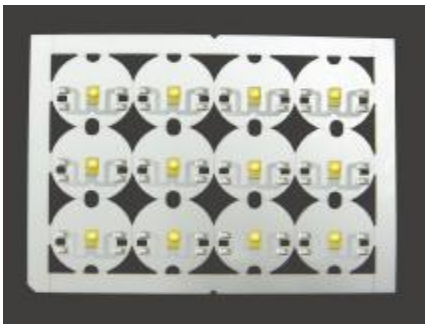
CERACON®

We Produce Competitive Printed Circuit Substrate for LEDs Lighting

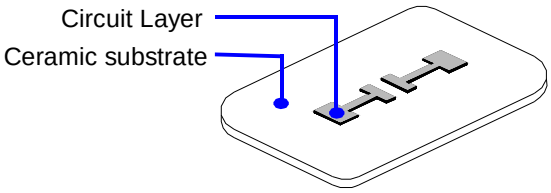
CERACON® is the latest launched product for LEDs application. We offer affordable and competitive price of CERACON® without compromising its quality and functional features. The cost is comparatively lower than metal core circuit boards.



With our past 17 years of good quality control experiences and exposure in ceramic printing, we are proud to be renowned as a reliable and trustworthy thin film processes techology producer.

Physically white in nature, CERACON® is able to provide good lighting reflection to enchance brightness. By allowing direct fired on ceramic surface, elimination of heat barrier and directly generates better heat dissipation and thermal management, thus longer LED life span is assured.

CERACON® is excellent used for ceramic-based LED as it is able to reduce TCE mismatch. Thus solder stretch problem will be minimum or negligible.
As CERACON® has high electrical insulation, it widely used for high voltage applications.



RoHS Compliant

Benefits

* High electrical insulation
* Thermal cycling stability
* Better light reflection of its natural color.
* Reduce TCE missmatch ***(excellent used for ceramic-base LEDs such as Rebel).***
* Good thermal conductivity
* Low cost
* Flexible shape and design capability

Product Specification

Technical Specification:

Maximum Operating voltage	: 250 VAC
Maximum Operating Temperatu	: 150° C
Breakdown Voltage	: 15KV/mm
Conductor Trace Resistivity	: < 5.5 mΩ/in^2
Fired Conductor Thickness	: 10.0µm ± 2.5µm
Maximum Substrate Size	: 100mm X 100mm
Conductor Trace Resolution (line/space)	: 200µm X 200µm
Conductor Adhesion Force (Initial - 2mm X 2mm pad)	: >6.0 kgf

Property	Units	Ceracon® 96% Al_2O_3
Color	-	White
Thermal conductivity 20-100°C	W/m °K	24
Thermal expansion 20-600°C	10^{-6}/°K	7.3
Dielectric constant		
-1 MHz		9.8 ± 10%
-1 GHz		10.0 ± 10%
Volume resistivity	Ohm x cm	
20°C		10^{13}
200°C		10^{12}

Product Performance

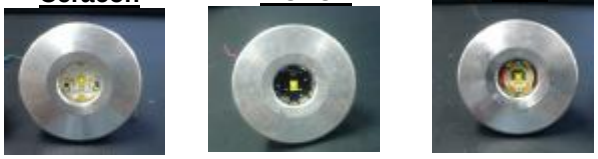
1) Scope

This test method is designed to evaluate the performance of board temperature and light output among CERACON, MCPCB and FR4 on the MR16 application.

2) Test specimens

a). 3 set of samples are prepared.

Ceracon **MCPCB** **FR-4**



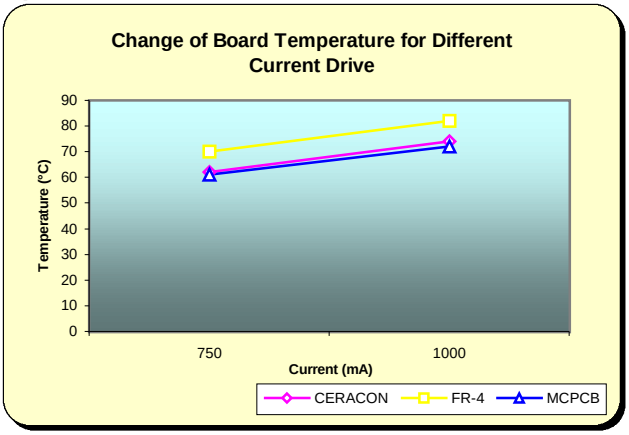
b). LED specification: Luxeon Rebel: LXML-PWC1

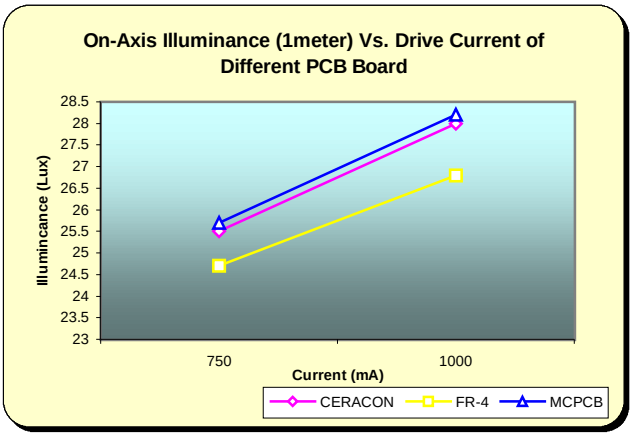
3) Procedure

a). Prepare the circuit connection as shown in diagram below, the test specimen will drive with 750mA, and 1000mA forward current. Record the board temperature rise when it reaches the saturation level.

b). After each test has been completed, the test specimens must be cooled down to room temperature before starting for the next test.

4) Result





Remark

This testing data is offered solely to provide possible suggestion for your experimentation. It is not intended, however to substitute for any testing you may need to conduct to determine for yourself the suitability of ours products for your particular purposes. Since we can't anticipate all variations in actual end-use conditions, HMS no warranties or liability in connection with any use of this information.