Record of Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: China
Global Technical Committee: HB-LED
TC Chapter Cochairs: Yong Ji/GHTOT, Weizhi Cai/SANAN
Standards Staff: Sophia Huang/SEMI China

	Scheduled in Background Statement	Actual
Date	04/20/2017	04/20/2017
Location	No.87 North Yinhu Road, Wuhu, Anhui, HanJue Hotel Wuhu	No.87 North Yinhu Road, Wuhu, Anhui, HanJue Hotel Wuhu
Reason for Change of Date and/or Location (if changed)		

Note: See *Regulations* ¶ 9.5 Exception for allowable reason to change.

I. Document Number and Title

Document Number	Document Title
5776	New Standard: Test Method for Detecting Surface Defects of GaN based LED Epitaxial Wafer Used for Manufacturing HB-LED

II. Tally

Standards staff to fill in.

Voting Tally: As-cast tally after close of voting period

Note: A minimum of 60% of the Voting Interests that have TC Members within the global technical committee that issued the Letter Ballot must return Votes. (*Regulations* ¶ 9.7.1.1)

Voting Tally (with example values):

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	42	÷	70	=	60.0%	≥60%
Intercommittee Ballot	21					
Voting Interest Reject(s)	4		Total Voters with Rejects		4	
Voting Interest Accept(s)	33					

Note: See *Regulations* § 3.2.1 for definition of Voting Interest.

III. Rejects

Voting Interest Reject 1 (Voting Interest Name: Larry D. Hartsough)
Voter Reject 1 (Voter: Larry D. Hartsough /U.A. Assocciates)
Negative 1

<table>
<tr>
<td rowspan="4">Negative</td>
<td>Referenced Section/ Paragraph</td>
<td colspan="3">*TF/TC Chapter to fill in, including text in the ballot if necessary.</td>
</tr>
<tr>
<td colspan="3">Section 4.1.3</td>
</tr>
<tr>
<td rowspan="2">Negative Text</td>
<td colspan="3">*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.</td>
</tr>
<tr>
<td colspan="3">1. In ¶ 4.1.3 Hillock — A small prominence or elevation at the surface wafers, typically with hexagonal shape for GaN LED wafers.

a. The adjective small is ambiguous and the shape limitation belongs in a subsidiary paragraph. It could be re-written as follows:

b. 4.1.3 hillock — a localized protuberance of material from the wafer surface.

4.1.3.1 Discussion. For GaN epitaxial wafers, these are usually hexagonal.</td>
</tr>
<tr>
<td colspan="2">TF input (optional)</td>
<td colspan="3"></td>
</tr>
<tr>
<td rowspan="2"></td>
<td rowspan="2">Withdrawal (check one)</td>
<td></td>
<td>No Negative withdrawal made by Voter.</td>
<td>GO TO "Related" subsection</td>
</tr>
<tr>
<td></td>
<td>Withdrawal document received by Standards staff on MM/DD/YYYY.</td>
<td>GO TO "Final" subsection → (A)</td>
</tr>
<tr>
<td rowspan="8">Related</td>
<td rowspan="3">Motion and Reason (check one)</td>
<td></td>
<td>'Related' is mutually agreed upon. (Needs no motion.)</td>
<td>GO TO "Persuasive" subsection</td>
</tr>
<tr>
<td></td>
<td colspan="2">Negative is not related. (Needs ≥2/3 votes to pass.)</td>
</tr>
<tr>
<td></td>
<td>Reason</td>
<td>Accept</td>
</tr>
<tr>
<td>Motion by/ 2nd by</td>
<td colspan="3">Name (Company)/Name (Company)</td>
</tr>
<tr>
<td>Discussion</td>
<td colspan="3"></td>
</tr>
<tr>
<td rowspan="3">Result of Vote (check one)</td>
<td colspan="3">XX Y-XX N; Motion passed/failed.</td>
</tr>
<tr>
<td></td>
<td>[Negative is not related.] < 2/3</td>
<td>GO TO "Persuasive" subsection</td>
</tr>
<tr>
<td></td>
<td>2/3 ≤ [Negative is not related.]</td>
<td>GO TO "Final" subsection → (B)</td>
</tr>
<tr>
<td rowspan="4">Persuasive</td>
<td rowspan="3">Motion and Reason (check one)</td>
<td></td>
<td colspan="2">Negative is related and persuasive. (Needs >1/3 votes to pass.)</td>
</tr>
<tr>
<td></td>
<td colspan="2">Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)</td>
</tr>
<tr>
<td></td>
<td>Reason</td>
<td>XXXX</td>
</tr>
<tr>
<td>Motion by/ 2nd by</td>
<td colspan="3">Name (Company)/Name (Company)</td>
</tr>
</table>

