

RESONANT SCANNING MIRROR

ABSTRACT

A system and method allow for a more effective synchronous scanning mirror (SSM). A lithography apparatus comprises an illumination system, a patterning device, a substrate table, and a projection system. The illumination system conditions a beam of radiation received from a radiation source operating at a first frequency. The patterning device patterns the beam. The substrate table supports and scans a substrate at a scanning velocity. The projection system includes a scanning device including a reflective device and a plurality of flexures. The plurality of flexures being configured to allow the reflective device to resonate about an axis of rotation. The scanning device is configured to scan the patterned beam onto a target area of the substrate. The resonant frequency of the scanning device is substantially equal to the first frequency and is synchronized with the scanning velocity.

Figure 5