# PowerCool Series DA-024-24-02
# MFG Part Number: DA-024-24-02-00-00

## PowerCool Series Thermoelectric Cooler Assembly

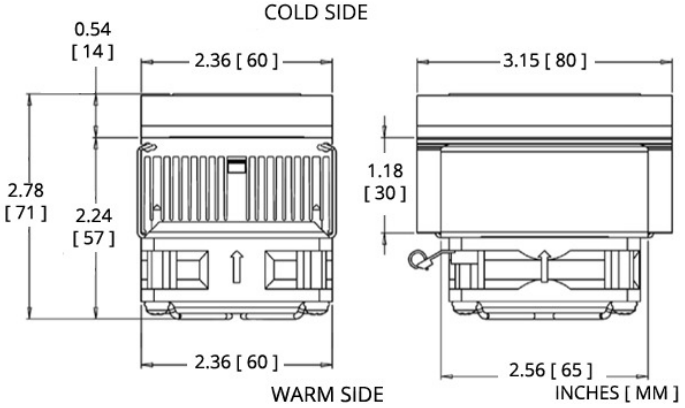
The DA-024-24-02 is a Direct-to-Air Thermoelectric Cooler Assembly that uses impingement flow to transfer heat. It offers dependable, compact performance by cooling objects via conduction. Heat is absorbed through a cold plate and dissipated thru a high density heat exchanger equipped with an air ducted shroud and brand name fan. It has a maximum Qc of 24 Watts when ΔT = 0 and a maximum ΔT of 44 °C at Qc = 0.

## Features

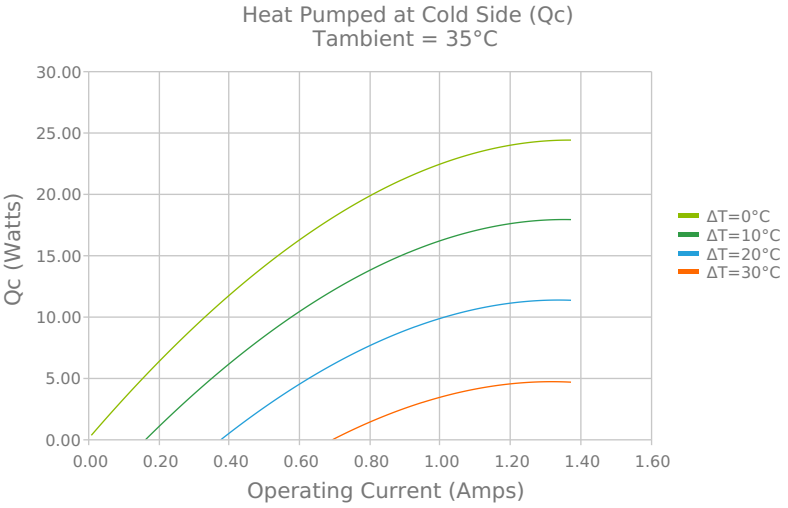
- Compact design
- Precise temperature control
- Reliable solid-state operation
- Low noise
- RoHS-compliant

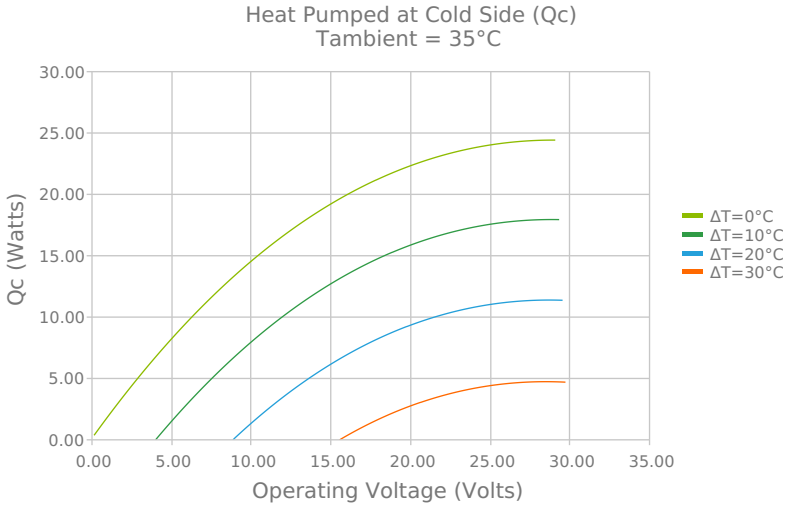
## Applications

- Medical Diagnostic and Analytical Instrumentation
- Thermoelectric Coolers and Assemblies for Medical Applications
- Liquid Cooling Options for PET and SPECT Scanners
- Cooling for Centrifuges
- High-Performance Liquid Chromatography (HPLC)
- Heating and Cooling for Liquid Chromatography Systems

