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Author Chong-Hwai Su
Author's Email Address No Public.
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Abstract
This paper presents a control strategy combining with the fuzzy control approach, in the intensity error and change of intensity error are used as the inputs of the fuzzy control system, and the output is the displacement of photo detector, the track of maximum intensity can be achieved by suitably controlling the displacement of photo detector. Initially, the intensity error does not reach the preset condition, the photo detector moves at the fastest speed until hitting the condition and using fuzzy controller to perform the maximum intensity control.
According to the relationships between part intensity error, change of intensity error and position of maximum intensity, the fuzzy control rules are constructed. The normalization of intensity error and change of intensity error makes the fuzzy controller be adaptive to different maximum intensity tracking control.
The results indicate that the application of the proposed control strategy, no matter what different intensity or moving light source, the tracking target of maximum intensity can be achieved.
Keywords: fuzzy control, intensity error, tracking of maximum intensity
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