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ARTICLE
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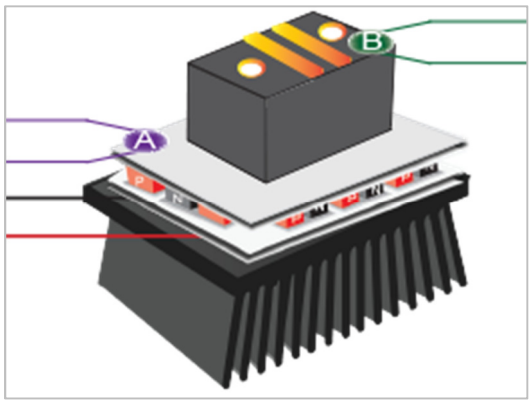
Increase Temperature Stability

Adapted from Laser/Tec Connect, January 2014 from **Wavelength Electronics**.



Sensor placement is critical. If you place the temperature sensor close to the device under control (B), it will read an accurate temperature. If, however, this puts it a distance from the actuator (Thermoelectric or Resistive Heater), there will be a thermal delay in the sensor feedback that will decrease temperature stability.

For example, the more accurate system usually uses a smaller Proportional Gain (P) and an large Integrator Time Constant of 5-10 seconds. The more stable system (A), with the sensor placed closer to the thermoelectric is stable over a wide range of Proportional Gain settings and uses a small Integrator Time Constant of about one second. With this system, you have the freedom to increase the Proportional Gain to reduce time to temperature.

For more information, contact **Warsash Scientific** on +61 2 9319 0122 or sales@warsash.com.au.