FPD Materials & Components and FPD Metrology

Japan Joint TC Chapter Meeting Summary and Minutes

Japan Standards Autumn Meetings 2025

Wednesday, October 15, 2025, 3:00PM – 5:00PM JST

SEMI Japan, Tokyo, Japan / Official Virtual TC Chapter Meeting (Hybrid)

TC Chapter Announcements

Next TC Chapter Meeting

FPD Materials & Components Japan TC Chapter and FPD Metrology Japan TC Chapter joint meeting will be held on Thursday, March 19, 2025, 3:00PM - 5:00PM JST via OVTCCM and at SEMI Japan, Tokyo, Japan.

Table 1 Meeting Attendees

Italics indicate virtual participants

FPD Materials & Components TC Co-Chairs: Tadahiro Furukawa (Yamagata University), Ryoichi Watanabe (Self), Toshimasa Eguchi (Sumitomo Bakelite)

FPD Metrology TC Co-Chairs: Ryoichi Watanabe (Self), Akira Kawaguchi (Otsuka Electronics)

SEMI Staff: Nahoko Koga (SEMI Japan)

Company	*Last*	*First*	*Company*	*Last*	*First*
MORESCO	*Uehigashi*	*Atsushi*	*FUJIFILM*	*Ishizuka*	*Hiroshi*
Self	Watanabe	Ryoichi	*FUJIFILM*	*Shibahara*	*Yoshi*
Nippon steel Chemical & Material	Nakatsuka	Jun	*SK-Electronics*	*Yagi*	*Toshifumi*
Nippon steel Chemical & Material	Takata	Rie	*SK-Electronics*	*Miyazaki*	*Shohei*
Yamagata University	Furukawa	Tadahiro	ITRI	Pong	Bao-Jen
Hoya Corporation	*Kondo*	*Keitaro*	SEMI Japan	Yoshida	Akiko
Otsuka Electronics	*Kawaguchi*	*Akira*	SEMI Japan	Koga	Nahoko
Sumitomo Bakelite	*Eguchi*	*Toshimasa*			

Table 2 Leadership Changes

WG/TF/SC/TC Name	*Previous Leader*	*New Leader*
FPD Materials & Components Japan TC Chapter		
None		
FPD Metrology Japan TC Chapter		
None		

Table 3 TC Chapter Structure Changes

Previous WG/TF/SC Name	*New WG/TF/SC Name or Status Change*
FPD Materials & Components Japan TC Chapter	
None	
FPD Metrology Japan TC Chapter	
None	

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
FPD Materials & Components Japan TC Chapter		
None		
FPD Metrology Japan TC Chapter		
None		

#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 Ratification Ballot Results

Document #	*Document Title*	*ISC A&R Action*	*A&R Forms*
FPD Materials & Components Japan TC Chapter			
None			
FPD Metrology Japan TC Chapter			
None			

Note 1: **Passed** Ratification ballots will be submitted to SEMI publication for final processing.

Note 2: **Failed** Ratification ballots were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 6 Activities Approved by the GCS between meetings of the TC Chapter

#	*Type*	*SC/TF/WG*	*Details*
FPD Materials & Components Japan TC Chapter			
None			
FPD Metrology Japan TC Chapter			
None			

Table 7 Authorized Activities

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

#	*Type*	*SC/TF/WG*	*Details*
FPD Materials & Components Japan TC Chapter			
7403	SNARF	FPD Mask Task Force	Revision to SEMI D53-0421, Specification for Flat Panel Display (FPD) Pellicles
7404	SNARF	FPD Materials & Components Maintenance Task Force	Line Item Revision to SEMI D9-0303, Terminology for Flat Panel Display (FPD) Substrates
FPD Metrology Japan TC Chapter			
None			

#1 SNARFs and TFOFs are available for review on the SEMI Web site at:
https://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF

Table 8 Authorized Ballots

#	*When*	*TF*	*Details*
FPD Materials & Components Japan TC Chapter			

Table 8 Authorized Ballots

#	*When*	*TF*	*Details*
7383	Cycle1-2026	FPD Mask Task Force	Reapproval of SEMI D20-0706, Terminology for FPD Mask Defect
7384	Cycle1-2026	FPD Mask Task Force	Reapproval of SEMI D21-0706, Terminology for FPD Mask Pattern Accuracy
7403	Cycle1-2026	FPD Mask Task Force	Revision to SEMI D53-0421, Specification for Flat Panel Display (FPD) Pellicles
7404	Cycle1-2026	FPD Materials & Components Maintenance Task Force	Line Item Revision to SEMI D9-0303, Terminology for Flat Panel Display (FPD) Substrates
FPD Metrology Japan TC Chapter			
None			