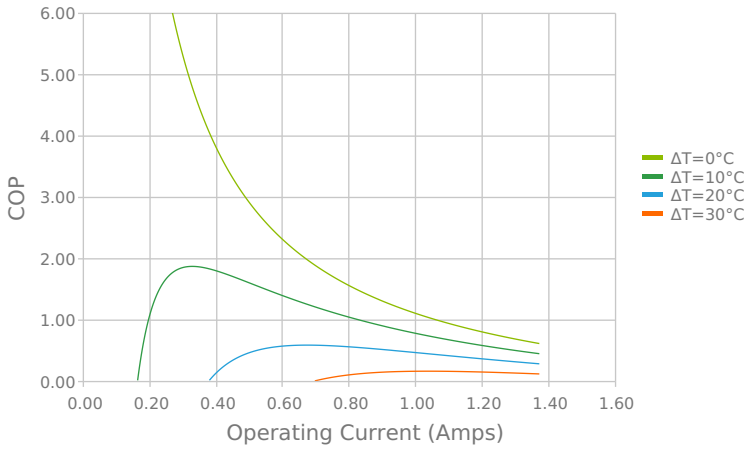



## Electrical and Thermal Performance

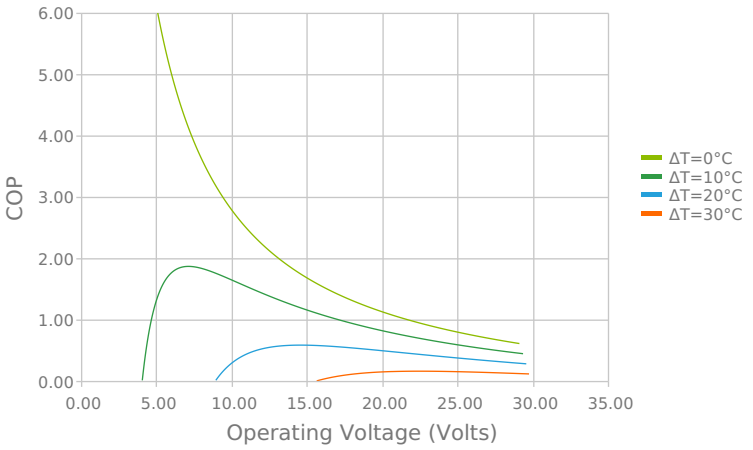


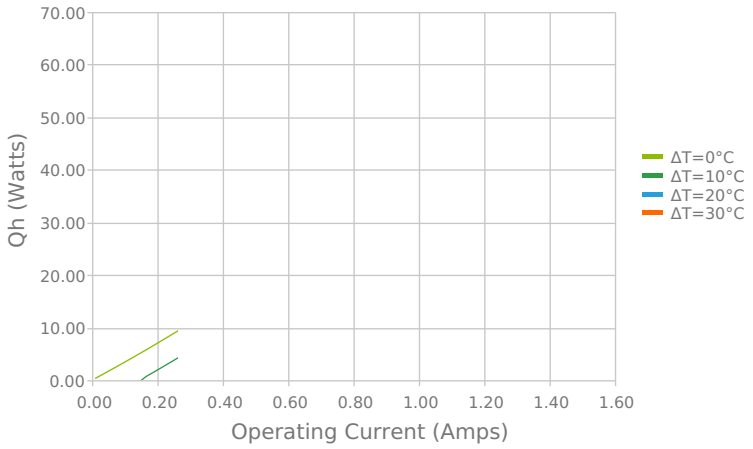
Coefficient of Performance (COP = Qc/Pin)
Tambient = 35°C



