

Liquid Chiller Module

LCM-650G | Part # FP00150



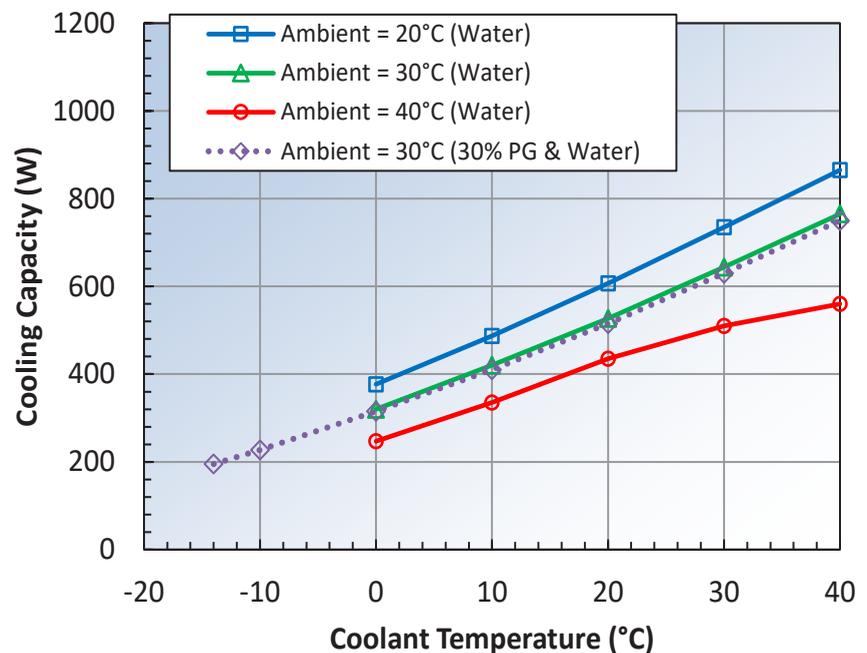
System Overview

The LCM-650G is a compact, energy-efficient fluid cooling system engineered for applications that demand high-capacity cooling, while minimizing weight, footprint, and power consumption. The module features a hermetically sealed refrigeration system with a miniature variable-speed compressor, condenser, fan, expansion valve, and evaporator, pre-charged with R-290, a natural, low-GWP refrigerant. Users can connect their own coolant loop while controlling compressor speed via the integrated drive board. Our skilled engineers can modify our standard cooling systems to meet your distinct specifications, delivering a solution perfectly suited to your needs. By providing the core refrigeration components in a compact, insulated unit, the LCM-650G integrates easily into applications across various industries including automotive, aerospace, communications, defense, electronics, and medical.

Applications

The LCM-650G 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



*150 cfm airflow, 2L/min water flow

About Aspen Systems

Aspen Systems' expertise lies in creating small, powerful, energy-efficient thermal management solutions deployed globally in industries including aerospace, automotive/EV, defense/military, life sciences, medical, electronics, semiconductor, and more. Aspen's journey began in 1984 as an innovative technology organization and continued to grow with the development of miniature, variable-speed, DC compressors for military applications. Today, we are a USA manufacturer committed to driving sustainability and delivering cutting-edge cooling solutions utilizing natural, low GWP refrigerants that are environmentally responsible and compliant with IATA safe air travel regulations. Our manufacturing location operates under a Quality Management System (QMS) that is registered to the ISO 9001:2015 standard; which ensures that we consistently provide products that meet rigorous industry standards and all of our customer performance requirements.

System Specifications

Cooling Capacity	See graph above
Maximum Current	15 A
*Maximum Power Draw	360 W at 24 VDC
Voltage	22-27 VDC (24 V Nominal)
Operating Ambient Temperature	-20 to 40°C (-4 to 104°F)
Coolant Temperature	-15 to 50°C (5 to 122°F)
Storage Temperature	-20 to 50°C (-4 to 122°F)
Compatible Fluids	Water, Water/Glycol Mix
Refrigerant	R-290, <100 g
Orientation	Within 30° of vertical
Weight	2.9 kg (6.5 lbs)
Dimensions	137H X 192W X 225D mm (5.4H X 7.6W X 8.9D in)

*Actual power draw will vary with ambient temperature, coolant temperature, and cooling load

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