Table 9 SNARF(s) Granted a One-Year Extension

#	*TF*	*Title*	*Expiration Date*
FPD Materials & Components Japan TC Chapter			
None			
FPD Metrology Japan TC Chapter			
None			

Table 10 SNARF(s) Cancelled

#	*TF*	*Title*
FPD Materials & Components Japan TC Chapter		
None		
FPD Metrology Japan TC Chapter		
None		

Table 11 Standard(s) to receive Inactive Status

Standard Designation	*Title*
FPD Materials & Components Japan TC Chapter	
None	
FPD Metrology Japan TC Chapter	
None	

Table 12 New Action Items

Item #	*Assigned to*	*Details*
FPD Materials & Components Japan TC Chapter		
FPDM&C_20251015_01	Flexible Display Task Force	To prepare SNARF for Revision to D80, and to submit ballot for GCS Approval for Cycle 1.
FPDM&C_20251015_02	SEMI Staff	To send SNARF for Revision to D80 to Global TC members for 2 weeks review.

Table 12 New Action Items

Item #	*Assigned to*	*Details*
FPDM&C_20251015_03	Flexible Display Task Force and SEMI Staff	To submit D80 Revision ballot for Cycle 1.
FPDM&C_20251015_04	FPD Mask TF	To prepare SNARF for Revision to D42, and to submit ballot for GCS Approval for Cycle 1.
FPDM&C_20251015_05	FPD Mask TF and SEMI Staff	To submit SEMI D20 Reapproval ballot (Doc.#7383), SEMI D21 Reapproval ballot (Doc.#7384), SEMI D53 Revision ballot (Doc.#7403), SEMI D42 Revision ballot for Cycle1.
FPDM&C_20251015_06	FPD Materials & Components Maintenance TF and SEMI Staff	To submit Line Item Revision to D9-0303 (Doc.#7404) for ballot Cycle 1.
FPD Metrology Japan TC Chapter		
None		

Table 13 Previous Meeting Action Items

Item #	*Assigned to*	*Details*
FPD Materials & Components Japan TC Chapter		
FPDM&C_20250718_01	Flexible Display Task Force	To propose SNARF for Major Revision to SEMI D80-0421.→Open
FPDM&C_20250718_02	FPD Materials & Components Maintenance Task Force	To propose SNARF for Line Item Revision to SEMI D9-0303.→Closed
FPDM&C_20250718_03	FPD Mask Task Force	To propose SNARF for Revision to SEMI D42-0421.→Open To propose SNARF for Revision to SEMI D53-0421.→Closed
FPDM&C_20250718_04	SEMI Staff	To prepare Reapproval Ballots for SEMI D20-0706 and SEMI D21-0706.→Closed
FPD Metrology Japan TC Chapter		
None		

1 Welcome, Reminders, and Introductions

Toshimasa Eguchi (Sumitomo Bakelite) called the meeting to order at 3:00PM. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: 01_Required Meeting Elements March 2024_J

2 Review of Previous Meeting Minutes

The FPD Materials & Components Japan TC Chapter and the FPD Metrology Japan TC Chapter reviewed the minutes of the previous meeting.

Motion: Approve the minutes as written.
By / 2nd: By: Ryoichi Watanabe / Self
Second By: Jun Nakatsuka / NIPPON STEEL Chemical & Material
Discussion: None.
Vote: 8-Y 0-N Motion Passed.

Attachment: 02_FPD M&C+FPD Met_JA _Mins_20250718_v1.0

3 Liaison Reports

3.1 *Japan Regional Standards Committee (JRSC)*

Nahoko Koga (SEMI Japan) reported for the JRSC that the meeting was held on Thursday, August 28, 2025. Topics included:

- SEMI Standards Award Selection Committee for 2025 has been launched, and preparations are now underway for the Award Ceremony scheduled to take place at the Friendship Party during SEMICON Japan.
- The Planning Meeting was held on Thursday, August 28, 2025 inviting all the TF leaders as well as TC co-chairs to deepen knowledge related to standardization. The theme this year was "Gaps in Supply Chain Transparency and SEMI Standards."

