Photovoltaic substrate Approval Specification Sheet for SSS 002C

TA-I Technology Part Number: PVA01APSSS002C

Customer Approval:

Valid Date	Release Date	Version
Aug 22, 2012	Aug 22, 2012	SSS002C
Approved by	**Checked by**	**Produced by**

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1. Specification：

1.1 Substrate Dimension as shown in Table 1.

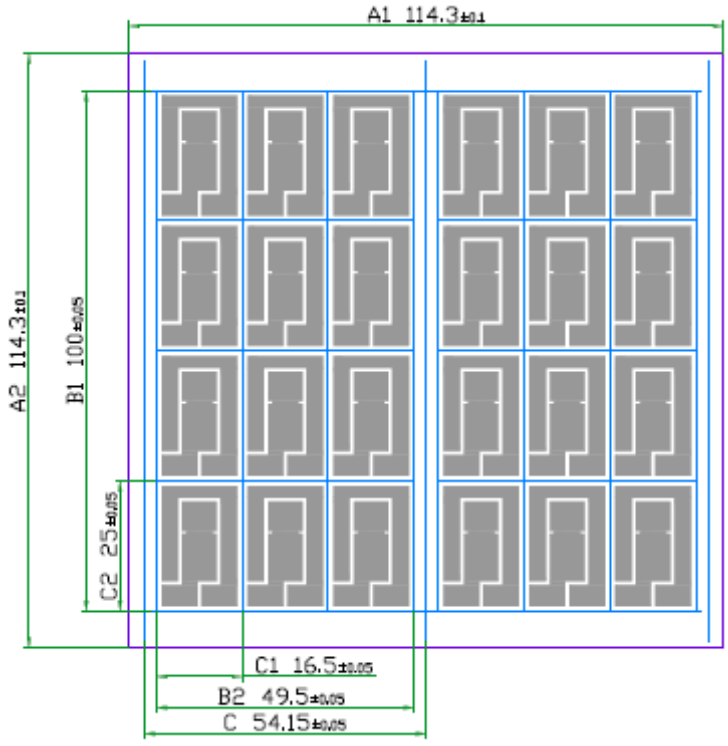
1.2 Per panel up to 24 pieces.

Table 1: The spec of Panel and Single Unit

Item		Spec
Panel	Length	114.3±0.1
	Width	114.3±0.1
	Thickness of substrate	0.38±0.04
	The total thickness	0.53±0.04
Single Unit	Length	25±0.05
	Width	16.5±0.05
Pre-cut	depth	0.06±0.01

Unit: mm

1.3 Specification of Panel:



2. Criteria of Visual Inspection:

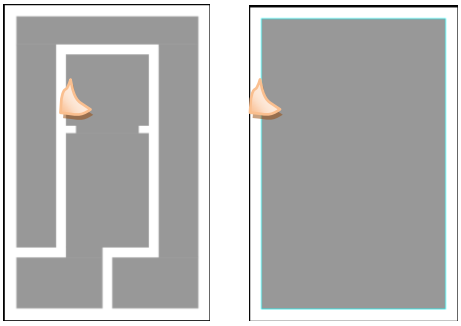
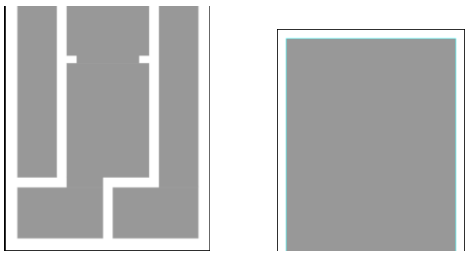
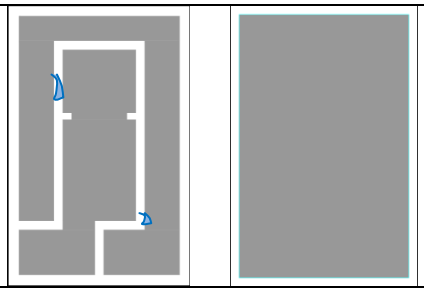
2.1 Visual inspection

2.2 Test items are shown as below table.

2.3 Tool: CCD OM 15X

2.4 Panel defective control: Accept if defective </= 10%

2.5 Definition of test areas:

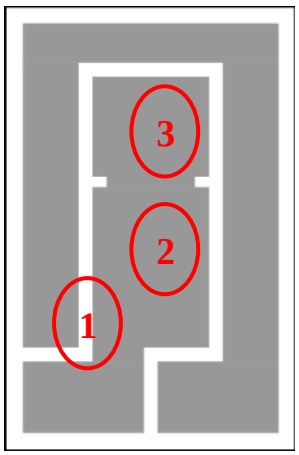
No.	Item	Examine area	Specification	Schematic diagram
1	a)Depression b)Silver Point c)Protrusion d)Foreign Materials e)Contaminants f)Crack g)Peeling (Electroless & Electro Plating)	Single unit of front and back side	NG if >/= 0.8mm	 Front Side Back Side
2	Pattern Inspection	Pattern of front and back side	The finish pattern shall per original drawing (above 95%).	
3	Plating Layer / Photoresist	Gap age of bondpad area	No metal / Photoresist in indicated area.	

3. Coating thickness test specification:

3.1 Using tools：
- Substrate thickness : Micrometer
- Cu thickness : 3 axis microscope
- Final finish thickness : X-ray thickness meter

3.2 Measurement position:
- Substrate thickness : Position 1
- Cu thickness : Position 2
- Final finish thickness : Position 3

3.3 Inspect spec: (Three times average of measurement)
- Substrate thickness : 0.38±0.04 mm
- Cu thickness : 75±15 um
- Final finish thickness : Ni Au:5(2~8) um/0.075(0.05~0.15)um(electroless)



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°	● The exterior must be no separate
2	**Solderability**	1. Temp.：235±5℃ 2. Time：5±1sec 3. solder bath composition：(Ag/Sn/Cu=3/96.5/ 0.5%)	● Coverage＞90%
3	**Reflow**	1. Temp.：260℃ 2. Times：3 cycles	● 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℃±5℃、50%±10RH when sealed.

The expiration date is less than 3 months when sealed.

Store under 25℃±5℃、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.