

SYSTEMS AND METHODS FOR REDUCING PULSED LASER BEAM PROFILE NON-UNIFORMITIES FOR LASER ANNEALING

ABSTRACT

Systems and methods for reducing pulsed laser beam profile non-uniformities for laser annealing are disclosed. The methods include directing an initial pulsed laser beam along an optical axis, and imparting to each light pulse a time-varying angular deflection relative to the optical axis. This forms a new laser beam wherein each light pulse is smeared out over an amount of spatial deflection δ sufficient to reduce the micro-scale intensity variations in the laser beam. The new laser beam is then used to form the line image, which has better intensity uniformity as compared using the initial laser beam to form the line image.

(Figure 2)