

LED PCB Manufacturing

Capabilities & Technical Specifications

Professional Aluminum, Copper & Flexible

LED Circuit Board Solutions

JHYPCB

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About JHYPCB

JHYPCB specializes in high-quality LED PCB manufacturing and assembly services. With advanced equipment, experienced engineers, and ISO 9001:2015 certification, we deliver reliable LED circuit board solutions from prototype to mass production.

Our Expertise

- **15+ years** in PCB manufacturing industry
- **ISO 9001, RoHS, UL** certified facility
- **10,000+** LED PCBs delivered annually
- **500+** satisfied customers worldwide
- **98%+** on-time delivery rate

ISO 9001:2015

RoHS

REACH

UL

Why Choose JHYPCB?

- **Advanced Equipment:** State-of-the-art SMT lines and inspection systems
- **Superior Heat Dissipation:** Aluminum and copper substrates with 1-398 W/mK thermal conductivity
- **Fast Turnaround:** 24-hour quote, 3-5 days prototype, express service available
- **One-Stop Service:** From PCB fabrication to full turnkey assembly
- **Competitive Pricing:** Factory-direct pricing with flexible MOQ
- **Technical Support:** Free DFM check and engineering assistance

Technical Specifications

Technical Parameter	Specifications
Substrate Materials	Aluminum, Copper, FR-4, Ceramic (AlN, Al ₂ O ₃), Polyimide (PI), Polyester (PET)
PCB Type	Rigid, Flexible, Rigid-Flex
Layer Count	• Aluminum: 1-4 layers • Copper: 1-8 layers • FR-4: 1-24 layers • Flexible: 1-6 layers
Board Thickness	0.4mm - 3.2mm (Standard: 0.8mm, 1.0mm, 1.2mm, 1.6mm, 2.0mm)
Copper Weight	1oz - 10oz (35μm - 350μm), Standard: 1oz, 2oz, 3oz
Thermal Conductivity	• Aluminum: 1-9 W/mK • Copper: Up to 398 W/mK • Ceramic: 24-170 W/mK
Min. Trace Width/Spacing	4mil/4mil (0.1mm/0.1mm), Advanced: 3mil/3mil
Min. Hole Size	Mechanical: 0.2mm (8mil), Laser: 0.1mm (4mil)
Max. Board Size	500mm x 600mm (19.7" x 23.6")
Surface Finish	HASL, Lead-Free HASL, ENIG, OSP, Immersion Silver/Tin, Hard Gold, Soft Gold
Solder Mask Colors	White (LED standard), Black, Green, Blue, Red, Yellow, Matte Black/Green
Silkscreen Colors	White, Black, Yellow
Assembly Capabilities	SMT, COB (Wire bonding & Flip-chip), Through-hole, BGA, QFN, CSP
Testing & Inspection	AOI, Flying Probe, ICT, Functional Testing, Thermal Testing, 100% Electrical Testing
Quality Standards	ISO 9001:2015, RoHS, REACH, UL, IPC-A-600 Class 2/3, IPC-6012
Turnaround Time	• Express: 24-48 hours • Prototype: 3-5 days • Small Batch: 5-7 days • Mass Production: 7-15 days
Order Quantity	From 1 pcs (prototype) to 100,000+ pcs (mass production)
Packaging	Vacuum sealed, ESD protection, custom packaging available

LED PCB Types & Services

1. Aluminum LED PCB Manufacturing

Thermal Conductivity: 1-9 W/mK

Layers: Single to 4-layer options

Features: Cost-effective, excellent heat dissipation, lightweight, durable

Applications: LED street lights, automotive lamps, commercial lighting, home lighting

Advantages: Most popular choice for general LED applications, best balance of performance and cost

2. Copper Core LED PCB

Thermal Conductivity: Up to 398 W/mK

Layers: 1-8 layer configurations

Features: Superior heat dissipation, high-power LED compatible, excellent performance

Applications: High-power LED headlights, industrial lighting, stage lighting, medical equipment

Advantages: Maximum thermal conductivity for demanding high-power applications

3. Flexible LED PCB

Materials: Polyimide (PI) / Polyester (PET) substrate

Layers: Single to multi-layer options

Features: Bendable, lightweight, custom shapes available, space-saving design

Applications: LED light strips, decorative lighting, wearable devices, curved displays

Advantages: Perfect for creative and space-constrained designs

4. LED PCB Assembly Services

Assembly Types: SMT, COB (Wire Bonding & Flip-Chip), Through-hole

Services: Component sourcing, assembly, testing, packaging

Features: One-stop turnkey solution, from bare board to finished product

Quality Control: AOI inspection, functional testing, 100% electrical testing

Advantages: Simplified supply chain, faster time-to-market, consistent quality

Industry Applications

Our LED PCB solutions serve a wide range of industries with demanding performance requirements:

Automotive Lighting

LED headlights, taillights, dashboard illumination, interior lighting, brake lights

Commercial Lighting

Office LED panels, shopping mall lighting, hotel lighting, warehouse lighting

Residential Lighting

LED bulbs, downlights, smart home lighting, kitchen lighting, LED strips

Medical Devices

Surgical LED lights, examination lamps, diagnostic equipment, patient monitoring

Consumer Electronics

Smartphone backlighting, TV displays, laptop keyboards, smart wearables

Telecommunications

Network equipment indicators, signal towers, data centers, base stations

Agricultural Lighting

LED grow lights, greenhouses, vertical farming, plant growth chambers

Transportation

Traffic signals, street lighting, tunnel lighting, airport runway lights

Quality Assurance

Our Commitment to Quality

- **100% Inspection:** Every LED PCB undergoes comprehensive testing
- **Advanced Testing:** AOI, X-ray inspection, flying probe, functional testing
- **Thermal Testing:** Verification of heat dissipation performance
- **Traceability:** Complete manufacturing records for every batch
- **Warranty:** Quality guarantee with free rework for manufacturing defects

Contact JHYPCB

Ready to start your LED PCB project? Get in touch with our team today.

Email

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24-hour response guarantee

Phone

+86-138-2527-4100
Direct sales line

Website

www.pcbelec.com
Online quote & file upload

Support

Live Chat Available
Monday - Friday, 9AM - 6PM CST

How to Get Started

- Step 1:** Send us your Gerber files and specifications
- Step 2:** Receive detailed quote within 24 hours
- Step 3:** Free DFM review and optimization suggestions
- Step 4:** Approve quote and we begin production
- Step 5:** Quality inspection and on-time delivery

Free Services Included:

✓ 24-Hour Quotation | ✓ DFM Analysis | ✓ Engineering Support | ✓ Quality Guarantee

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This document contains proprietary information. All specifications subject to change without notice.

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