

ABSTRACT

Disclosed are a shutter device and a control method therefor, a mask aligner and an exposure dose control method therefor. The shutter device comprises: a light blocking unit and a voice coil motor (100), wherein the voice coil motor (100) comprises a permanent magnet module (110), a guide track assembly (120) and a coil assembly (130). The coil assembly (130) is arranged on the guide track assembly (120). The permanent magnet module (110) generates a magnetic field inside the guide track assembly (120). The light blocking unit comprises two shutter blades (200). The shutter blades (200) are connected to the coil assembly (130). After being energised, the coil assembly (130) generates magnetic fields the opposite of or the same as the magnetic field in the guide track assembly (120), so that the coil assembly (130) moves forwards or reversely along the guide track assembly (120) to drive the opening or closing of the two shutter blades (200). By means of directly connecting the coil assembly (130) of the voice coil motor (100) to the light blocking unit, the opening and closing time of the shutter blades (200) is greatly reduced, thus increasing a small-dose exposure yield and increasing the light source utilisation rate in unit time.