

COPPER & METAL CLAD LAMINATES FOR MPCB

B Aismalibar

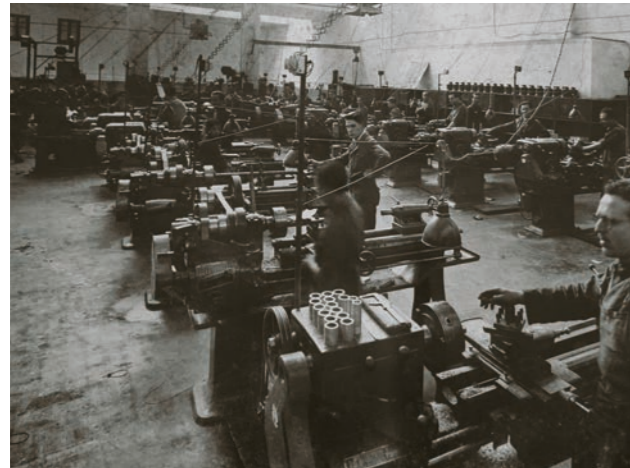
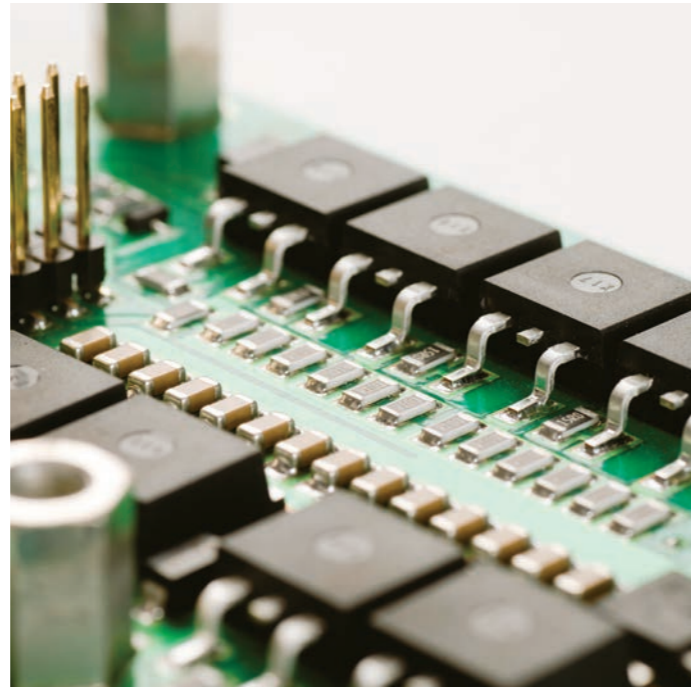
COOLING ELECTRONICS

www.aismalibar.com

Experts in cooling electronics, prolonging their useful life and optimizing their performance.

The expansion of technology into every aspect of our lives requires proper thermal management of integrated electronic components to achieve higher performance and efficiency. These days, industry, as is the case with the automotive sector, is promoting electronic solutions while abandoning mechanical ones. At Aismalibar, we are experts in cooling electronics.

Our goal is to reduce the operating temperature of electronic components, thereby prolonging their useful life and optimizing their performance. Using our materials ensures the quality and reliability of products that incorporate them and even minimizes the use of supplementary fans or heat sinks, thus reducing production costs.



More than 60 years manufacturing high end Copper and Metal Clad Laminates for the Printed Circuit Board Industry.

Walter L. Ankli founded Aismalibar in 1934. Soon after, production began on his flagship product, the copper clad wire, eventually making Aismalibar the largest European company in the sector and an international point of reference. More than fifty years ago, in 1958, well before the technological boom, we began producing copper clad laminates for printed circuit boards.

In 1965 Aismalibar opened its copper laminate plant for the production of XPC, FR2 and FR4. In today's completely digitized world, our IMS/CCL metal-based laminates are essential in the electronics industry, where our base materials are integrated into electronic products.

In 2011 Aismalibar became part of Benmayor S.A. The combination of knowledge and structure has enabled us to become the only European manufacturer specializing in thermal clad insulated metal substrate.

