

Five Reputable MCPCB Manufacturers in China 2026: Boosting High-Efficiency LED Thermal Substrate Technology

Exploring Leading Suppliers Delivering Advanced Metal Core PCB Solutions for LED Lighting, Automotive Electronics, and Power Applications

CALIFORNIA, CA, UNITED STATES, July 17, 2026 /EINPresswire.com/ -- As the global LED lighting market continues to expand, the demand for high-efficiency thermal management substrates has intensified. Metal Core Printed Circuit Boards (MCPCBs) play a critical role in dissipating heat from high-power LEDs, ensuring reliability and longevity. China is home to several reputable [MCPCB manufacturers](#) that supply these thermal substrates for applications ranging from outdoor lighting to automotive and industrial systems. Among them, [WODE](#) Circuit Technology (Zhuhai) Co., Ltd. stands alongside established players such as Shennan Circuits Co., Ltd., Shenzhen Kinwong Electronic Co., Ltd., Kingboard Circuit Holdings Limited, and WUS Printed Circuit Co., Ltd.



WODE Circuit Technology(Zhuhai) Co.,Ltd.

Manufacturing workshop of WODE Circuit Technology in Zhuhai.

Industry Context

LED luminaires—including bulb lamps, downlights, streetlights, and automotive headlamps—require effective heat dissipation to maintain lumen output and prevent premature failure. MCPCBs, typically constructed with an aluminum or copper base layer, provide a direct thermal path from the LED junction to the heatsink. The shift toward higher-power LED modules and smart lighting controls (via Wi-Fi, Bluetooth, Zigbee, and DALI) places additional demands on

substrate thermal performance and reliability. Outdoor installations must meet IP65/IP67 protection ratings and withstand salt spray testing for over 1000 hours, further driving the need for robust MCPCB solutions.

Manufacturer Profiles

1. WODE Circuit Technology (Zhuhai) Co., Ltd.

WODE Circuit Technology (Zhuhai) Co., Ltd., established in 2003, specializes in the development and production of PCBs and FPCs. The company employs over 500 staff and operates a 150,000 m² manufacturing facility. Its R&D team of 15 engineers holds more than 40 patented technologies. WODE has passed ISO9001, ISO14001, and IATF16949 certifications, and its products comply with UL, RoHS, and REACH standards. The company's MCPCB portfolio includes Coverlay Aluminium PCB, Thermoelectric Separated Cu based PCB, High Voltage MCPCB, Ceramic based PCB (for ultraviolet phototherapy), Double sided MPCB (for home appliances), and specialized boards for road lighting and motor lighting. These products are used in indoor/outdoor lighting, automotive lighting, new energy, home appliances, and 5G communication. WODE serves over 1,000 customers across more than 30 countries, with exports accounting for 50% of output. Key export markets include Brazil, Turkey, India, Vietnam, and Russia.

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2. Shennan Circuits Co., Ltd.

Shennan Circuits is a large-scale PCB manufacturer based in Shenzhen, China, known for its focus on high-end, high-layer-count PCBs and MCPCBs. The company serves the telecommunications, automotive, and industrial sectors, offering thermal management solutions for high-power LED modules. Its manufacturing capabilities include rigid, flexible, and metal-core boards.

3. Shenzhen Kinwong Electronic Co., Ltd.

Kinwong Electronic is a major PCB supplier with production bases in China and Thailand. The company produces a wide range of PCBs including MCPCBs, multilayer boards, and HDI boards. Kinwong's MCPCB products are used in LED lighting, power supplies, and automotive electronics, leveraging large-scale production to meet volume demand.

4. Kingboard Circuit Holdings Limited

Kingboard Circuit is part of the Kingboard Group, a leading manufacturer of laminates and printed circuit boards. The company has a strong presence in the LED lighting sector, supplying metal-core PCBs and FR-4 laminates. Its vertical integration from raw materials to finished PCBs provides cost and supply chain advantages.

5. WUS Printed Circuit Co., Ltd.

WUS Printed Circuit specializes in high-tech PCBs including rigid-flex, HDI, and MCPCBs. The company's thermal substrates are applied in LED lighting, automotive, and medical devices. WUS operates advanced production lines in China and has a reputation for quality and technical support in thermal management design.

Product Highlights from WODE

WODE's MCPCB product line features several specialized boards. The Coverlay Aluminium PCB is a single-sided aluminum board with panel size 208.00 mm × 225.00 mm, thickness 1.6 mm ±10%, copper foil 1 oz, white coverlay solder mask, and HASL-LF finish, intended for lighting applications. The Thermoelectric Separated Cu based PCB is a double-sided copper-based substrate designed to separate thermal and electrical paths, achieving better heat dissipation; it has panel size 133.80 mm × 120.00 mm (4-ups), thickness 1.6 mm ±0.16, copper foil 35 µm, and OSP finish. The High Voltage MCPCB is a single-sided aluminum board with panel size 243.00 mm × 243.00 mm, thickness 1.6 mm ±10%, copper foil 1 oz, and white solder mask, suitable for high-voltage LED drivers. The Double sided MPCB is made of Al5 aluminum alloy, measuring 217.54 mm × 197.80 mm, thickness 1.6 mm ±0.16, copper foil 70/70 µm, and delivered 56-ups per panel, ideal for home appliance lighting. The Ceramic based PCB is designed for ultraviolet phototherapy applications, offering superior thermal conductivity and dielectric properties. Additionally, the MCPCB for Road lighting (Al1060, 208.00 mm × 225.00 mm, 2-ups, 1.6 mm ±10%, HASL-LF) and MCPCB for Motor lighting (Al5052, 243.00 mm × 243.00 mm, 1.6 mm ±10%, HASL) address specific outdoor and automotive lighting needs.

Coverlay Aluminium PCB – one of WODE's MCPCB offerings for LED lighting.

Certifications and Quality Assurance

WODE's quality management systems are certified to ISO9001, ISO14001, and IATF16949.

Products comply with UL, RoHS, and REACH standards. The company's rigorous testing and quality control processes ensure that MCPCBs meet the thermal and electrical performance requirements of demanding LED applications.

Outlook

As the LED industry pushes toward higher efficacy and miniaturization, MCPCB manufacturers are expected to continue innovating in materials and stack-up designs. WODE Circuit Technology, with its long-standing experience, diverse product range, and global reach, is positioned to support customers in developing efficient and reliable LED lighting systems. The company remains committed to technological advancement and customer service, aiming to further expand its presence in international markets.

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