



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**Thermoelectric cooling unit for medical and industrial applications**



The Liquid-to-Air Series thermoelectric assembly (TEA) offers dependable, compact performance by cooling objects via liquid to transfer heat. Heat is absorbed through a liquid heat exchanger and dissipated thru a high density heat sink equipped with an air ducted shroud and brand name fan. The thermoelectric modules are custom designed to achieve a high coefficient of performance (COP) to minimize power consumption. This product series is available in a wide range of cooling capacities and voltages. Custom configurations are available, however, MOQ applies.

**FEATURES**

- Compact form factor
- Precise temperature control
- Reliable solid-state operation
- DC operation
- RoHS compliant

**APPLICATIONS**

- Medical Diagnostics
- Industrial Lasers
- Medical Lasers
- Analytical Instrumentation

Americas: +1.919.597.7300

Europe: +46.31.420530

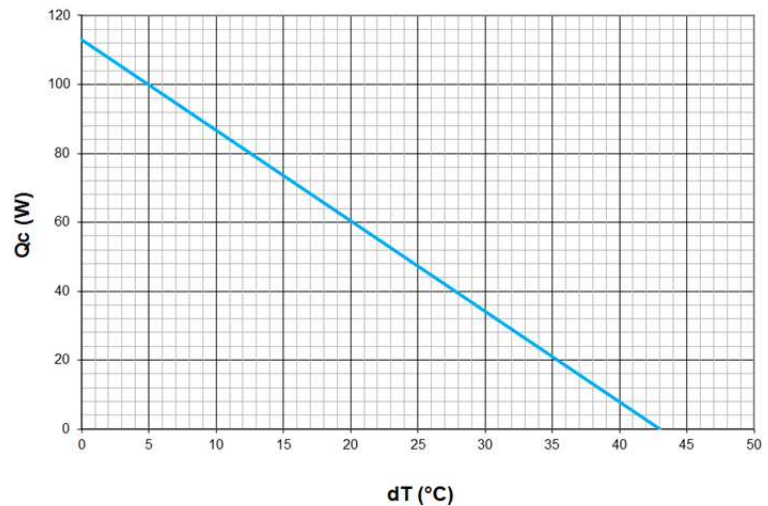
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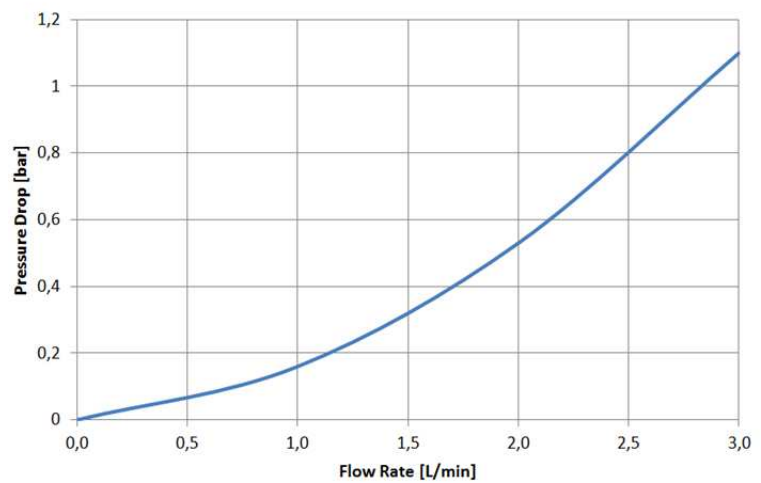
[www.lairdtech.com](http://www.lairdtech.com)

Liquid-to-Air Thermoelectric Assembly

Qc vs dT



Pressure Drop vs Flow Rate



**SPECIFICATIONS**

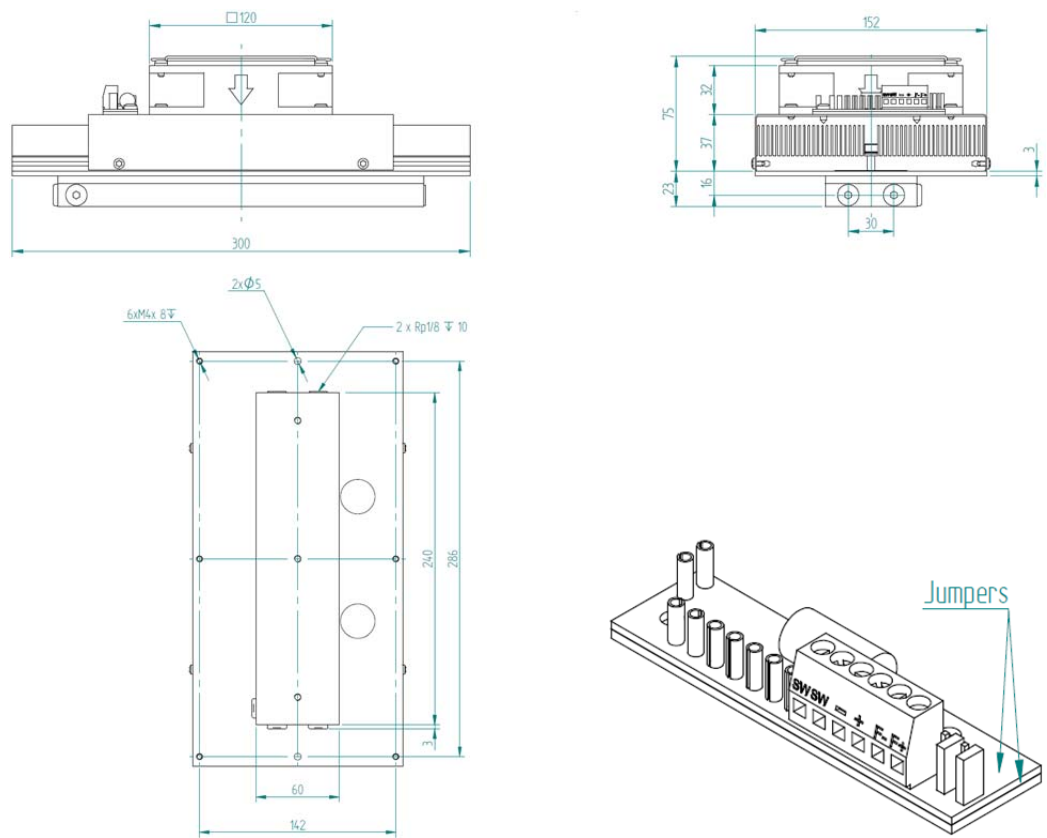
**TECHNICAL**

Technology	Thermoelectric based
Cooling at $\Delta T = 0^\circ\text{C}$	113 W
Voltage (nominal / maximum) <sup>1</sup>	24/30 VDC
Current draw, $\pm 10\%$ (nominal / startup)	5.3/6.6 A
Weight	3.2 kg
Power Input	139 W
MTBF (fans)	50,000 hours

**ENVIRONMENTAL**

Temperature range	-10°C to +47°C
Over temp Thermostat	75°C $\pm$ 5°C on hot side heat sink surface

**MECHANICAL DRAWING**



**Note:**

- For overheating protection, the cooler is equipped with a bimetal thermostat. The maximum rating for the thermostat is 8 A dc. For systems with 8 A or less, the thermostat can be connected directly in series with the thermoelectric modules (TEMs). Otherwise, connect the TEMs to the power source through a relay of suitable rating which state is controlled with the bimetal thermostat.
- Turbulators are mounted inside liquid channels to turbulate flow
- Cold block requires insulation to minimize moisture buildup under dew point conditions.

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