Attachment: 03_JRSC Liaison Report_202510

3.2 *Global Coordinating Subcommittee (GCS)*

Nahoko Koga (SEMI Japan) reported for GCS that there had been no updates from the previous meeting.

3.3 *FPD Metrology Korea TC Chapter*

Nahoko Koga (SEMI Japan) reported for the FPD Metrology Korea TC Chapter. Of note:

- Last meeting was held on August 28, 2025 (Hybrid) and the next meeting will be held on January 15, 2026 (Hybrid).
- Doc.#7154A, New Standard, Test Method for Flicker of Flat Panel Displays failed ballot review.
- Doc.#7358, Reapproval of SEMI D76-0318, Test Method for Viewing Angle Characteristic Using Reference Color on Visual Display passed as balloted.
- Doc.#7155, New Standard, Test Method for Optical Switchable Properties of Automotive Display was approved for Ballot Cycle 7, 2025 by the GCS.
- Doc.#7154B, New Standard, Test Method for Flicker of Flat Panel Displays was authorized for Ballot Cycle9, 2025 and Doc.#7394, New Standard, Test Method for Accurate Color Performance of Flat Panel Display was authorized for Ballot Cycle1, 2026.
- SNARF for New Standard, Test Method for Accurate Color Performance of Flat Panel Display was authorized.

Attachment: 04_Liaison report_KR_FPDM_Oct2025_v2_20251015

3.4 *FPD Metrology Taiwan TC Chapter*

Bao-Jen Pong (ITRI) reported for the FPD Metrology Taiwan TC Chapter. Of note:

- Last meeting was held on October 3, 2025 (Hybrid) and the next meeting will be held on May 22, 2026.
- The following four SNARFs for Reapproval Ballots due to 5-year review were approved by the TC Chapter.
  - ➢ Reapproval of SEMI D69-0520, Test Method of FPD-Based Stereoscopic Display with Active Glasses

- Reapproval of SEMI D70-0520, Test Method of FPD-Based Stereoscopic Display with Passive Glasses
- Reapproval of SEMI D72-0520, Test Method for Color Properties of Electronic Paper Displays
- Reapproval of SEMI D73-1020, Reapproval of SEMI D73-1020 - Test Method for Positional Accuracy of Capacitive Touchscreen Panel

- Doc. #7352, Major Revision to SEMI D056-00-0519 Test Method for Measurement for Ambient Contrast of Flat Panel Displays, was approved by the TC Chapter.

Attachment: 05_FPD-M Taiwan Liaison Report_20251003_V1

4 SEMI Staff Report

Nahoko Koga (SEMI Japan) gave the SEMI Staff Report. Of note:

- SEMICON West 2025 was held in Phoenix, Arizona for the first time. From now on, SEMICON West will alternate each October between Phoenix and San Francisco.
- The second Global Standards Summit (GSS) took place at SEMICON West. GSS aims to identify areas relevant to standards and develop strategies for industry standardization over the next 3- and 7-year periods. This year's event continued discussions from previous meetings and included new topics such as supply chain traceability.
- The locations and dates for the NA Winter Meeting and NA Spring Meeting are under discussion. Once they are finalized, further information will be provided.
- SEMICON Japan is scheduled for December 17-19 at Tokyo Big Site. Due to renovation work at Tokyo Big Sight, Standards Meetings will take place in the TFT Building.

Attachment: 06_Staff Report Oct 2025 v4_202510

5 Ballot Review

None

6 Subcommittee and Task Force Reports

6.1 *FPD Materials & Components Japan TC Chapter*

6.1.1 *Flexible Display Task Force*

Tadahiro Furukawa (Yamagata University) reported that the Flexible Display Task Force met on October 15, 2025, prior to the TC Chapter meeting, to review document D80-0421 for its 5-year Review.

6.1.2 *FPD Mask Task Force*

Shohei Miyazaki (SK Electronics) reported that FPD Mask Task Force is discussing continuously about a new mask case development.

6.1.3 *FPD Materials & Components Maintenance Task Force*

Tadahiro Furukawa (Yamagata University) reported that the FPD Materials & Components Maintenance Task Force met on October 15, 2025, prior to the TC Chapter meeting, to discuss on the SNARF for D9-0303, for its 5 year-Review.

6.2 *FPD Metrology Japan TC Chapter*

6.2.1 *FPD Metrology Maintenance Task Force*

Ryoichi Watanabe (Japan Display) reported that the FPD Metrology Maintenance Task Force met on June 9, 2025, and September 3, 2025 to discuss on the following three ballot documents.