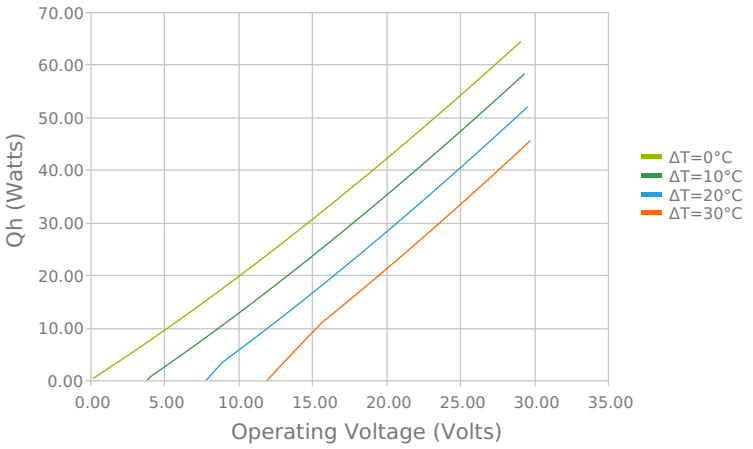

Coefficient of Performance (COP = Qc/Pin)
Tambient = 35°C



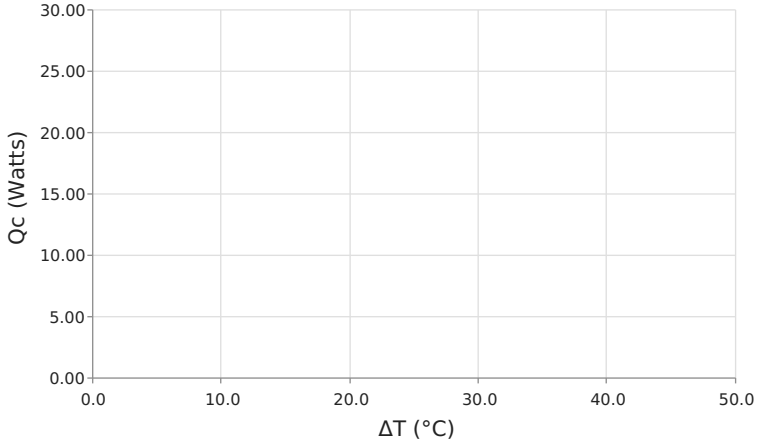

Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Tambient = 35°C



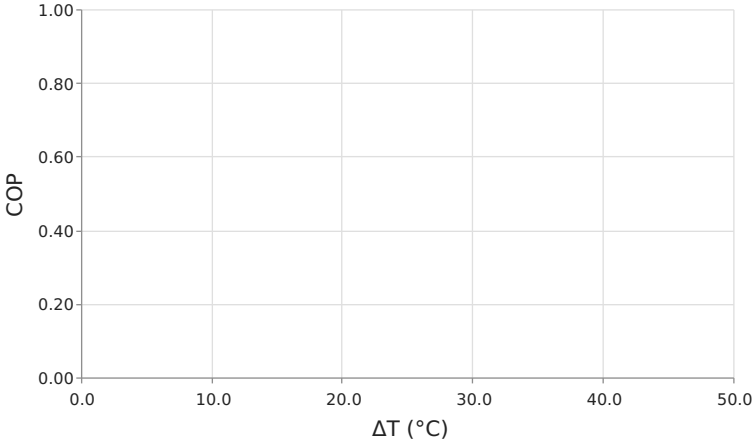

Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Tambient = 35°C




Heat Pumped at Cold Side (Qc)
Voperating = 24 Volts | Ioperating = 1.16 Amps



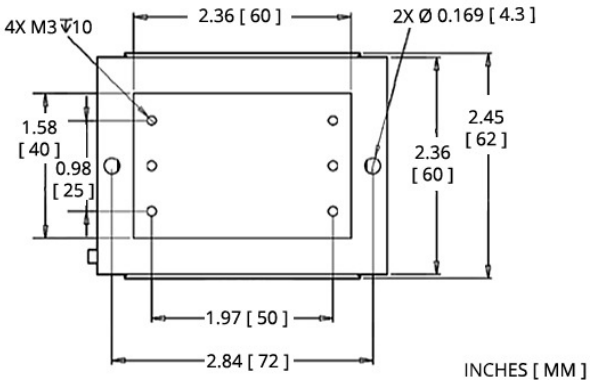

Coefficient of Performance (COP = Qc/Pin)
Voperating = 24 Volts | Ioperating = 1.16 Amps



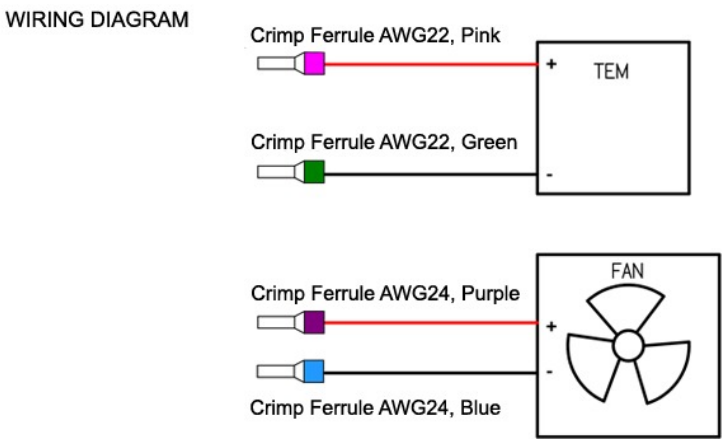
## Specifications

| | |
|---|---|
| **Heat Transfer Mechanism, Cold Side** | Direct - Conduction |
| **Heat Transfer Mechanism, Hot Side** | Air - Forced Convection |
| **Operating Temperature Range** | -10°C to 48°C |
| **Supply Voltage** | 24.0 VDC nominal / 29.5 VDC maximum |
| **Current Draw** | 1.6 A running / 2.0 A startup |
| **Power Supply** | 29.0 Watts |
| **Performance Tolerance** | 10% |
| **Hi-Pot Testing** | No Testing |
| **Fan MTBF** | 50000 hours |
| **Weight** | 0.30 kg |
| **Panel Mounting** | Flush Mount |

# Mounting Hole Location




# Wiring Schematic




## Notes

| |
|---|
| [1]For indoor use only |
| [2]it is recommended to clean the heat sinks and fans of debris. This is best done with compressed air. |



Revision: 02 Date: 01-22-2024

Print Date: 05-12-2025

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Laird Thermal Systems:

DA-024-24-02-00-00