Our laminates provide exceptional thermal management. We are pioneers, highly creative and very competitive.

Our creativity is reflected in the continuous introduction of technological innovations into the global marketplace.

At Aismalibar, we develop, manufacture and market the latest advances in laminates for the production of printed circuit boards.

Our engineers and chemists work alongside the sales department developing new proposals for a market in a constant state of evolution.

This acquired commitment by the company is achieved through our own R+D+I, which is fully involved in all manufacturing and marketing processes. To this end, we have a department whose laboratory is fitted out with the latest generation equipment such as TMA, DSC, TGA, GC, SEM and PSA.



Creativity is reflected in the continuous introduction of technological innovations into the global marketplace.

Our Barcelona plant can produce half a million square meters of Cobrithem and almost one million square meters of Thermal Pre Peg.

Aismalibar has also consolidated its presence in the Asian market through the new production plant located in the city of Kunshan Suzhou, China.

The new Suzhou plant has a production capacity of 720.000 square meters of IMS (Insulated Metal Substrate) and four million square meters of Pre Preg without fabric.

We already have Commercial Subsidiaries in China and Taiwan, North America and Germany.

We have UL certification, RoHs, IATF 16949:2016, among others.

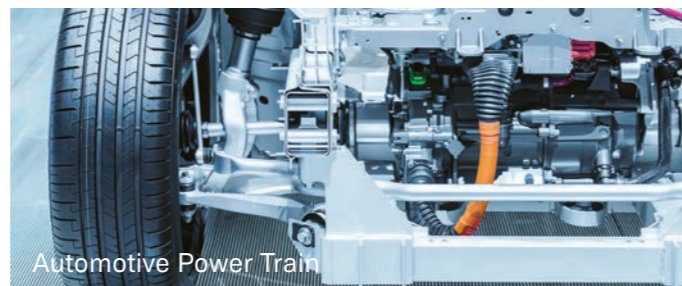
In addition, at Aismalibar we have preserved the modernizing spirit of the company's founder.

It is for this reason that our capital investment combine capital flow between the R+D+I department and constant modernization of our production plants.

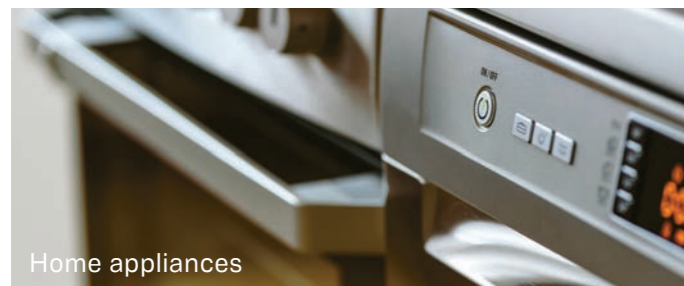
AISMALIBAR solutions are implemented in many different areas and environments.



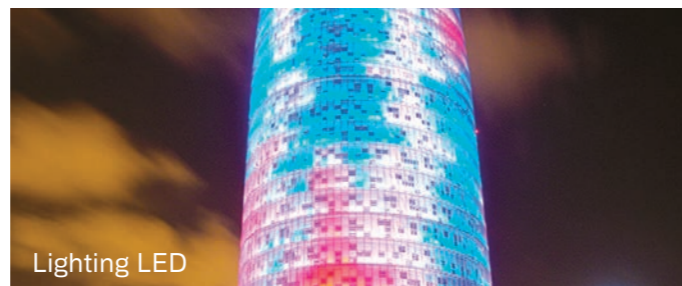
Automotive Lighting



Automotive Power Train



Home appliances



Lighting LED



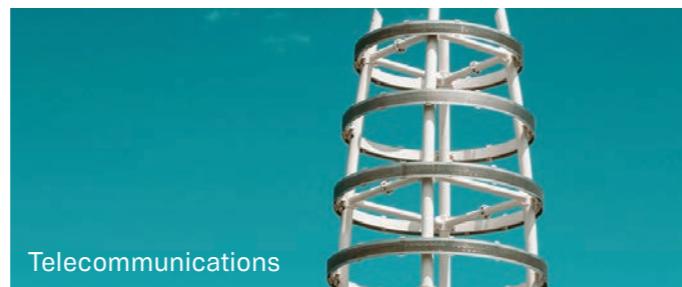
Power&Industrial Automation



Railway & Aerospace



Solar & Wind



Telecommunications

Aismalibar manufactures its laminates for the electronics sector and its markets: LED lighting, telecommunications, the automotive sector, renewable energies, home appliances, railway transport, aerospace research and energy storage and industrial management.

