



**THERMAL
SYSTEMS**

For more information, please contact:
Karl von Gunten
Director of Marketing
+1-919-931-1434
Email: karl.vongunten@lairdthermal.com

Laird Thermal Systems' Offers Online Thermoelectric Modeling Tool for PCR Design Engineers

The Thermal Wizard helps engineers simulate PowerCycling PCX Thermoelectric Coolers in PCR applications...

October 28, 2021 – Laird Thermal Systems, the world leader in thermal management solutions has launched an online simulation tool for PCR thermal cycling applications. Thermoelectric coolers designed for thermal cycling, such as the PowerCycling PCX Series, are used for Real-Time PCR to precisely temperature control DNA amplification to three temperature set points. Assembled with next generation thermoelectric material, the PCX Series provides faster ramp rates and higher reliability than standard thermoelectric coolers to significantly extend field use of molecular diagnostic devices.

Selecting the right thermoelectric cooler for thermal cycling can be a difficult process for any design engineer. To aid in product selection, Laird Thermal Systems has developed an advanced Thermal Wizard application tool for PCR. This is a web-based simulation tool where design engineers can input known attributes such as geometry constraints, desired set point temperatures and thermal mass on control side to estimate required heat pumping capacity needed to achieve specific ramp rates.

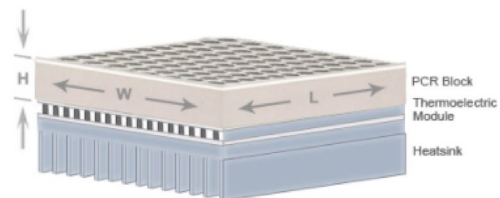
“Selection of thermoelectric coolers can be quite difficult. The Thermal Wizard enables customers to calculate approximate heat load requirements and then simulate performance based on a user’s specified operating condition,” said Andrew Dereka, Product Director at Laird Thermal Systems. “The Thermal Wizard recommends a specific PCX thermoelectric cooler or an array of coolers that are capable of meeting the input application attributes specified by the user.”

Go to the [Thermal Wizard](#) or [PowerCycling PCX Series](#) to find the optimum thermoelectric cooler for your PCR application. [Learn more about PCR thermal management in our application note.](#)



Thermal Cycling Calculator

CHOOSE AN EXAMPLE OR COMPLETE THE REQUIREMENTS...



DIMENSIONS

Length mm Width mm Height mm

TEMPERATURES

Ambient Temperature (T_{amb})	Elongation Temperature (T_{elg})	Denaturization Temperature (T_{den})	Annealing Temperature (T_{ann})
<input type="text"/> 35 °C	<input type="text"/> 70 °C	<input type="text"/> 95 °C	<input type="text"/> 55 °C

About Laird Thermal Systems

Laird Thermal Systems designs, develops and manufactures thermal management solutions for demanding applications across medical, industrial and telecommunications markets. We manufacture one of the most diverse product portfolios in the industry, ranging from active thermoelectric coolers and assemblies to temperature controllers and liquid cooling systems. With unmatched thermal management expertise, our engineers use advanced thermal modeling and management techniques to solve complex heat and temperature control problems. By offering a broad range of design, prototyping and in-house testing capabilities, we partner closely with our customers across the entire product development lifecycle to reduce risk and accelerate time-to-market. Our global design, manufacturing and support resources help customers shorten their product design cycle, maximize productivity, uptime, performance and product quality. Laird Thermal Systems is the optimum choice for standard or custom thermal solutions.

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