

China HB-LED Standards Committee
Meeting Summary and Minutes
 China Spring Standards Meeting 2015
 Friday, April 10, 2015, 09:30 -14:00
 Diamond Hall C, #9 Shanxi Road, Gulou District, Nanjing

Next Committee Meeting
 Friday, September 18th, 2015

Table 1 Meeting Attendees

Co-Chairs: Yong Ji (GHTOT), Weizhi Cai (Sanan)

SEMI Staff: Kris Shen – SEMI China, Daniel Qi – SEMI China, Adam He – SEMI China, Richard Jiang – SEMI China

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
48 Institute	Lv	Wenli	Jingmai	Shen	Zhenhong
48 Institute	Sui	Honglin	Jingmai	Zhang	Bing
AMEC	LEE	Steven	KRDQ	Li	Guoping
AURORA	Zuo	Hongbo	Lianhe	Gao	Liming
AURORA	Yang	Xinhong	Lianhe	Wang	Jing
AURORA	Zhang	Xuejun	Lianhe	Zhu	Sen
AURORA	Ding	Guangbo	Meyer Burger	Zhou	Huiwen
CBVAC	Liu	Shenghui	Meyer Burger	Eggimann	Christoph
CESI	Fu	Xuetao	Monocrystal	Niu	Congshi
Crystaland	Yi	Jingjing	NJC	Zheng	Songsen
CXTC	Wang	Fan	NJC	Li	Ye
CXTC	Dong	Zhengming	NJC	Lv	Jiancheng
Dahuasmart	Wang	Zhaoyun	NJC	Ji	Xinyi
DDXDF	Zhao	Songbin	NJC	Pu	Zonghan
DDXDF	Zhen	Wei	NJC	Huang	Kai
DDXDF	Shi	Feng	NJC	Lu	Chengwei
DIASC	Liang	Chao	PatSnap	Liu	Zhonghua
DIASC	Di	Feng	Sanan	Cai	Weizhi
DIASC	Zou	Yuyao	SCIENTIFIC VISUAL	ORLOV	IVAN
DIAT	Kang	Jiejiao	Sdsafeier	Wang	Jingbo
Dongrong	Ma	Ying	Sdsafeier	Zhao	Jingting
ECEC	Liu	Jianzhe	SEMI	Shen	Kris
Edwards	Shao	Wei	SEMI	Qi	Daniel
FJhuijing	Chen	Jianming	SEMI	He	Adam
GAPSS	Wei	Mingde	SEMI	Jiang	Richard
GHTOT	Qi	Liuyun	Sindnfride	Kang	Kai
GHTOT	Ren	Jing	SKY	Zhao	Kexin
GT Advanced Technologies	Jin	Junqiang	Solvay	Xia	Xing
GT Advanced Technologies	Zhou	Zhengxing	Solvay	Yang	Nuo
Hermes-epitek	Sun	Liang	SST	Song	Weihong
Hermes-epitek	Li	Qi	SVECK	Tang	Fei
Hermes-epitek	Che	Yanqing	TDG	Song	Yanyan
HIT	Gan	Yang	TDG	Fan	Zhiyuna
Hongbo	Wang	Yongzhong	TDG	Shen	Qhuan
Hyperion	Li	Mingyuan	TDG	Yao	Zhiyan
Invenlux	Yan	Chunhui	THTFLED	Dong	Fa
Istarwafer	Zhen	Dong	THTFLED	Wu	Feixiang
JEshine	Cai	Jinrong	Ulightech	Hu	Langlang

Jeshine	Huang	Kai	WINIFRED	Feng	Yimin
Jingan	Lin	Yongteng	YUHUAN	Xie	Yanbo
Jingan	Ye	Guowei	YUHUAN	Xie	Dongping
Jingan	Chen	Shunsong	Zeta	Hou	Zhen
Jingmai	Qu	Min	Zhongtian	Chen	Qi
Jingmai	Fu	Rong	Zhongtian	Tang	Baofa

Table 2 Leadership Changes

<i>Group</i>	<i>Previous Leader</i>	<i>New Leader</i>
GaN based LED Epitaxial Wafer Task Force	Donghai Wu (THTF), quit	Fa Dong (THTF)

Table 3 Ballot Results

Passed ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.
Failed ballots and line items were returned to the originating task forces for re-work and re-balloting.

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
None		

Table 4 Authorized Ballots

<i>#</i>	<i>When</i>	<i>SC/TF/WG</i>	<i>Details</i>
None			

Table 5 Authorized Activities

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
None			

Note: SNARFs and TFOFs are available for review on the SEMI Web site at:
<http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF>

Table 6 New Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
None		

Table 7 Previous Meeting Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>	<i>Status</i>
China HB-LED-091 4-01	Sapphire Single Crystal Ingot Task Force Leaders	Recruiting more task force members to develop the document # 5775	Done
China HB-LED-091 4-01	GaN based LED Epitaxial Wafer Task Force Leaders	Recruiting more task force members to develop the document # 5776	In process

1 Welcome, Reminders, and Introductions

Committee co-chair Yong Ji chaired the meeting and welcomed all attendees, all the attendees introduced themselves. Kris Shen called the meeting to order at 9:45 AM. The meeting reminders on antitrust issues, intellectual property issues and effective meeting guidelines were reviewed.