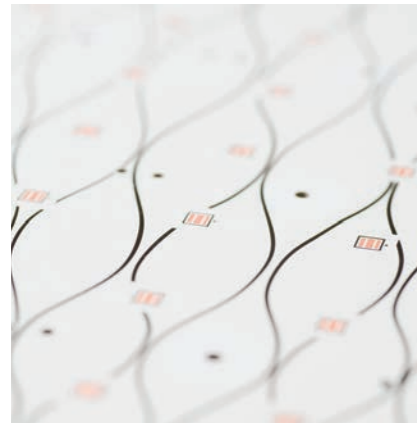
We offer to our customers a global and personalized service, guaranteed through our subsidiaries and manufacturing plants.



While our customers are companies from different areas and sectors they have one thing in common: the need for top-level thermal management. Powered by Aismalibar. These are some of them:



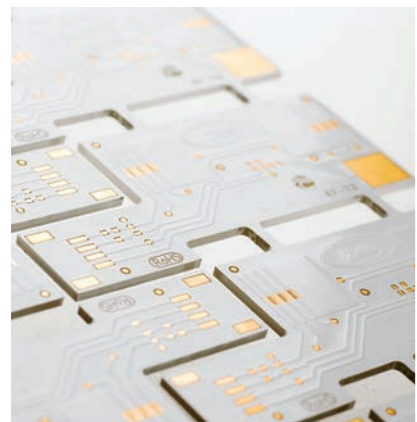
AISMALIBAR offers the latest innovations in thermal management for the electronics industry.



COBRITHERM is a highly thermally conductive Insulated Metal Substrate (IMS) consisting of an aluminum or copper base clad with copper foil on the opposite side. It has an epoxy-based insulation layer with high inorganic content allowing the material to achieve excellent thermal conductivity.

The substrate's goal is to minimize thermal impedance and effectively conduct heat from the electronic components into the metal core.

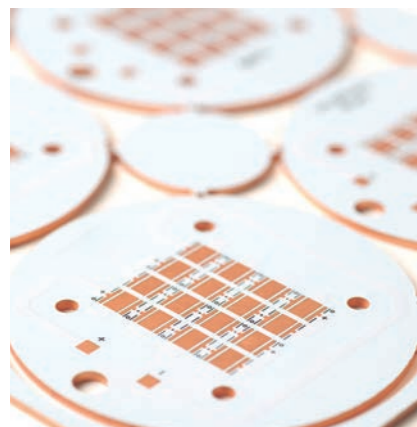
It is a high pressure and temperature substrate which can achieve excellent bonding strengths, much higher than standard thermal adhesives common in the thermal management industry.



COBITHERM ULTRATHIN is a high thermal conductivity metal clad used for high power applications, AC-DC power converters, motor drivers and high power LEDs > 2W.

Demand for higher dissipation rates and higher working temperatures is increasing rapidly. Due to this continued demand AISMALIBAR has developed a new Cobritherm with an innovative ultra-thin dielectric layer that provides higher thermal performance and excellent working temperature.

With a thickness of only 35 microns, this new product reduces thermal resistance down to 0.11 Kcm²/W (0,017 Kin²/W), which offers excellent thermal dissipation conditions for high power LEDs assembly.



FASTHERM is a new technology developed by AISMALIBAR to achieve a faster thermal transition from the LED thermal pad into the heat sink.

