



LED Heat Dissipation Substrate Approval Specification Sheet for TAI004G

TA-I Technology Part Number: LHA01APTAI004G

Customer Approval:

Valid Date	Release Date	Version
Jul 12, 2012	Jul 12, 2012	TAI004G
Approved by	Checked by	Produced by

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1. Specification :

1.1 Substrate Dimension as shown in Table 1.

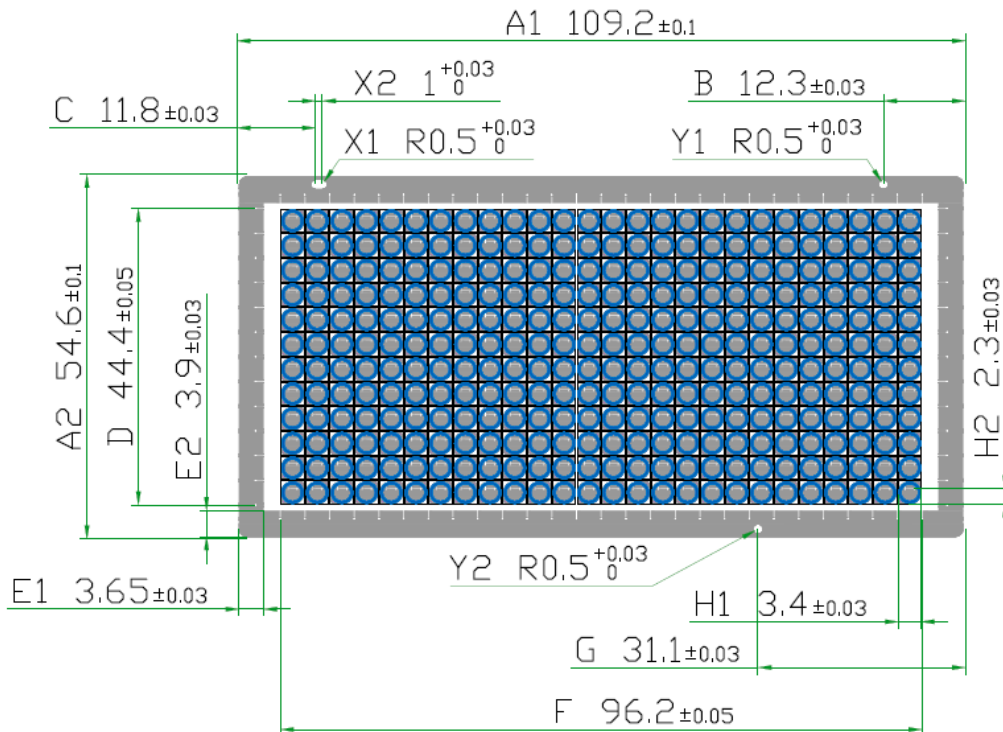
1.2 Per panel up to 312 pieces.

Table 1: The spec of Panel and Single Unit

	Item	Spec
Panel	Length	109.2±0.1
	Width	54.6±0.1
	Thickness of substrate	0.38±0.04
	The total thickness	0.55±0.06
Single Unit	Length	3.5±0.03
	Width	3.5±0.03

