**KD2Pro Thermal Conductivity Analyzer**

**Manufacturer:** Decagon Devices, Inc.

**Technical Specifications**

**Controller:**
- Power: 4 AA batteries
- Case Size: 15.5 cm x 9.5 cm x 3.5 cm
- Display: 3 cm x 6 cm, 128 x 64 pixel graphics LCD
- Keypad: 6 key, sealed membrane
- Data Storage: 4,095 measurements in flash memory (both raw and processed data are stored for download)
- Interface: 9-pin serial
- Read Modes: Manual and Auto Read
Sensors

1. **6 cm (small) single needle (KS-1)**

Size: 1.3 mm diameter x 6 cm long
Range: 0.02 to 2.00 W/ (m * K) (thermal conductivity)
      50 to 5000 °C * cm/W (thermal resistivity)
Accuracy:
(Conductivity): ±5% from 0.2 to 2 W/ (m * K) ± 0.01 W/ (m * K)
      From 0.02 to 0.2 W/ (m * K)
Cable length: 0.8 m

2. **10 cm (large) single needle (TR-1)**

Size: 2.4 mm diameter x 10 cm long
Range: 0.1 to 4.0 W/ (m * K) (thermal conductivity)
      25 to 1000 °C * cm/W (thermal resistivity)
Accuracy:
(Conductivity): ±10% from 0.2 to 4.0 W/ (m*K) ±0.02 W/ (m*K)
      from 0.1 to 0.2 W/ (m*K)
Cable length: 0.8 m

3. **3 cm dual-needle (SH-1)**

Size: 1.3 mm diameter x 3 cm long, 6 mm spacing
Range: 0.02 to 2.00 W/ (m*K) (thermal conductivity)
      50 to 5,000 °C * cm/W (thermal resistivity)
      0.1 to 1.0 mm²/s (diffusivity)
      0.5 to 4.0 mJ/ (m³K) (volumetric specific heat)
Accuracy:
(Conductivity) ± 10% from 0.2 to 2 W/ (m*K)
± 0.01 W/(m*K) from 0.02 to 0.20 W/(m*K)
(Diffusivity) ±10% at conductivities above 0.1 W/(m*K)
(Volumetric Specific Heat) ±10% at conductivities above 0.1 W/(m*K)
Cable length: 0.8 m