ABSTRACT

LASER SCRIBER FOR DICING OF SEMICONDUCTOR WAFERS

A laser beam machining method and a laser beam machining device capable of cutting a work without producing a fusing and a cracking out of a predetermined cutting line on the surface of the work, wherein a pulse laser beam is radiated on the predetermined cut line on the surface of the work under the conditions causing a multiple photon absorption and with a condensed point aligned to the inside of the work, and a modified area is formed inside the work along the predetermined cut line by moving the condensed point along the predetermined cut line, whereby the work can be cut with a rather small force by cracking the work along the predetermined cut line starting from the modified area and, because the pulse laser beam radiated is not almost absorbed onto the surface of the work, the surface is not fused even if the modified area is formed.

NO FIGURE.