



Photovoltaic Taiwan TC Chapter

Meeting Summary and Minutes

Taiwan Summer Standards 2nd Meeting
 Wednesday, Jun 26, 2024 10:00 – 12:00
 Online Meeting

TC Chapter Announcements

Next TC Chapter Meeting
 Nov. 19, 2024 14:00-15:30
 Hybrid Meeting, Hsinchu, Taiwan

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: Ray Sung (UL)

SEMI Staff: *Cher Wu/ Cheryl Chuang*

| <i>Company</i> | <i>Last</i> | <i>First</i> | <i>Company</i> | <i>Last</i> | <i>First</i> |
|------------------------|-------------|--------------|----------------|-------------|--------------|
| ITRI | Long | Mickey | | | |
| King Design | Shih | Jason | | | |
| Risen Energy Co., Ltd. | Zhang | Ying | | | |
| | | | | | |
| | | | | | |

Table 2 Leadership Changes

| <i>WG/TF/SC/TC Name</i> | <i>Previous Leader</i> | <i>New Leader</i> |
|-------------------------|------------------------|-------------------|
| None | | |

Table 3 Committee Structure Changes

| <i>Previous WG/TF/SC Name</i> | <i>New WG/TF/SC Name or Status Change</i> |
|-------------------------------|---|
| None | |



Table 4 Ballot Results

| <i>Document #</i> | <i>Document Title</i> | <i>Committee Action</i> |
|-------------------|---|-------------------------|
| 7207 | Reapproval of SEMI PV23-1011 (Reapproved 0818), Test Method for Mechanical Vibration of Crystalline Silicon Photovoltaic (PV) Modules in Shipping Environment | Failed |
| 7208 | Reapproval of SEMI PV38-0912 (Reapproved 0818), Test Method for Mechanical Vibration of c-Si PV Cells in Shipping Environmen | Failed |
| 7209 | Reapproval of SEMI PV72-0316, Test Method to Evaluate an Accelerated Thermo Humidity Resistance of Photovoltaic (PV) Encapsulation | Failed |
| 7210 | Reapproval of SEMI PV84-0818, Test Method for Polymer Foil Dependent Discoloration of Silver Fingers on Photovoltaic Modules | Failed |

#1 **Passed** ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.

#2 **Failed** ballots and line items were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 5 Activities Approved by the GCS between meetings of the TC Chapter

| # | Type | SC/TF/WG | Details |
|------|------|----------|---------|
| NONE | | | |

Table 6 Authorized Activities

Listing of all revised or new SNARF(s) approved by the Originating TC Chapter.

| # | Type | SC/TF/WG | Details |
|------|-------|----------------------------|--|
| 7209 | SNARF | PV Reliability Test Method | The ballot is failed in Cycle 4-24 with one reject comment, so PV Reliability Test Method TF will review |
| | | | |

#1 SNARFs and TFOFs are available for review on the SEMI Web site at:

<http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF>

Table 7 Authorized Ballots

| # | When | TF | Details |
|------|--------------------------|----------------------------|---|
| 7207 | Cycle 6-24 Cycle 7-24 | PV Reliability Test Method | Reapproval of SEMI PV23-1011 (Reapproved 0818), Test Method for Mechanical Vibration of Crystalline Silicon Photovoltaic (PV) Modules in Shipping Environment |
| 7208 | Cycle 6-24 Cycle 7-24 | PV Reliability Test Method | Reapproval of SEMI PV38-0912 (Reapproved 0818), Test Method for Mechanical Vibration of c-Si PV Cells in Shipping Environment |
| 7210 | Cycle 6-24 Cycle 7-24 | PV Reliability Test Method | Reapproval of SEMI PV84-0818, Test Method for Polymer Foil Dependent Discoloration of Silver Fingers on Photovoltaic Modules |

Table 8 SNARF(s) Granted a One-Year Extension

| # | TF | Title | Expiration Date |
|------|----|-------|-----------------|
| None | | | |

Table 9 SNARF(s) Abolished

| # | TF | Title |
|------|----|-------|
| None | | |

Table 10 Standard(s) to receive Inactive Status

| Standard Designation | Title |
|----------------------|-------|
| None | |

Table 11 New Action Items

| Item # | Assigned to | Details |
|----------------------------------|-------------|---|
| Co-chairs have alignment meeting | Cher Wu | Discuss about the development direction of PV committee |



Table 12 Previous Meeting Action Items

| <i>Item #</i> | <i>Assigned to</i> | <i>Details</i> |
|-----------------------|--------------------|---|
| TF Leader Replacement | Matt Tsai (ITRI) | YuTai Li (ITRI), leader of PV Reliability Test Method TF has job responsibility change. Co-Chair Teng-Chun Wu (ITRI) recommends Dr. Hsieh as new leader (approved by committee on Jan. 12, 2024). Therefore, Matt Tsai (ITRI) will get the join approval from Dr. Mina Hsieh. |

1 Welcome, Reminders, and Introductions

Committee Co-Chairs Ray Sung (UL) called the meeting to order at 10:00. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: Required Element Nov 2020

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion: Approve previous meeting minute.

By / 2nd: Mickey Long (ITRI)/ Jason Shih (King Design)

Discussion: None

Vote: 3-0 in favor. Motion passed

Attachment: PV Meeting Minutes 20240326 V1

3 Liaison Reports

3.1 Photovoltaic and PV Materials China TC Chapter

--Cher Wu (SEMI) gave the China TC Chapter

PV and PV Materials Joint Global Technical Committees Liaison Report, Of note:

Last meeting is held May 16th , Spring 2024 Meeting, Baoding, Hebei. Next meeting will be Fall Meeting, 2024.