By using FASTHERM technology LEDs operate at 30 to 50°C lower in temperature due to the direct thermal transition from the thermal pad to the heat sink. FASTHERM technology requires a very accurate and precise depth control to open the thermal pad footprint.

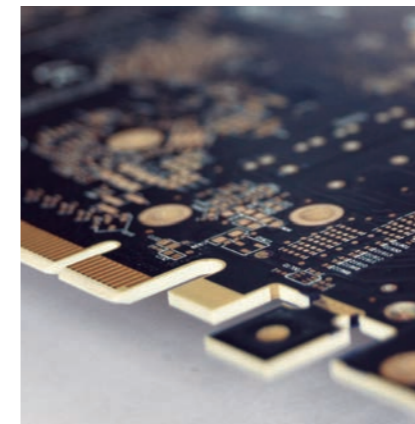
FASTHERM is perfect for conformable MPCB manufacturing. It can be bent after MPCB production while maintaining the initial dielectric strength in between conductive layers.

AISMALIBAR has implemented a 100% proof test with 1-3KV (High Pot Test) to every IMS laminate that is produced.



FLEXTHERM is a high technology thermal insulated metal substrate, also known as a metal core copper clad laminate, for use in the production of conformable metal printed circuit boards. Its low thermal impedance allows the dissipation of temperature from the heating elements of a PCB into FLEXTHERM's metal core at an extremely efficient rate.

The dielectric layer is a polyamide resin combined with a high thermal conductivity filler with an overall thickness of over 25 or 35 microns capable of standing with 2,000 V or 4,000 V dielectrical strength respectively. FLEXTHERM's flexible properties enable it to conform to both the negative and positive radius allowing the product to adapt to the ever-changing demands of the industry. Typical applications are high power LED, power supply modules and the automotive industry.



MULTILAYER PCBs are often requested in the case of complex boards.

AISMALIBAR offers a range of multi-layer products that can be combined to customize solutions for your electronic designs and applications.

Some boards with denser circuitry need the combination of multiple layers to assure reliable and effective heat dissipation that allows better functions and connections.

BOND SHEET, THIN LAM and AL PRIMER can be used in standard multilayer lamination processes to improve: resistance to thermal shocks, high thermal conductivity and high thermal dissipation.

New products:

COBRITHERM ULTRATHIN 4W Tg180°C 150°C MOT

COBRITHERM ULTRA THIN 4W was developed to achieve high thermal conductivity, a Tg of 180°C by TMA and an 150°C MOT. The Ultra Thin 4W CTE Z axis is under 1.8% from 50 to 250°C. Based on an aluminum cladding with an ED copper sheet on the opposite side, containing an innovative 35 microns ultra-thin polymer-ceramic dielectric layer of its own formulation, offering industry-leading thermal conductivity and high dielectric strength. It also offers strong MOT, High Tg and Low CTE values, which are the key elements for performance of the MPCB operating at high temperatures.

THERMAL MULTILAYER THIN LAM BOND SHEET

The new THERMAL THIN LAM and BOND SHEETS 3,2W have been developed to reduce thermal resistance on multilayer PCBs. The 150°C MOT, high Tg value 180°C, 3.2W thermal conductivity and Low CTE value under 1.8% (50 to 250°C) enhances the overall thermal performance. THIN LAM and BOND SHEETS are available for all types of multilayer constructions and can be clad to standard FR4 or solid metal cores.

Certifications

Aismalibar and its mother company, Gabriel Benmayor, have received certifications which prove the high quality of its products and manufacturing processes:

UL Approved QMETS2 QMETS8 File: E47820 IPC-4101

RoHS 3 / REACH Last updated compliance directive.

IATF 16949:2016 Design and manufacture of laminates for printed circuits and Policy making, Human resources, Information technologies.

ISO/TS 16949:2009 Certification for all of its insulated metal substrates products. This certificate guarantees the quality of the design and manufacture of the company's laminate for printed circuits boards.

This is an important step for the company as it continues to expand its technology capabilities, especially when it comes to thermal management solutions. Aismalibar's plant has been investing in thermal management technologies and also in its family of high thermal interface materials in order to meet its customers' demands.



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