



AURORACIRCUITS
North American Technology Solutions Provider for Printed Circuits



Aluminum Clad

While the excitement builds for the future of the electric vehicle (EV) and charging market, a problem arises: How do Aurora Circuits is no stranger to Aluminum PCBs. Known to many in the industry as "Aluminum Clad", "Aluminum base", "Metal Clad Printed Circuit Boards (MCPCB)", Insulated Metal Substrates (IMS)", and Thermally Conductive PCB - these boards generally contain a thin layer of conductive dielectric material.

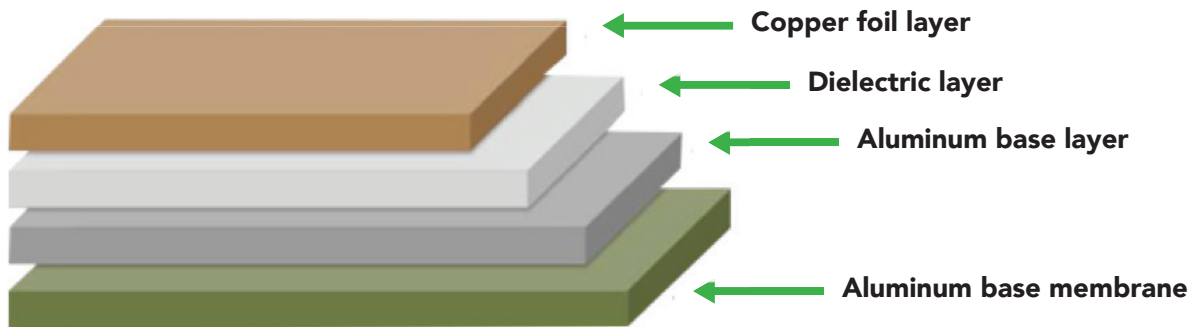
Performance:

Thermal Dissipation: The performance of aluminum PCBs while dissipating heat is, in some instances, superior to FR4. For example, a FR4 PCB that is 1.5mm thick will have thermal resistance of 20-22 degrees per watt while an aluminum PCB 1.5mm thick will have a thermal resistance of 1-2 degrees per watt per kelvin.

Thermal Expansion: Each has its own coefficient of thermal expansion.

CTE of aluminum (13.2ppm/C) and copper(9.8ppm/C)

Aluminum PCBs work well in terms of thermal dissipation, but they can have thermal expansion and contraction issues. There are many different dielectrics available that can handle the CTE differences. There are also construction and processing guidelines to be considered.



About Aurora Circuits

Over 70 years' experience in Printed Circuit Fabrication providing Advanced Thermal Management and Interconnect Technology Solutions for Printed Circuit Designs and Specialty Products.

As one of the trailblazers and longest established, domestic manufacturers in the printed circuit board industry, (formerly known as Kalmus & Associates), Aurora Circuits is known as an industry leader in innovation, customer service and engineering. Let us partner with you to maximize profitability and production sustainability.