Leadership Changes

| <i>WG/TF/SC/TC Name</i> | <i>Previous Leader</i> | <i>New Leader</i> |
|-----------------------------|------------------------|--|
| PV Silicon Wafer Task Force | Yichun Wang – LONGi | Yichun Wang – LONGi Xuannan Zhang – TZE |

Ballot Result

| <i>Document #</i> | <i>Document Title</i> | <i>Committee Action</i> |
|-------------------|--|-------------------------|
| 7055 | New Standard: Guide for Tube PECVD Graphite Boat Materials for Solar Cell Production | Passed |

Authorized Activities

| <i>#</i> | <i>Type</i> | <i>SC/TF/WG</i> | <i>Details</i> |
|----------|-------------|------------------|---|
| PV | SNARF | PV Equipment | Revision to SEMI PV 81-0318, Guide for Specifying Low Pressure Horizontal Diffusion Furnace |
| PVM | SNARF | PV Silicon Wafer | Specification for Tungsten Wire Electroplated Diamond Wire for Photovoltaic Silicon Wafer Cutting |



SNARF(s) Abolished

| # | TF | Title |
|------|------------------|--|
| 7054 | PV Equipment | Reapproval of SEMI PV81-0318, Guide for Specifying Low Pressure Horizontal Diffusion Furnace |
| 6922 | PV Silicon Wafer | New Standard: Classification of Reusable Silicon Material |

Attachment: China PV&PVM Committee Chapter Liaison Report_May 2024

3.2 Photovoltaic (PV) – Materials NA TC Chapter

No Update

3.3 SEMI Staff Report

-Cher Wu (SEMI) gave the SEMI Staff Report. Of note:

Action Item: SEMI Global 2023 Calendar of Events

2023 Critical Dates for SEMI Standards Ballots

Attachment: Staff Report PV TC Meeting_20240626

4 Ballot Review

NOTE 1: TC Chapter adjudication on ballots reviewed is detailed in the Audits & Review (A&R) Subcommittee Forms for procedural review. The A&R forms are available as attachments to these minutes. The attachment number for each balloted document is provided under each ballot review section below.



4.1 Document # 7207, Reapproval of SEMI PV23-1011 (Reapproved 0818), Test Method for Mechanical Vibration of Crystalline Silicon Photovoltaic (PV) Modules in Shipping Environment

Motion: Approve this Document to be submitted to ballot for Cycle 6-24 、 Cycle 7-24

By / 2nd: By: Louis Wu (TUV) / Ray Sung (UL)

Discussion: None

Vote: 5-Y 0-N. Motion passed..

4.2 Document # 7208, Reapproval of SEMI PV38-0912 (Reapproved 0818), Test Method for Mechanical Vibration of c-Si PV Cells in Shipping Environment

Motion: Approve this Document to be submitted to ballot for Cycle 6-24 、 Cycle 7-24

By / 2nd: By: Louis Wu (TUV) / Ray Sung (UL)

Discussion: None

Vote: 5-Y 0-N. Motion passed..

4.3 Document # 7209, Reapproval of SEMI PV72-0316, Test Method to Evaluate an Accelerated Thermo Humidity Resistance of Photovoltaic (PV) Encapsulation

Motion: Approve this Document to be return to TF to review

By / 2nd: By: Louis Wu (TUV) / Ray Sung (UL)

Discussion: None

Vote: 5-Y 0-N. Motion passed..

4.4 Document # 7210, Reapproval of SEMI PV84-0818, Test Method for Polymer Foil Dependent Discoloration of Silver Fingers on Photovoltaic Modules

Motion: Approve this Document to be submitted to ballot for Cycle 6-24 、 Cycle 7-24

By / 2nd: By: Louis Wu (TUV) / Ray Sung (UL)

Discussion: None

Vote: 5-Y 0-N. Motion passed..

5 Subcommittee and Task Force Reports

None

6 Old Business

None

7 New Business

Cher Wu (SEMI) will coordinate a meeting with Co-chairs to discuss about the development direction of PV committee.



8 Next Meeting and Adjournment

Nov. 19, 2024

See <http://www.semi.org/standards-events> for the current list of events

Adjournment: 11:00

Respectfully submitted by:

Cheryl Chuang



Standards Coordinator

SEMI Taiwan

Phone: 886-3-560-1777 #510, 886-910-419-832

Email: cchuang@semi.org

Minutes tentatively approved by:

| | |
|---------------------|---------------|
| Co-chair | Date Approved |
| Teng-Chun Wu (ITRI) | Jul 01, 2024 |
| Ray Sung (UL) | Jul 01, 2024 |
| | |

Table 13 Index of Available Attachments#1

| <i>Title</i> | <i>Title</i> |
|--|--|
| 1 <u>Required Element Nov 2020</u> | 4. <u>China PV&PVM Committee Chapter Liaison Report May 2024</u> |
| 2 <u>PV Meeting Minutes 20240326 V1</u> | |
| 3 <u>Staff Report PV TC Meeting 20240626</u> | |

#1 Due to file size and delivery issues, attachments must be downloaded separately. A .zip file containing all attachments for these minutes is available at www.semi.org. For additional information or to obtain individual attachments, please contact [SEMI Staff Name] at the contact information above.