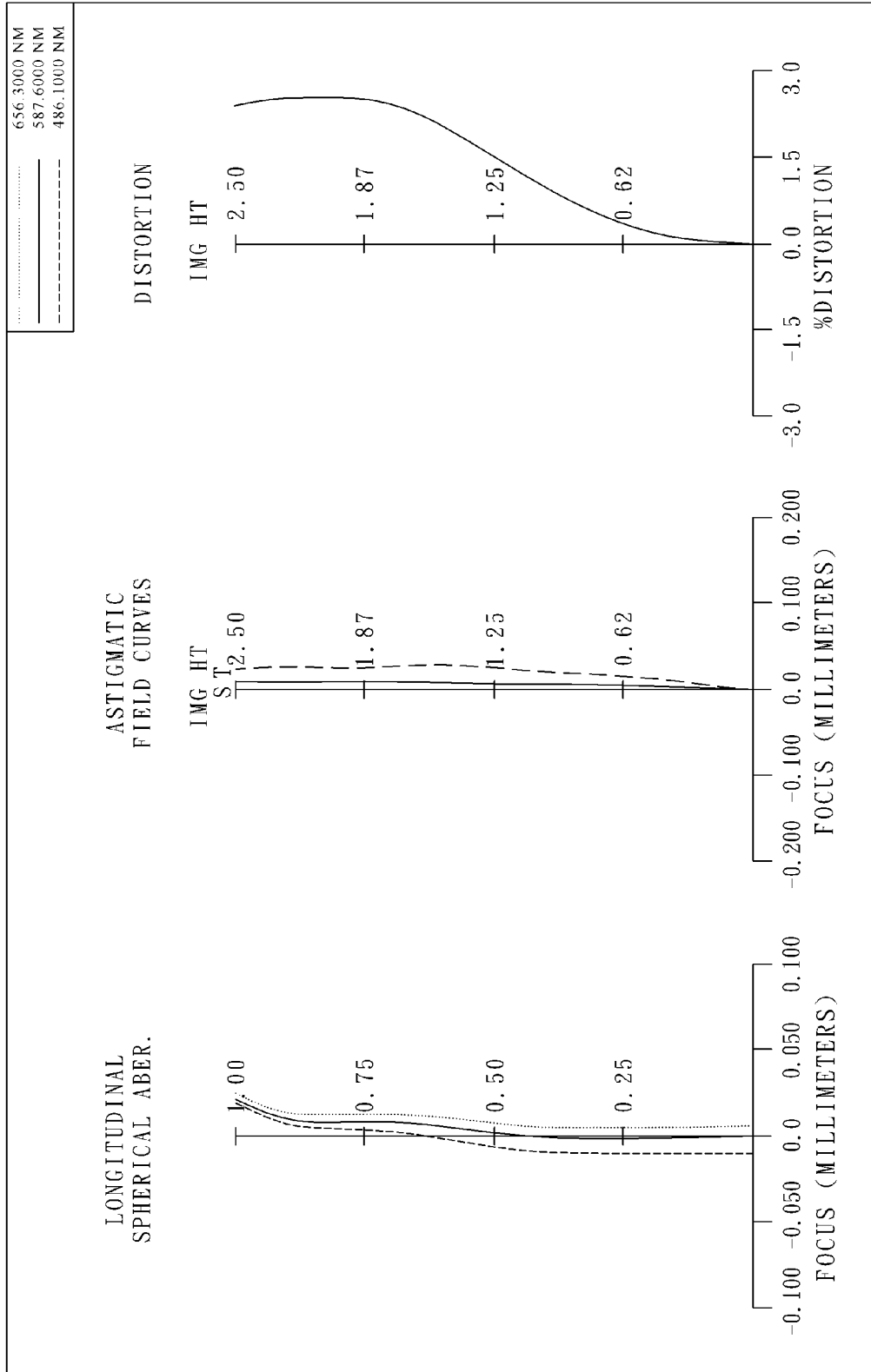


Fig. 2B

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