



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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Outdoor Thermoelectric Cooler Assemblies



Americas: +1.919.597.7300
Europe: +46.31.420530
Asia: +86.755.2714.1166
ets.sales@lairdtech.com
www.lairdtech.com

The AA Outdoor Cooler Series is an Air-to-Air thermoelectric assembly (TEA) that uses impingement flow to transfer heat. It offers dependable, compact performance by cooling objects via convection. Heat is absorbed and dissipated thru high density heat exchangers equipped with air ducted shrouds and brand name fans. The heat pumping action occurs from custom designed thermoelectric modules that achieve a high coefficient of performance (COP) to minimize power consumption.

This product series has been designed to pass rigorous Telcordia test requirements conducted by our customers, such as earthquake resistance, salt fog, wind-driven rain, high temperature exposure and dust contaminants. This is due to the selection of world class components such as brand fans with the highest degree of environmental protection and lifetime guaranteed waterproof connectors, heavy duty anodization on the high-density heat sinks, overheat protection, and double environmental seals for the thermoelectric modules.

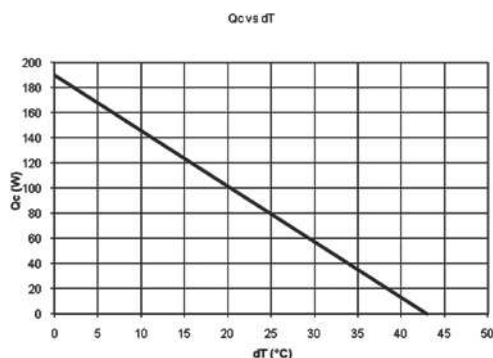
FEATURES AND BENEFITS

- 200W capacity rated at $\Delta T = 0^{\circ}\text{C}$, $T_{\text{ambient}} = 32^{\circ}\text{C}$
- Wide operating temperature range of -40°C to $+55^{\circ}\text{C}$
- Telcordia GR-487-CORE tested and verified by customers when integrated in telecom outdoor enclosures
- Gaskets, connectors, and fans provide a NEMA 4 seal for the enclosure
- UL60950 and UL50 approval obtained by customers when integrated in telecom outdoor enclosures
- Environmentally friendly solid state operation – no compressor or CFC refrigerants
- Cooling and heating in the same unit; optional temperature controller reverses the polarity of current to generate heating

APPLICATIONS

- Outdoor telecom enclosures
- Outdoor kiosks and displays
- Harsh condition electronic cabinets
- Battery cabinets

