

1. Scope:

This test method is designed to evaluate the performance of Board temperature (T_b) between TRICON® and MCPC board with corresponding to power.

2. Test specimens

a). Two set of specimens have been prepared, the size: (L) X (W) X (t) as below:

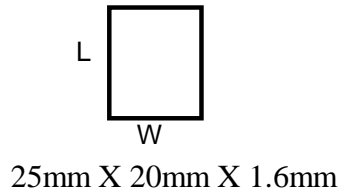


Diagram 1

b). Mounted the LED onto the boards, reflow the LED with solder paste and make sure there have solder paste on the beneath metal part. Refer to diagram 1.

c). LED specification: **Luxeon K2 Beta:**

- i). LXX2-PD12-R00B
- ii). Color: Red
- iii). Radiation pattern: Lambertian
- iv). Max. wattage: 5W

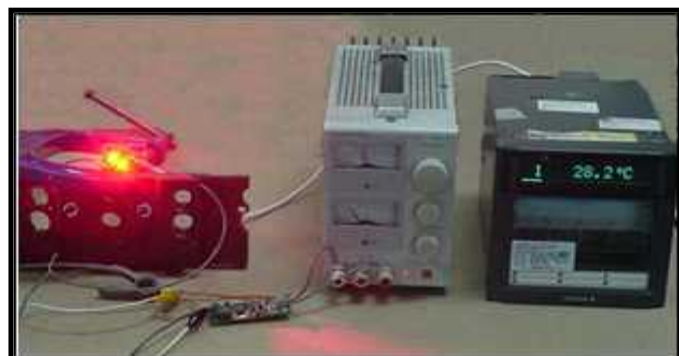
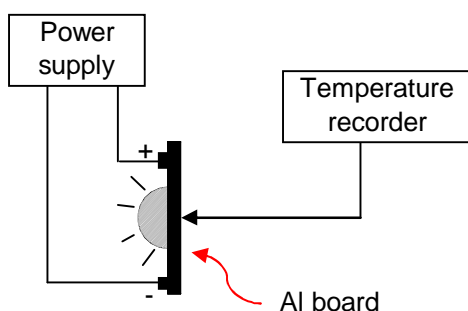
3. Apparatus

- 3.1. **Power Supply source:** Kenwood Regulated DC power supply PR18-3.
- 3.2. **Measurement Meter:** Advantest R6871E digital multimeter.
- 3.3. **Temperature Recording:** Yokogawa Temperature Recorder.

4. Procedure

4.1. Prepare the circuit connection as below diagram, each test specimen will apply to two different of forward current. i.e.: 300mA and 500mA. Record each board temperature when it was reached the saturation level.

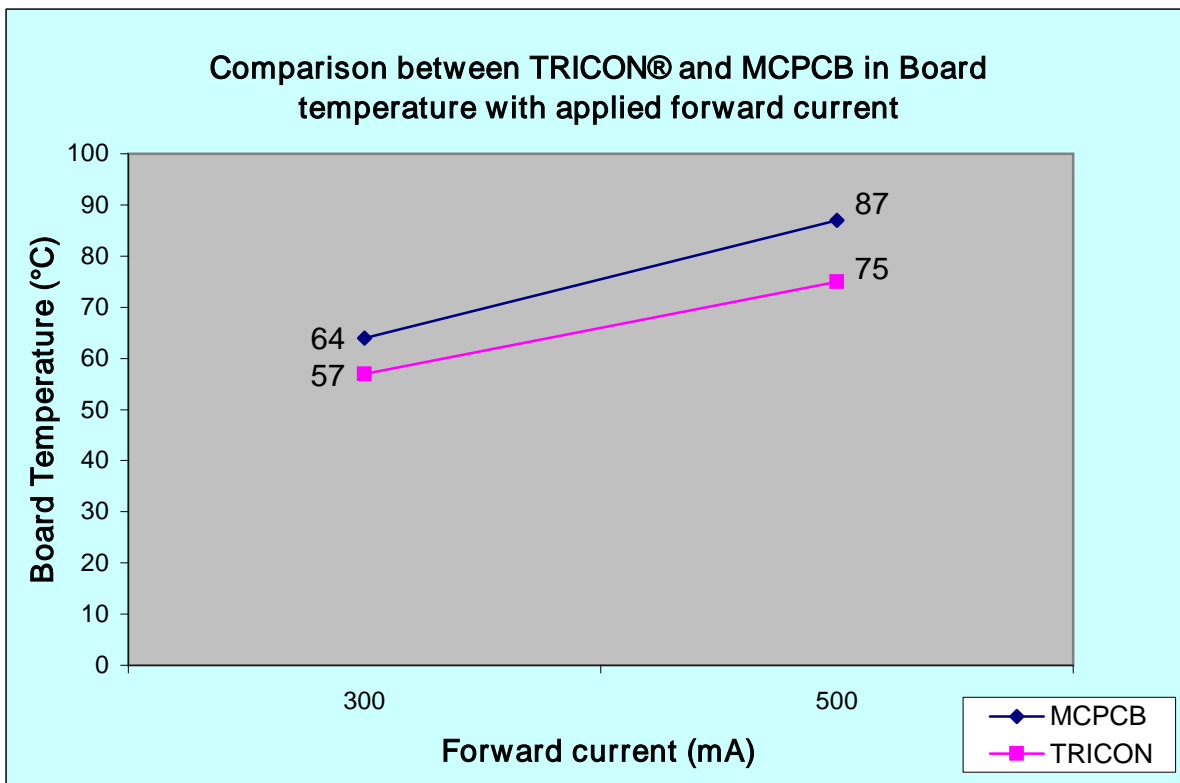
4.2. After finishing each test, the test specimens must be cold down to room temperature before start for the next test. The procedure will repeat for next test.



5. Result

Room temperature: 26.9°C

Board Type	Power		Board Temperature (°C)
	Vf (V)	If (mA)	
MCPCB	5.658	300	64.0
	6.362	500	87.0
TRICON®	5.754	300	57.0
	6.470	500	75.0



Remarks:

From the test result, TRICON® board shown more better heat dissipation compared to MCPCB. This is due to the nature of TRICON® construction process that allow the board to perform highly thermal conductivity. It ables to dissipate the heat more faster that MCPCB without support any external heat sink.