

ABSTRACT

The invention provides a magnetron, a magnetron sputtering chamber, and a magnetron sputtering apparatus. The magnetron includes a first outer magnetic pole and a first inner magnetic pole of opposite polarities. The first outer magnetic pole has an annular structure around a rotation center. The first inner magnetic pole is located on the inner side of the first outer magnetic pole, and a first magnetic field track is formed between the first inner magnetic pole and the first outer magnetic pole. A straight line starting from the rotation center and along one of the radial directions passes through the first magnetic field track at least twice in succession, and the magnetic-field directions at the two positions of the first magnetic field track that the straight line passes through twice in succession are opposite to each other. The magnetron provided by the invention can solve the technical problem in the existing technology that the uniformity of the thin film formed by sputtering is poor.

Fig. 3.