

ABSTRACT

A shutter device according to an aspect of the invention includes a housing having an opening, a plurality of shutter plates, and a plurality of drive parts. The plurality of drive parts are connected to the plurality of shutter plates and are configured to change postures of the plurality of shutter plates. At least a part of a region of the opening serves as a passage region through which sputtered particles emitted from a target pass. The plurality of drive parts are configured to change a state of the shutter plate to a closed state, a parallelized state, or an open state. In the closed state, the plurality of shutter plates are disposed to close at least the passage region of the sputtered particles. In the parallelized state, a part of the plurality of shutter plates is disposed in the passage region of the sputtered particles such that flight directions of the sputtered particles are parallel to each other. In the open state, the plurality of shutter plates are retracted from the passage region of the sputtered particles.