Agenda was reviewed.

2 Review of Previous Meeting Minutes

Minutes were reviewed. No change was made.

Motion: To accept the minutes of the previous meeting as submitted

By / 2nd: Yang Gan (HIT)/ Steven Lee (AMEC)

Discussion: None

Vote: 30-0. Motion passed
[Attachment-1, China HB-LED TC Meeting Minutes 20140919.pdf](#)

3 Staff Report

Kris Shen (SEMI) gave the staff report. Highlights

- Overview the SEMI Global 2015 Calendar of Events
- SEMI standards publication update
- Overview recent published standards from HB-LED TC
- Remind SEMI standards membership application

[Attachment-2, SEMI Staff Report 20150410.pdf](#)

4 Liaison Reports

4.1 North America PV Materials Committee

Kris Shen (SEMI) reported. Highlights:

- The co-chairs of North America HB-LED TC are Iain Black (Philips Lumileds), Chris Moore (BayTech-Resor), Mike Feng (Silian), Bill Quinn (WEQ Consulting)
- There are 9 task forces under the TC, one new working group--Display Materials and Metrology WG
- Recent Ballots—Cycle 1, 2015:#5747, #5748, #5749
- Current Activities
- Next meeting - Thursday, July 16, San Francisco Marriott Marquis Hotel, 780 Mission Street, San Francisco, California 95103 U.S.A.

[Attachment-3, NA HB-LED Report April 2015 MT.pdf](#)

4.2 Korea HB-LED Working Group

Kris Shen (SEMI HQ) reported. Highlights:

- 2 teams under the working group
- Responses to the NA HB-LED technical committee
- Next meeting – TBD

[Attachment-4, KR HB-LED liaison 2015Mar.pdf](#)

5 Ballot Review

None

6 Task Force Reports

6.1 Single Crystal Sapphire Task Force

- Working on: Doc. 5723, Specification for Single Crystal Sapphire Intended for Use for Manufacturing HB-LED Wafers
 - Discolor Classification
 - Inclusions Classification
 - Grain Boundary Testing Method

[Attachment-5, Single Crystal Sapphire TF Report20150410.pdf](#)

6.2 Sapphire Single Crystal Ingot Task Force

- Working on: Doc. 5775, New Standard: Specification for Sapphire Single Crystal Ingot Intended for Use for Manufacturing HB-LED Wafers
 - Key parameters Sharing
- Ivan Orlov from Scientific Visual SA gave a presentation on “Proposal for standard Specification for Sapphire Single Crystal Ingot”
 - 5 key points which should be taken into account
 - Testing Methods
 - 8 Quality Grades for new standard
- Task force will held a Tel-conference to discuss the details soon

[Attachment-6, Sapphire Single Crystal Ingot TF 20150410.pdf](#)

[Attachment-7, Proposal for Sapphire Single Crystal Ingot TF.pdf](#)

6.3 GaN based LED Epitaxial Wafer Task Force

- Working on: D oc. 5776, New Standard: Test Method for GaN based LED Epitaxial Wafer Used for Manufacturing HB-LED
 - Key Test item and test method
 - Task force will recruiting more members to draft the document together

[Attachment-8, GaN based LED Epitaxial Wafer TF 20150410.pdf](#)

7 Old Business

None

8 New Business

8.1 SNARF- New Standard: Test Method for Single Crystal Orientation

Motion: To approve the SNARF

By/2nd: Feng Shi(DDXDF)/ Jianzhe Liu (ECEC)

Discussion: Is there any similar single crystal orientation test method in semiconductor industry? --Yang Gan (HIT)

We have not find it. --Feng Shi (DDXDF)

Yes, there is one similar standard has been published, we can provide the standard name and number offline. Wenli Lv (48 Institute)

Committee recommended the author to compare the current standard, if they are different, author can apply the SNARF in the next meeting.

The author (Feng Shi) accepted the committee suggestion.

Vote: None

[Attachment-9, SNARF-New Standard Test Method for Single Crystal Orientation.pdf](#)

9 Action Item Review

9.1 *Open Action Items*

None

9.2 *New Action Items*

See Table 6.

10 Next Meeting and Adjournment

The next meeting of the China HB-LED Standards committee will be on Sept. 18, 2015, Friday, Huangshan, Anhui, China.

Respectfully submitted by:

Kris Shen
SEMI China

Minutes approved by:

Yong Ji (GHTOT), Co-chair	2015/4/20
Weizhi Cai (SANAN), Co-chair	2015/4/20

Table 8 Index of Available Attachments #1

#	Title	#	Title
1	China HB-LED TC Meeting Minutes 20140919.pdf	6	Sapphire Single Crystal Ingot TF 20150410.pdf
2	SEMI Staff Report 20150410.pdf	7	Proposal for Sapphire Single Crystal Ingot TF.pdf
3	NA HB-LED Report April 2015 MT.pdf	8	GaN based LED Epitaxial Wafer TF

			20150410.pdf
4	KR_HB-LED_liaison_2014Sept.pdf	9	SNARF-New Standard Test Method for Single Crystal Orientation.pdf
5	Single Crystal Sapphire TF Report 20150410.pdf		

#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.