**This is a related question in boardgames.stackexchange.com:**

<http://boardgames.stackexchange.com/q/10836/4779>

**Hidetchi** <https://www.youtube.com/watch?v=h9zb5udfeWo>

**Sun 1/33m = 3.0303 cm**

Length 12 sun = 36.3636 cm

Width 11 sun = 33.333 cm

**Nekomado board measurements:**

Size: 35.1 cm x 29.7 cm

**Other measurements for the board:**

Length 33.66 cm

Width 33.33 cm

**Measurements for the squares in the board:**

Length 3.6 cm = (36.36 - 4)/9 = 3.6

Width 3.3 cm = (33.333 - 4)/9 = 3.3

**The number of pieces in a set:**

King 2

Rook 2

Bishop 2

Gold 4

Silver 4

Knight 4

Lance 4

Pawn 19

**The exact measurements for each piece.**

Measurements provided in this order:

Width (middle), length, thickness

<http://shogi-koma.jp/shop/koma.html>

**My angles Bottom to top 81° and top to middle 18°**

**Manufacturing method 1 (Mikura, Yunnan wood)**

31.5 mm 28 mm 9.5 mm King

30.5 mm 27 mm 9.0 mm Rook & Bishop

29.5 mm 26 mm 8.75 mm Gold & Silver

28.5 mm 25 mm 8.25mm Knight

28 mm 23 mm 8.0 mm Lance

27 mm 22.5 mm 7.75 mm Pawn

**Manufacturing method 2 (sham material)**

30.5 mm 26.5 mm 8.5 mm King

29.5 mm 25.5 mm 8.3 mm Rook & Bishop

28.5 mm 24.5 mm 8.0 mm Gold & Silver

27.5 mm 23.0 mm 7.5 mm Knight

27.5 mm 22.0 mm 7.5 mm Lance

26.5 mm 21.0 mm 6.5 mm Pawn

**Other dimensions:**

32mm 28.7 mm 9.7 mm 81° 85° King

31mm 27.7 mm 9.3 mm 81° 85° Rook & Bishop

30mm 26.7 mm 8.8 mm 81° 85° Gold & Silver

29mm 25.5 mm 8.3 mm 81° 85° Knight

28mm 23.5 mm 8.0 mm 81° 85° Lance

27mm 22.5 mm 7.75 mm 81° 85° Pawn

angle (general, bottom > top)

angle (thickness, bottom > top)

The golden proportion (with 20 pawns) for the Shogi piece is determined by each angular of the pentagon. Let’s put any Shogi piece on the board correctly. If your piece has the shape with the top at an angle of 144 degrees, the middles at an angle of 117 degrees, and the bottoms of 81 degrees, it means you got ideal pieces. Those angles have also a good reason.