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**LASER IRRADIATION METHOD AND LASER IRRADIATION APPARATUS,
AND METHOD FOR FABRICATING SEMICONDUCTOR DEVICE**

ABSTRACT OF THE DISCLOSURE

When a laser beam is radiated on a semiconductor film under appropriate conditions, the semiconductor film can be crystallized into single crystal-like grains
5 connected in a scanning direction of the laser beam (laser annealing). The most efficient laser annealing condition is studied. When a length of one side of a rectangular substrate on which a semiconductor film is formed is b , a scanning speed is V , and acceleration necessary to attain the scanning speed V of the laser beam relative to the substrate is g , and when $V = (gb/5.477)^{1/2}$ is satisfied, a time necessary for the
10 laser annealing is made shortest. The acceleration g is made constant, however, when it is a function of time, a time-averaged value thereof can be used in place of the constant.



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