

◆ Selected materials and specifications ◆

Probe needles have been used for many years as electrode needles for current-carrying tests of semiconductor circuits and microelectrical circuits. We have prepared standard stock items by selecting carefully selected materials and specifications based on our many years of handling experience. We also accept custom orders* for tungsten carbide and palladium to meet your specifications.

*We will accept orders for specifications other than the standard stock items in quantities of 100 or more. Please contact our sales department for specifications and availability (delivery date).

◇ Probe Needle Specification Standard ◇

*** Basic form ***

*** Needle No. Description**
W 26-05-05 x 1 1/2"

(L) Length: 3/4"(19mm) 1"(25mm) 1 1/4"(32mm) 1 1/2"(38mm)
 (R) Tip Radius: 005(1.2μ) 01(2μ) 02(5μ) 05(12μ) 10(25μ) 20(50μ)
 (θ) Tip angle: 05(5degrees) 08(8degrees) 10(10degrees) 20(20degrees)
 (D) Shaft Diameter: 20(φ0.5mm) 26(φ0.66mm) 28(φ0.71mm)
 Material: W(Tungsten) S(Osmium alloy) T(Tungsten carbide) P(Palladium Alloys)

◆ Features of materials used ◆

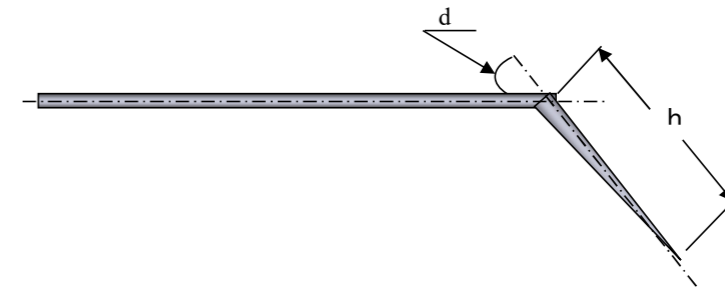
※Except for tungsten, the tip radius is processed by our own precision mechanical polishing.

- Tungsten (W)** Tungsten is the most commonly used probe needle material for electrical property testing. Electropolished* to parabolic finish at the tip for low contact resistance and superior mechanical strength.
- Osmium alloy (S)** Low cost is achieved by using Ni alloy at the end and welding and grinding osmium alloy at the tip. Its electrical properties are the best among white metals, with high wear and corrosion resistance and low contact resistance.
- Tungsten carbide (T)** Very high hardness and excellent electrical properties, as an inspection needle with high wear resistance. Widely used. Also suitable for use as a plunger pin, a beveling pin, and for removing oxide film.
- Palladium Alloys (P)** Palladium-based precious metal alloy needles with good electrical properties and high wear resistance. The needle is finished and priced inexpensively for a precious metal.
 alias: Palinay 7

Standard Stock Needle No.

Tungsten	Osmium alloy	Tungsten carbide	Palladium Alloys
W20-05-005 x 1 1/2"	S26-10-10 x 1"	T26-08-02 x 1 1/2"	P26-10-05 x 1 1/2"
W20-05- 01 x 1 1/2"		T26-10-10 x 1 1/2"	P26-10-10 x 3/4"
W20-05- 10 x 1 1/2"			P26-10-10 x 1"
		T28-10-10 x 1"	P26-10-10 x 1 1/4"
W26-05-005 x 1 1/2"			P26-10-20 x 1"
W26-05- 01 x 1 1/2"			
W26-05- 10 x 1 1/2"			

* Special Needle : Bending Needle *



Total length (L): Standard = <38 mm, depending on bending position and angle

Material (W): Tungsten

Diameter of shaft (D): Standard = 0.50mm; 0.66mm

Pilot angle (θ): Standard = 5 degrees (±2 degrees)

Pilot radius (R): Standard = 12μ(±3); 25μ(±3)

Angle of curvature (d): Standard = 75 degrees (±5 degrees) h = 8mm (±1mm)

(For specifications such as bent needles, we will process to your requested dimensions separately.)

T-4 probe needle

Ideal for ULSI, VLSI, and low cost

It uses a very fine needle tip (cat whisker shape) identical to the tip for picoprobes. It is mainly used to drive submicron circuits and suitable for general probing use.

MODEL NO.	Tip Radius (R)	Diameter (φ)	shape
T-4-5	<0. 1μ	5μ	
T-4-10	<0. 1μ	10μ	
T-4-22	<1μ	22μ	
T-4-35	<2μ	35μ	
T-4-60	<3μ	60μ	
T-4-125	<5μ	125μ	

Blade needle

The blade needle is a DC needle with a beryllium needle connected to a ceramic plate. It is easy to handle and can be used to produce original DC probes by soldering to boards, etc.

MODEL KC1: Ceramic blade + beryllium copper needle

A DC probe assembly kit is also available separately.

