

# DA Cascade Series DAC-035-12-02

## Thermoelectric Assembly



The DA Cascade Series is an Air-to-Air thermoelectric assembly (TEA) that offers dependable, compact performance by cooling objects via conduction. Heat is absorbed through a cold plate and dissipated thru a high density heat exchanger equipped with an air ducted shroud and brand name fan. The thermoelectric modules are custom designed multistage cascades to achieve a high temperature differential, which allows this series to reach colder temperatures than standard DA product offerings. Custom configurations and moisture protection options are available, however, MOQ applies.

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### FEATURES

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

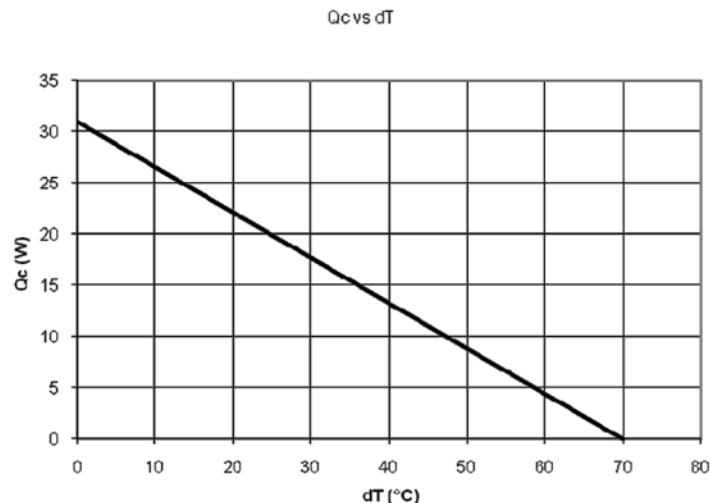
### APPLICATIONS

- Analytical instrumentation
- Medical diagnostics
- Photonics laser systems
- Industrial instrumentation
- Food and beverage cooling

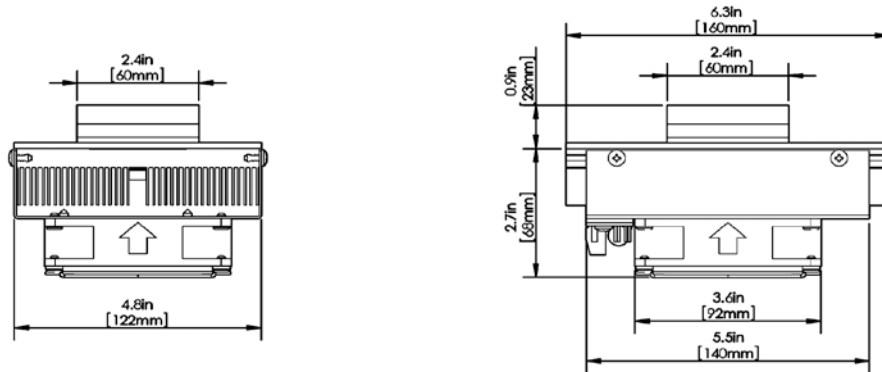
### SPECIFICATIONS

Cooling Power $Q_{cmax}$ (W)	31
Running Current (A)	4.8
Startup Current (A)	5.5
Nominal Voltage (V)	12
Max Voltage (V)	14
Power Input (W)	58
Operating Temperature (°C)	-10 to 54
Weight (kg)	1.2
MTBF (fans - hrs)	50,000
Performance Tolerance	±10%

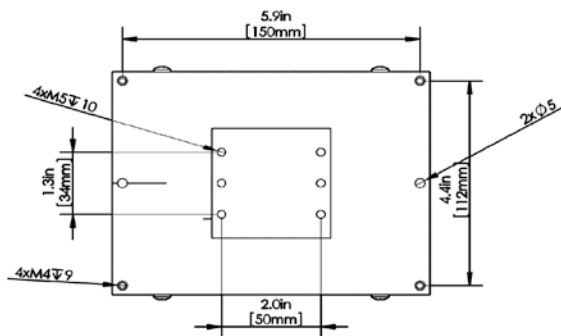
### PERFORMANCE CURVE



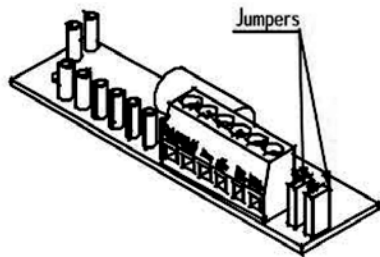
### ISOMETRIC DRAWINGS



### MOUNTING HOLE LOCATION



### WIRING SCHEMATIC



Electrical connections:

- " + " : +TEM
- " - " : -TEM
- " F+ " : +Fan(s)
- " F- " : - Fan(s)

To use single supply:  
Lift the jumpers and rotate 90° to short-cut the pin pairs.  
Connect the unit to "+" & "-".

**Warning: Single supply not applicable in heating mode or with PWM-regulation.**

### NOTES

- For indoor use only
- Thermally Conductive Grease enclosed
- Overheating Thermostat: 75°C ± 5°C on hot side heat sink surface

LAIRD-ETS-DAC-035-12-02-DATA-SHEET-100616

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