	Discussion					
	Result of Vote (check one)		XX **Y**-XX **N**; Motion passed/failed.			
			[Negative is related and persuasive.] > 1/3	**Is a technical change recommended? (check one)**	**Y**	**GO TO "Address by Technical Change Option" subsection**
			[Negative is related and not persuasive.] < 2/3		**N**	**GO TO "Final" subsection → (E)**
			2/3 ≤ [Negative is related and not persuasive.] < 90%	**GO TO "Final" subsection → (C)**		
			90% ≤ [Negative is related and not persuasive.]	**GO TO "Not Significant Finding Option" subsection**		

Address by Technical Change Option

Technical Change Recommendations

Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.

Technical Changes	**1**	**FROM: Section/Paragraph XXX**
		TO: Section/Paragraph xxx
		Justification (If necessary)
	2	**FROM: Section/Paragraph XXX**
		TO: Section/Paragraph xxx
		Justification (If necessary)

Motion	Negative is addressed by the technical change(s).
Motion by/2nd by	Name (Company)/Name (Company)
Discussion	

Result of Vote (check one)	XX **Y**-XX **N**; Motion passed/failed.	
	2/3 ≤ [Negative is addressed by the technical change(s).]	**GO TO "Incorporation of the Technical Change" subsection**
	[Negative is not addressed by the technical change(s).] < 2/3	**GO TO "Final" subsection → (E)**

Incorporation of the Technical Change

Motion	To incorporate the technical change(s).	
Motion by/2nd by	Name (Company)/Name (Company)	
Discussion		
Result of Vote (check one)	XX **Y**-XX **N**; Motion passed/failed.	
	90% ≤ [Agree to incorporate.]	**GO TO "Final" subsection → (F)**
	[Disagree to incorporate.]>10%	**GO TO "Final" subsection → (E)**

Not Significant Finding Option	**This option can be used only "if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action". (*Regulations* ¶ 9.6.4.4.2)**			
	Use of "Not significant finding option" (check one)		It is mutually agreed upon to term the Negative "not significant".	**GO TO "Final" subsection → (D)**
			It is mutually agreed upon to term the Negative "significant".	**GO TO "Final" subsection → (C)**
			Whether or not the Negative is "not significant" is decided by a vote.	
	Motion	The Negative is "not significant".		
	Motion by/ 2nd by	Name (Company)/Name (Company)		
	Vote		XX **Y**-XX **N**; Motion passed with simple majority	**GO TO "Final" subsection → (D)**
			XX **Y**-XX **N**; Motion failed with simple majority	**GO TO "Final" subsection → (C)**
Final	**(check if applicable)**		**(A)** Withdrawn **(counted under h in disposition)**	
			(B) Not related **(counted under i in disposition)**	
			(C) Related and not persuasive (significant)	
			(D) Not significant **(counted under j in disposition)**	
			(E) Related and persuasive and not addressed by technical change	**DOCUMENT FAILS**
			(F) Addressed by technical change **(counted under k disposition)**	
	(check if applicable)		Comment generated. **See Section V-(ii) Comment #** X.	

This table is needed for each Negative.

Negative 2
Negative 3
Negative 4

Voting Interest Reject 1- Voter Reject 2 (Voter: Name and company)

Negative 1
Negative 2
Negative 3
Negative 4

Disposition of Voting Interest Reject 1

Check only when the Document has not been failed.