PERFORMANCE Q_c VS ΔT

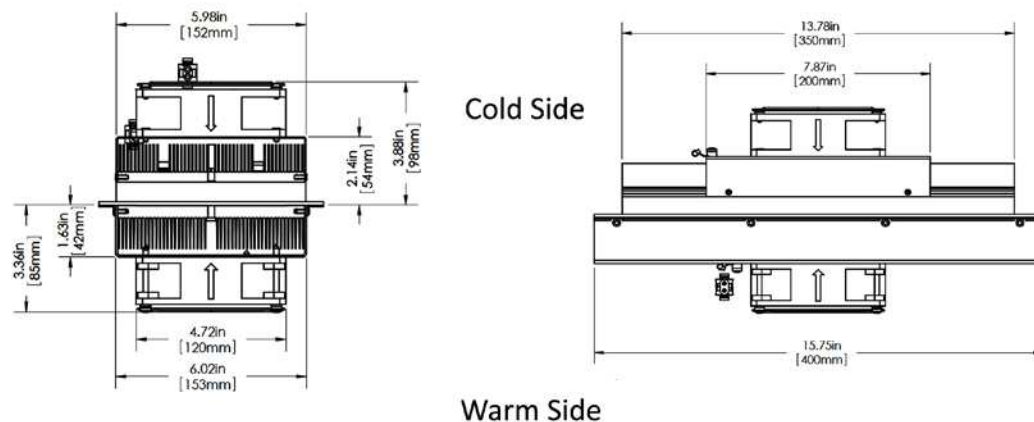


SPECIFICATION		AA-200-48-44-00-XX
Technical		
Technology	Thermoelectric (TE) modules, forced air, closed loop (non-mixing), filterless, non-refrigerant	
Cooling at $dT = 0^{\circ}\text{C}$, and nominal / float voltage. ¹	193/214W (659/731 Btu/h)	
Heating ²	250W (853 Btu/h)	
Voltage (nominal / maximum)	48/56 VDC	
Grounding (all voltages)	Positive or negative	
Current draw, $\pm 10\%$ (nominal / startup)	5.6/7.2 A (48V version)	
Weight	6.6 kg (14.5 lbs)	
Panel mounting	Through	
Fan life (L_{10} at $+40^{\circ}\text{C}$)	$\geq 70,000$ hours	
Number of connectors	3	
Connector type (on unit / mating side)	On unit: AMP part number: 350777-1, 794269, 350547-6, 794270-1 Mating side: AMP part number : 350778-1, 350550-6, 794270-1	
Hi-pot testing	707 VDC	
Environmental		
Temperature range ³ (external ambient)	-40°C to $+55^{\circ}\text{C}$ (-40°F to $+131^{\circ}\text{F}$)	
Temperature range (internal enclosure)	-20°C to $+55^{\circ}\text{C}$ (-4°F to $+131^{\circ}\text{F}$)	
Degree of protection, enclosure ⁴	NEMA 4 (IP55)	
Degree of protection, unit ⁵	IP54	
Sound level (1m distance)	63 dB(A)	
Over-Temp Thermostat (Hot and cold side heat sink)	$80^{\circ}\text{C} \pm 3^{\circ}\text{C}$	

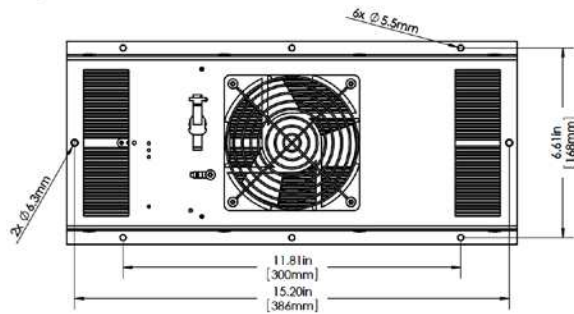
- 1) Cooling capacities at nominal / float voltage are rated at external temperatures of 32°C and 46°C respectively. Float voltage is defined at 54 VDC.
- 2) Heating capacity is rated at external temperature of -40°C , nominal voltage, and $dT = -45^{\circ}\text{C}$.
- 3) Controller function shall not operate the external fan during heating mode.
- 4) The highest environmental protection level requires an external shroud and is defined as the protection level for the enclosure.
- 5) Rating for unit without protective shroud.

Note: The specified performance of any Laird Technologies cooling unit is dependent on how it is handled and incorporated into the final product. This includes elements such as the system design, insulation design, and assembly method. While Laird Technologies is able to provide general guidelines based upon our experience, it is ultimately the responsibility of the device manufacturer to validate each product and its performance for its intended use.

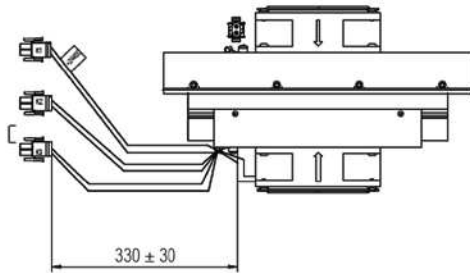
ISOMETRIC DRAWINGS



MOUNTING HOLE LOCATION



WIRING SCHEMATIC



Electrical connections

K1 Power to TEM Array (Operate in Cooling Mode)
 P1 Positive (Red) Marked +24 VDC
 P2 Negative (Black)

K2 Power to Exterior Fan (Hot Side)
 P1 Positive (Orange) +24 VDC
 P2 Negative (White)

K3 Power to Interior Fan (Cold Side)
 P1 Positive (Green)
 P2 Negative (White)

LAIRD-ETS-AA-200-48-44-00-XX-DATA-SHEET-083116

Any information furnished by Laird Technologies, Inc. and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird Technologies materials rests with the end user. Laird Technologies makes no warranties as to the fitness, merchantability, suitability or non-infringement of any Laird Technologies materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies products are sold pursuant to the Laird Technologies' Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request. © Copyright 2016 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies Logo, and other marks are trademarks or registered trademarks of Laird Technologies, Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird Technologies or any third party intellectual property rights.