WAKEFIELDTHERMAL

LIQUID CHILLER MODULE

LCM-600

DATA SHEET

Part #FP00039

The LCM-600 from Wakefield Thermal is a compact, energy-efficient fluid cooling system designed for applications that demand high-capacity cooling while minimizing weight and power consumption. The module features a hermetically sealed refrigeration system with a miniature variable-speed compressor, condenser, expansion valve, and evaporator, pre-charged with R-134a. Users can easily integrate their own coolant loop and airflow while controlling compressor speed via the integrated drive board.

At Wakefield Thermal, our skilled engineers can modify our standard cooling systems to meet your specific requirements, providing a solution that is perfectly suited to your needs. By offering the core refrigeration components in a compact, insulated unit, the LCM-600 seamlessly integrates into applications across various industries, including automotive, aerospace, communications, defense, electronics, and medical.

System Specifications

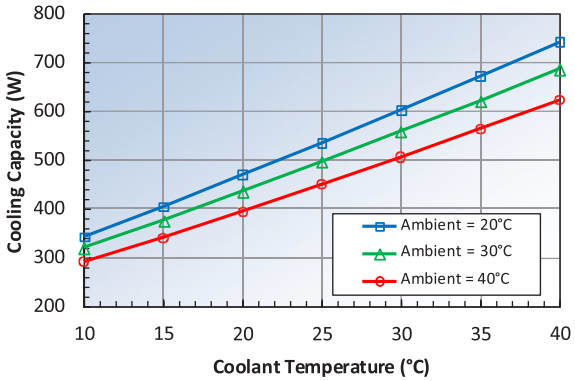
Cooling Capacity	See Graph
Maximum Current	15 A
Maximum Power Draw	360 W at 24 VDC
Voltage	22-30 VDC
Operating Ambient Temperature	0 to 50°C (32 to 122°F)
Coolant Temperature	0 to 50°C (32 to 122°F)
Storage Temperature	-20 to 50°C (-4 to 122°F)
Compatible Fluids	Water, Water/Glycol Mix
Refrigerant	R134a
Orientation	Within 30° of vertical
Weight	2.7 kg (6.0 lbs)
Dimensions	134H X 199W X 161D mm (5.3H X 7.8W X 6.3D in)

Applications

The LCM-600 is ideal for precise cooling across various high-performance applications including:

- Bio-Sample Analyzers
- Electric Vehicles
- Electronics & Enclosures
- Laboratory Equipment
- Laser Cooling
- Medical Device Cooling
- Military Communications
- Patient Cooling
- Sensors & Detectors

Cooling Capacity



*150 cfma irflow,2 L/minw ater flow

COOLVATION
Innovative Thermal Solutions
COOLED BY WAKEFIELD THERMAL

5 STEP
THERMAL ENGINEERING GUIDE
From Concept To Cooling

COOLVATION provides thermal management engineering services to improve products' thermal performance while applying cost effective solutions to eliminate unnecessary manufacturing costs. COOLVATION is a seamless resource extension for our customers' thermal & mechanical engineering teams from ideation to lab testing.

Customer Thermal Challenge
Physical limitations
Power constraints
Air flow/ fluid conditions
Environmental conditions
Component specifications
Define ideal state

01 STEP

Execution
Concept analysis
(CFD-ansys/ ice pack, fin optimizations software)
Solid model
Analysis & verification
Cost analysis

03 STEP

Global Manufacturing
Global manufacturing facilities
Global warehousing
Global labs to support future program

05 STEP

02 STEP

Collaboration
Review conditions
Statement of work to customer
Historical consideration along with cutting edge technologies to provide cost effective solution

04 STEP

Solution & Verification
Dedicated new product development center
Prototype
Physical thermal lab testing
Proven manufacturability

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