#		
#	Original number (#) of Negatives	**(g)**
#	Number of Negatives withdrawn	**(h)**
#	Number of Negatives found not related	**(i)**
#	Number of Negatives found not significant	**(j)**
#	Number of Negatives addressed by technical change **(Negative becomes not significant)**	**(k)**

Final		$g - (h + i + j + k) = 0$	**Reject is Not Valid and is not included in the denominator of § VI.** *Approval Conditions Check*
		$g - (h + i + j + k) > 0$	**Reject is included in the denominator of § VI.** *Approval Conditions Check*
		Reject without a Negative	**Not Valid**

Note: If all of the Negatives included with a Reject Vote are withdrawn, determined to be not related, or determined to be not significant, the Reject Vote is not valid. (*Regulations* ¶ 9.4.3.3)
Note: A Negative addressed by a technical change is automatically considered to be not significant. (*Regulations* ¶ 9.6.4.4.2)

Voting Interest Reject 2 (Voting Interest Name: XXXXXX)
Voter Reject 1 (Voter: Name and company)
Negative 1
Negative 2

IV. Other Technical Issues

Note: TC Chapter may choose to address a technical issue that is not part of a Negative received on a Letter Ballot (i.e., a Comment or a reason not addressed by a Vote response) by handling it as a Negative and finding it related and technically persuasive. The TC Chapter may then fail the Document or address such technical issue by using the procedure defined in *Regulations* § 9.6.4.3 to make a technical change to the Document. (*Regulations* ¶ 9.6.2.4.5)

Technical Issue			
	Origin	***TF/TC Chapter to choose** Comment # (Voter: Name and company) / A reason not addressed by a Vote response	
	Referenced Section/ Paragraph	***TF/TC Chapter to fill in including text in the ballot as appropriate.**	
	Reason	***Original Comment text, if applicable, and problem statement, including justification and suggestion, should be copied.**	

Handle technical issue identified above as a Negative.

Related				
	Motion and Reason (check one)		'Related' is mutually agreed upon. **(Needs no motion.)**	**GO TO "Persuasive" subsection**
			Negative is not related and assigned to TF. **(Needs ≥2/3 votes to pass.)**	
			Negative is not related and placed on agenda of current TC Chapter meeting as new business. **(Needs ≥2/3 votes to pass.)**	
			Reason	XXXX
	Motion by/ 2nd by	Name (Company)/Name (Company)		
	Discussion			
	Result of Vote (check one)	XX **Y**-XX **N**; Motion passed/failed.		
			[Negative is not related.] <2/3	**GO TO "Persuasive" subsection**
			2/3 ≤ [Negative is not related] and assigned to TF.	

			2/3 ≤ [Negative is not related] and placed on agenda of current TC Chapter meeting as new business.		**GO TO "Final" subsection → (B)**	

Persuasive	**Motion and Reason (check one)**		Negative is related and persuasive. **(Needs >1/3 votes to pass.)**			
			Negative is related and not persuasive. **(Needs ≥2/3 votes to pass.)**			
			Reason	XXXX		
	Motion by/ 2ⁿᵈ by	Name (Company)/Name (Company)				
	Discussion					
	Result of Vote (check one)	XX **Y**-XX **N**; Motion passed/failed.				
			[Negative is related and persuasive.] > 1/3	**Is a technical change recommended? (check one)**	**Y**	**GO TO "Address by Technical Change Option" subsection**
			[Negative is related and not persuasive.] < 2/3		**N**	**GO TO "Final" subsection → (E)**
			2/3 ≤ [Negative is related and not persuasive.] < 90%	**GO TO "Final" subsection → (C)**		

Address by Technical Change Option	**Technical Changes**		**Technical Change Recommendations** **Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.**		
		1	**FROM: Section/Paragraph XXX**		
			TO: Section/Paragraph xxx		
			Justification (If necessary)		
		2	**FROM: Section/Paragraph XXX**		
			TO: Section/Paragraph xxx		
			Justification (If necessary)		
	Motion		Negative is addressed by the technical change(s).		
	Motion by/2ⁿᵈ by		Name (Company)/Name (Company)		
	Discussion				
	Result of Vote (check one)		XX **Y**-XX **N**; Motion passed/failed.		
			2/3 ≤ [Negative is addressed by the technical change(s).]		**GO TO "Incorporation of the Technical Change" subsection**
			[Negative is not addressed by the technical change(s).] < 2/3		**GO TO "Final" subsection → (E)**
	Incorpora	**Motion**	To incorporate the technical change(s).		
		Motion by/2ⁿᵈ by	Name (Company)/Name (Company)		