Unit: mm

1.3 Specification of Panel:

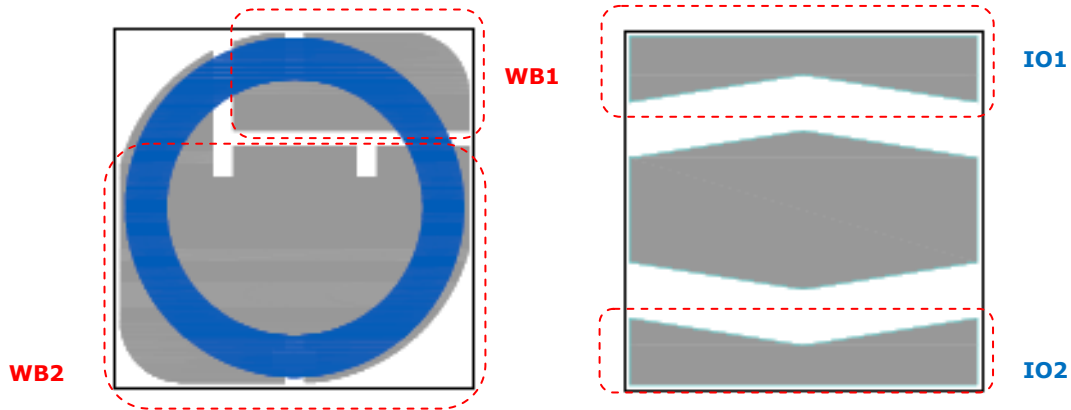




2. Electrical Continuity Test:

2.1 Test point: As shown in below diagram.

2.2 Method: Use flying probe attach separately to IO1 / IO2 of front side and WB1/WB2 of back side, result shall as shown as Table 1 and all via holes plugged. Electrodes of IO1/WB1 and IO2/WB2 shall be isolated from each other.



Front Side – Bondpad Area

Back Side – Non-Critical Area

2.3 Table of electrical function:

Measurement area	IO1-WB1	IO2-WB2	WB1-WB2	IO1-IO2
Function of electrical	○	○	×	×

○: Closed, ×: Opened



3. Criteria of Visual Inspection:


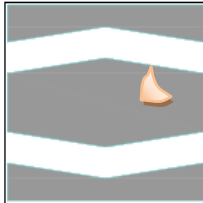


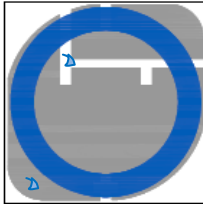
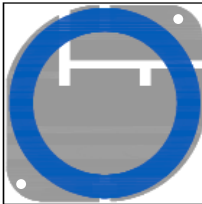
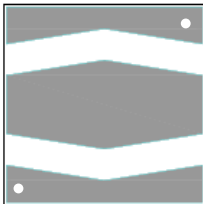
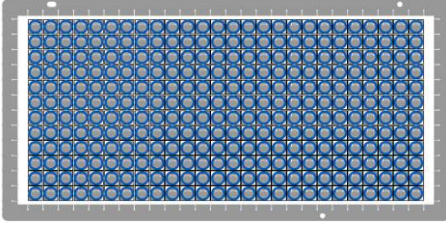
3.1 Visual inspection

3.2 Test items are shown as below table.

3.3 Tool: CCD OM 15X

3.4 Panel defective control: Accept if defective \leq 10%

3.5 Definition of test areas:

No.	Item	Examine area	Specification	Schematic diagram
1	a)Depression b)Silver Point c)Protrusion d)Foreign Materials e)Contaminants f)Crack g)Peeling (Electroless & Electro Plating)	Single unit of front and back side	NG if \geq 0.8mm	  <p style="text-align: center;">Front Side Back Side</p>
2	Pattern Inspection	Pattern of front and back side	The finish pattern shall per original drawing (above 95%).	 
3	Plating Layer / Photoresist	Gap edge of bondpad area	No metal / photoresist in indicated area.	
4	Over Plating / Partial Plating	Panel	Filling holes ratio > 99%	 
5	Over Plating	Tooling hole	No metal inside of the tooling hole.	



5. Reliability test

No.	Item	Parameter	Specification
1	Adhesion test	1. Temp. : RT 2. Tool : 3M-600 3. Time : adhesive 30 seconds 4. Angle : 180°	<ul style="list-style-type: none"> The exterior must be no separate
2	Solderability	1. Temp. : 235±5°C 2. Time : 5±1sec 3. solder bath composition : (Ag/Sn/Cu=3/96.5/ 0.5%)	<ul style="list-style-type: none"> Coverage > 90%
3	Reflow	1. Temp. : 260°C 2. Times : 3 cycles	<ul style="list-style-type: none"> The exterior must be no separate, crack and warpage Maintain the electrical function.

6. Notices

(1)When inspection, packaging and handling:

Must wear gloves and masks when inspect products.

Must wear latex gloves before unpacking products

Must avoid vibration, shock and stress etc. when carry products.

(2) Storage conditions:

Store under 25°C±5°C 、 50%±10RH when sealed.

The expiration date is less than 3 months when sealed.

Store under 25°C±5°C 、 50%±10RH when unsealed.

Please store unsealed package in airtight containers and used up within 3 days.

(3)Before wire bonding :

Please clean and preheat before wire bonding.