



**55956** Seebeck and Peltier Effect Demonstrator illustrates the two thermoelectric effects. It is useful in understanding the conversion of thermal energy into electrical energy and vice versa. The thermoelectric module used is of high quality and has advantage over conventional thermocouple in term of its Seebeck and Peltier Coefficients. Thermal emf is generated by heating one arm and cooling the other arm of the thermoelectric module. Seebeck Effect is demonstrated by using a DC motor with a fan. Thermal emf and temperatures of the hot and cold arm are simultaneously displayed on LCD. The Peltier Effect is demonstrated by directly supplying current to the module and observing the temperature gradient created on the two sides of the thermoelectric module.

### Features

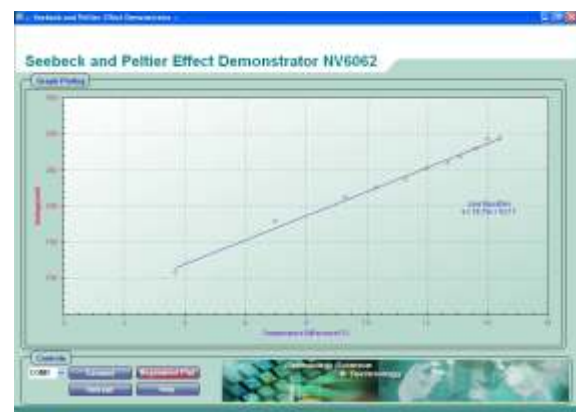
1. High Seebeck Coefficient of thermoelectric module
2. Microcontroller based measurement
3. Digital display of temperature of hot and cold side
4. Provided with PC based measurement and calculation

### Object

1. Study of the Seebeck Effect
2. Study of the Peltier Effect
3. Understanding of conversion of energy from one form to another
4. Application of thermal energy
5. To plot graph between thermo emf generated v/s temperature difference
6. Calculation of Seebeck Coefficient

### Technical Specifications

|                    |   |                       |
|--------------------|---|-----------------------|
| Display            | : | LCD (16 x 2)          |
| <b>Temperature</b> |   |                       |
| Range              | : | 0 - 150°C             |
| Resolution         | : | 0.1°C                 |
| <b>Voltage</b>     |   |                       |
| Range              | : | 0 - 2000mV            |
| Resolution         | : | 0.1mV                 |
| Glass Beaker       | : | 250ml                 |
| Fan                | : | 3V                    |
| Adaptor Input      | : | 220 - 240V, 50 / 60Hz |
| Adaptor Output     | : | 5V, 1A                |
| Dimension (mm)     | : | W 250 x D 300 x H 20  |



Software Window

Note: Specifications are subject to change.