- Doc.#7154A, New Standard: Test Method for Flicker of Flat Panel Displays
- Doc.#7358, Reapproval of SEMI D76-0318, Test Method for Viewing Angle Characteristic Using Reference Color on Visual Display
- Doc.#7155, New Standard: Test Method for Optical Switchable Properties of Automotive Display

Attachment: 07_FPD Metrology Maintenance TF Report_20251015

7 Old Business

7.1 *FPD Materials & Components Japan TC Chapter*

7.1.1 Project Period Review

No SNARF will be expiring soon.

7.1.2 5-year Review

The following six documents will be due for 5-year Review.

- SEMI D80-0421, Test Method for Measurement of Water Vapor Transmission Rate for High Gas Barrier Plastic Film in a Short Time
- SEMI D53-0421, Specification for Flat Panel Display (FPD) Pellicles
- SEMI D42-0421, Specification for Ultra Large Size Mask Substrate Case
- SEMI D9-0303 (Reapproved 0321), Terminology for FPD Substrates
- SEMI D21-0706 (Reapproved 0221), Terminology for FPD Mask Pattern Accuracy
- SEMI D20-0706 (Reapproved 0221), Terminology for FPD Mask Defect

The FPD Materials & Components Japan TC Chapter reviewed SNARFs for Major Revision to SEMI D53-0421 and Line Item Revision to SEMI D9-0303. The SNARFs were proposed by the responsible Task Forces.

- SEMI D53-0421: Specification for Flat Pane Display (FPD) Pellicles

Motion:	Approve the SNARF for Major Revision to SEMI D53-0421: Specification for Flat Pane Display (FPD) Pellicles
By / 2nd:	By: Yagi Toshifumi / SK-Electronics CO.,LTD. Second By: Keitaro Kondo / HOYA Corporation
Discussion:	None.
Vote:	7-Y 0-N Motion Passed.

- SEMI D9-0303: Terminology for Flat Panel Display (FPD) Substrates

Motion:	Approve the SNARF for Line Item Revision to SEMI D9-0303: Terminology for Flat Panel Display (FPD) Substrates
By / 2nd:	By: Hiroshi Ishizuka / FUJIFILM Corporation Second By: Jun Nakatsuka / NIPPON STEEL Chemical & Material Co., Ltd.
Discussion:	None.
Vote:	8-Y 0-N Motion Passed.

The FPD Materials & Components Japan TC Chapter submitted the four documents under 5 year review for Ballot Authorization.

- SEMI D20-0706, Terminology for FPD Mask Defect

Motion: Authorize Reapproval of SEMI D20-0706: Terminology for FPD Mask Defect for Letter Ballot Cycle 1-2026.
By / 2nd: By: Shohei Miyazaki / SK-Electronics CO.,LTD
Second By: Keitaro Kondo / HOYA Corporation
Discussion: None.
Vote: 9-Y 0-N Motion Passed.

- SEMI D21-0706, Terminology for FPD Mask Pattern Accuracy

Motion: Authorize Reapproval of SEMI D21-0706, Terminology for FPD Mask Pattern Accuracy for Letter Ballot Cycle 1-2026.
By / 2nd: By: Shohei Miyazaki / SK-Electronics CO.,LTD
Second By: Keitaro Kondo / HOYA Corporation
Discussion: None.
Vote: 7-Y 0-N Motion Passed.

- SEMI D53-0421: Specification for Flat Pane Display (FPD) Pellicles

Motion: Authorize Document for Major Revision to SEMI D53-0421: Specification for Flat Pane Display (FPD) Pellicles for Letter Ballot Cycle 1-2026.
By / 2nd: By: Shohei Miyazaki / SK-Electronics CO.,LTD.
Second By: Keitaro Kondo / HOYA Corporation
Discussion: None.
Vote: 8-Y 0-N Motion Passed.

- SEMI D9-0303: Terminology for Flat Panel Display (FPD) Substrates

Motion: Authorize Document for Line Item Revision to SEMI D9-0303: Terminology for Flat Panel Display (FPD) Substrates for Letter Ballot Cycle 1-2026.
By / 2nd: By: Hiroshi Ishizuka / FUJIFILM Corporation
Second By: Jun Nakatsuka / NIPPON STEEL Chemical & Material Co., Ltd.
Discussion: None.
Vote: 8-Y 0-N Motion Passed.

