

Laser Scribing OF Thin-film Solar Cell Panel

Abstract

[0042] The present invention describes an apparatus (100) for a first laser scribing (P1) on the front electrode of a thin film solar cell panel and a similar apparatus (100a) for subsequent laser scribing (P2,P3) on the semiconductor layer and semiconductor layer/rear electrode. Before starting scribing process P1, the left hand edge or reference line on the left hand edge on a workpiece is aligned substantively parallel to the linear drive (140) before translating the workpiece on the apparatus (100). Similarly, the first and second scribed lines (Lp1,Lp2) formed during the P1 and P2 processes are separately aligned parallel to the linear drive (140) before starting the relevant process (P2,P3). Alternatively, parallelism of the workpiece is carried out for each batch of the workpiece. In both apparatuses (100,100a), the laser sources (150) are mounted on independently motorised axes.

[0043] FIG. 2A for publication