

# LED

## High Power LED Ceramic Core PCB



### Product

Ceramic circuit boards are made by Nanotech and sintered at 1450°C. The circuits on the surface are printed by using the silver and then making the unleaded nickel and tin coating. That provides the circuits with good thermal conductivity and electric conductivity.

### Features

High hot and cold impact resisted  
Low thermal expansion coefficient  
Anti UV  
Chemical erosive resisted which can ensure the durability / reliability / security and stability of LED

### Applications

Electronic components: IC/CPU/MOS  
LED / M/B / P/S / Heat sink / LCD-TV / Notebook PC / PC / Telecom device / Wireless Hub / etc...  
DDR II Module / DVD Applications / Hand-set Applications / etc...

### Caution

After opening the package, the LED CPCB should be kept at 30% RH or less.

### Properties

Functional Characteristics	CP-20	CP-57
Insulation Resistance	>100G (1000VDC, 1 minute)	>10G (1000VDC, 1 minute)
Dielectric with standing voltage	Ok (1500VAC, 60 HZ, 1 minute)	Ok (1500VAC, 60HZ, 1 minute)
Thermal Conductivity	≥ 8W/mk	≥ 10W/mk
Solder Heat Resistance	300 °C / 5 sec	300 °C / 5 sec
Electrode Tensile Strength	> WB 20N (2Gf)	> WB 20N (2Gf)
Density	≥ 3.2g/cm <sup>3</sup>	≥ 2.5g/cm <sup>3</sup>
Porosity	≥ 15%	≥ 15%
RoHS Compliant	Yes	Yes
Rending Strength	> WB 100N (10KGf)	> WB 100N (10KGf)
Dimension	Ø20mm (2.0mm)x t2.0mm (max)	Ø53mm (2.0mm)x t2.0mm (max)

Contract for the CPCB and MCPCB		
	Ceramic Core Print Circuit Board	MCPCB
Thermal Conductivity	Good (20-25 W/mk)	Bad (1-2.2 W/mk)
Electrical	High Insulation >10GΩ <sup>9</sup>	Low Insulation (Restricted in the insulation layer of EPOXY)
Working Temperature	Can be used at 300°C	Unable to bear high temperature
Environmental	RoHS Compliant	On the surface for welding and the insulating layer are the high pollution chemical materials
Life	Able to bear high temperature for a long time	The Insulation strength for the insulator layer will be destroyed with the high temperature for a long working time