Attachment: 08_SNARF_D53_MajorRevision_Specification for FPD Pellicles
09_SNARF_D9_Line Item Revision_Terminology for Flat Panel Display(FPD) Substrates

7.2 *FPD Metrology Japan TC Chapter*

7.2.1 Project Period Review

No SNARF will be expiring soon.

7.2.2 5-year Review

No document is subject to 5-year Review within this year.

8 New Business

8.1 *FPD Materials & Components Japan TC Chapter*

None.

8.2 *FPD Metrology Japan TC Chapter*

None.

9 Action Item Review

9.1 *Open Action Items*

Item #	*Assigned to*	*Details*
FPD Materials & Components Japan TC Chapter		
FPDM&C_20250718_01	Flexible Display Task Force	To propose SNARF for Major Revision to SEMI D80-0421.→Open
FPDM&C_20250718_02	FPD Materials & Components Maintenance Task Force	To propose SNARF for Line Item Revision to SEMI D9-0303.→Closed
FPDM&C_20250718_03	FPD Mask Task Force	To propose SNARF for Revision to SEMI D42-0421.→Open To propose SNARF for Revision to SEMI D53-0421.→Closed
FPDM&C_20250718_04	SEMI Staff	To prepare Reapproval Ballots for SEMI D20-0706 and SEMI D21-0706.→Closed
FPD Metrology Japan TC Chapter		
None		

9.2 *New Action Items*

Item #	*Assigned to*	*Details*
FPD Materials & Components Japan TC Chapter		
FPDM&C_20251015_01	Flexible Display Task Force	To prepare SNARF for Revision to D80, and to submit ballot for GCS Approval for Cycle 1.
FPDM&C_20251015_02	SEMI Staff	To send SNARF for Revision to D80 to Global TC members for 2 weeks review.
FPDM&C_20251015_03	Flexible Display Task Force and SEMI Staff	To submit D80 Revision ballot for Cycle 1.
FPDM&C_20251015_04	FPD Mask TF	To prepare SNARF for Revision to D42, and to submit ballot for GCS Approval for Cycle 1.
FPDM&C_20251015_05	FPD Mask TF and SEMI Staff	To submit SEMI D20 Reapproval ballot (Doc.#7383), SEMI D21 Reapproval ballot (Doc.#7384), SEMI D53 Revision ballot (Doc.#7403), SEMI D42 Revision ballot for Cycle1.
FPDM&C_20251015_06	FPD Materials & Components Maintenance TF and SEMI Staff	To submit Line Item Revision to D9-0303 (Doc.#7404) for ballot Cycle 1.
FPD Metrology Japan TC Chapter		
None		

10 Next Meeting and Adjournment

The next FPD Materials & Components Japan TC Chapter and FPD Metrology Japan TC Chapter joint meeting is scheduled for Thursday, March 19, 2026, 3:00PM – 5:00PM JST via OVTCCM and at SEMI Japan, Tokyo, Japan. See https://www.semi.org/en/expositions-events/calendar for the current list of events.

Adjournment: [5:00 PM JST]>.

Respectfully submitted by:

Nahoko Koga

Standards & EHS

SEMI Japan

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Email: nkoga@semi.org

Minutes tentatively approved by:

FPD Materials & Components Japan TC Chapter	
Tadahiro Furukawa (Yamagata University), Co-chair	October 23, 2025
Ryoichi Watanabe (Self), Co-chair	October 23, 2025
Toshimasa Eguchi (Sumitomo Bakelite), Co-chair	October 24, 2025
FPD Metrology Japan TC Chapter	
Ryoichi Watanabe (Self), Co-chair	October 23, 2025
Akira Kawaguchi (Otsuka Electronics), Co-chair	October 23, 2025

Table 14 Index of Available Attachments[#1]

Title	*Title*
01_Required Meeting Elements March 2024_J	06_Staff Report Oct 2025 v4_202510
02_FPD M&C+FPD Met_JA _Mins_20250718_v1.0	07_FPD Metrology Maintenance TF Report_20251015
03_JRSC Liaison Report_202510	08_SNARF_D53_MajorRevision_Specification for FPD Pellicles
04_Liaison report_KR_FPDM_Oct2025_v2_20251015	09_SNARF_D9_Line Item Revision_Terminology for Flat Panel Display(FPD) Substrates
05_FPD-M Taiwan Liaison Report_20251003_V1	

#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 Nahoko Koga at the contact information above.