◎ Title

Autofocusing method and device

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Abstract	In the traditional Knife-Edge Method, when the object to be measured is near the focus, the speckle will be severely deformed, which will easily cause the system to miscalculate the defocus distance. Therefore, this patent proposes a new method that combines the Knife-Edge Method with the concepts of Astigmatism Method and Conjugate Focus Method, effectively deal with the above problems, and improve the accuracy of the autofocus module.
Benefits	The proposed method is capable of solving the problem that the reflected speckle encounters a severely deformed area near the focal point. Thus, the step of determining the defocus direction in traditional Knife-Edge Method is removed. Furthermore, the accuracy and response time of the autofocus system can be improved by using the proposed method.
Industry Categories	Automated testing, Quality Control, Diagnosis and prediction, Manufacturing, Testing Industry, Biomedical Industry
Keywords	Autofocusing, autofocus, focus
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Severely deformed region

0 µm　　Traditional Scale　　750 µm

Severely Deformed Area

Proposed Scale　　-250 µm　　0 µm　　250 µm
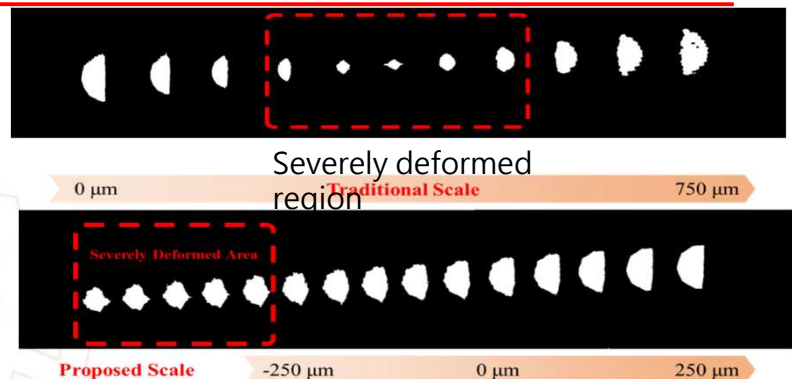
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