

LASER PROCESSING APPARATUS WITH POLYGON MIRROR

ABSTRACT

The disclosure is directed to a laser processing apparatus employing a polygon mirror, capable of processing an object efficiently. The apparatus is comprised of a laser generator for emitting a laser beam, a polygon mirror rotating at the axis and having a plurality of reflection planes which reflect the laser beam incident thereon from the laser generator, and a lens irradiating the laser beam on an object, e.g., a wafer, that is settled on a stage, after condensing the laser beam reflected from the polygon mirror. In applying the laser beam to the wafer in accordance with a rotation of the polygon mirror, the stage on which the wafer is settled moves to enhance a relative scanning speed of the laser beam, which enables an efficient cutout operation for the wafer. As it uses only the laser beam to cutout the wafer, there is no need to change any additional devices, which improves a processing speed and cutout efficiency. Further, it is available to control a cutout width and to prevent a recasting effect by which vapors generated from the wafer during the cutout process are deposited on cutout section of the wafer, resulting in accomplishing a wafer cutout process in highly fine and precise dimensions.

Fig. 1A