WHAT IS CLAIMED IS:

1. A probe needle comprising:

a head;

a tail; and

a body connected between the head and the tail, the body including:

a first flat section curvedly extending from the head towards the tail within a horizontal plane;

a first flat section having a constant width; and

a second flat section connected with an end of the first flat section;

wherein the width of the first flat section is greater than a thickness of the second flat section, a diameter of the head and a diameter of the tail;

wherein the first flat section has a thickness smaller than a width of the second flat section, the diameter of the head and the diameter of the tail;

wherein the width of the second flat section is greater than the thickness of the first flat section, the diameter of the head and the diameter of the tail; and

wherein the width of the second flat section extends horizontally in a first direction in the horizontal plane and the width of the first flat section extends horizontally in a second direction in a way that the first direction is not parallel to the second direction when the first and second directions are projected on the horizontal plane.

2. The probe needle as claimed in claim 1, wherein the second flat section is connected between the first section and the tail.

3. The probe needle as claimed in claim 1, wherein the second flat section is connected between the first section and the head.

4. The probe needle as claimed in claim 1, wherein the first direction is orthogonal to the second direction when the first and second directions are projected on the horizontal plane.

5. A probe module comprising:

an upper die having at least two upper guide holes;

a lower die having at least two lower guide holes; and

at least two probe needles of claim 1 arranged in a way that the head of each of the probe needles is inserted in one of the upper guide holes, the tail of each of the probe needles is inserted in one of the lower guide holes, the first flat section of the body of each of the probe needles is located between the upper die and the lower die, and the second flat section of the body of each of the probe needles is stopped at a surface of the lower die that faces the upper die; the width of the second flat section of the body of each of the probe needles being greater than a diameter of each of the lower guide holes.

6. The probe module as claimed in claim 5, wherein the second flat section of the probe needle is connected between the first section and the tail of the probe needle.

7. A probe module comprising:

an upper die having at least two upper guide holes;

a lower die having at least two lower guide holes;

a positioning film disposed between the upper die and the lower die and having at least two positioning holes;

at least two probe needles of claim 1 arranged in a way that the head of each of the probe needles is inserted in one of the upper guide holes through one of the positioning holes of the positioning film, the tail of each of the probe needles is inserted in one of the lower guide holes, the first flat section of the body of each of the probe needles is located between the positioning film and the lower die, and the second flat section of the body of each of the probe needles is stopped at a surface of the positioning film that faces the upper die; the width of the second flat section of the body of each of the probe needles being greater than a diameter of each of the positioning holes.

8. The probe module as claimed in claim 7, wherein the second flat section of the probe needle is connected between the first section and the head of the probe needle.