		Discussion				
		Result of Vote (check one)		XX **Y**-XX **N**; Motion passed/failed.		
					90% ≤ [Agree to incorporate.]	**GO TO "Final" subsection → (F)**
					[Disagree to incorporate.] >10%	**GO TO "Final" subsection → (E)**
Final		**(check one)**		**(B)**	Not related	
				(C)	Related and not persuasive	
				(E)	Related and persuasive and not addressed by technical change	**DOCUMENT FAILS**
				(F)	Addressed by technical change	
		(check if applicable)			Comment generated. See Section V-(ii) Comment # X.	

V. Comments

V- (i) Voters' Comments
Commenter 1 (Name/Company) - Comment 1

Comment	***TF/TC Chapter to fill in section/paragraph #, if necessary.**				
Action	**The TC Chapter agreed to do one of the following actions.**				
	*No motion is required in this step.				
		Already addressed by Commenter #, Comment #			
		No further action was taken by the TC Chapter.			
		Refer to the TF for more consideration.			
		New Business			
		Editorial Change			
	Options for editorial change **(check one)**		**Case 1: No vote in this section:**		
			To be included and voted on as a group in § VI. *Editorial Changes Other than Those Voted on in § V.*		
			Case 2: Voted in this section:		
			Original section number and at least one full sentence are required in "FROM" and "TO" fields.		
Editorial Changes	1	**FROM: Section/Paragraph xxx**			
		TO: Section/Paragraph xxx			
		Justification (If necessary)			

	2	**FROM: Section/Paragraph xxx**
		TO: Section/Paragraph xxx
		Justification (If necessary)
Motion		To approve above editorial change(s)
Motion by/2nd by		Name (Company)/Name (Company)
Discussion		XXXX
Vote		XX **Y**-XX **N**; Motion passed/failed.

This table is needed for each Comment.

Commenter 2 (Name/Company) - Comment 1
Commenter 3 (Name/Company) - Comment 1

V-(ii) Comments Created by Handling Negative

Comment (Created by Handling Negative) NC – 1

Comment	***TF/TC Chapter to fill in**			
Action	The TC Chapter agreed to do one of the following actions.			
	*No motion is required in this step.			
		Already addressed by Commenter #, Comment #		
		No further action was taken by the TC Chapter.		
		Refer to the TF for more consideration.		
		New business		
		Editorial change		
	Options for editorial change **(check one)**		**Case 1: No vote in this section:**	
			To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.	
			Case 2: Voted in this section:	
			Original section number and at least one full sentence are required in "FROM" and "TO" fields.	
Edit	1	**FROM: Section/Paragraph xxx**		

		TO: Section/Paragraph **xxx**	
		Justification (If necessary)	
	2	**FROM: Section/Paragraph xxx**	
		TO: Section/Paragraph xxx	
		Justification (If necessary)	
Motion		To approve above editorial change(s)	
Motion by/2ⁿᵈ by		Name (Company)/Name (Company)	
Discussion		XXXX	
Vote		XX **Y**-XX **N**; Motion passed/failed.	

Comment (Created by Handling Negative) NC – 2
Comment (Created by Handling Negative) NC – 3

VI. Editorial Changes Other than Those Voted on in § V

Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.

1	Origin of this editorial change **(Check one)**			Commenter(s) / Comment(s) #
				Other [ ]
	FROM: Section/Paragraph XXX			
	TO: Section/Paragraph XXX			
	Justification: (If necessary)			
2	Origin of this editorial change **(Check one)**			Commenter(s) / Comment(s) #
				Other [ ]
	FROM: Section/Paragraph XXX			
	TO: Section/Paragraph XXX			
	Justification: (If necessary)			
Motion	To approve the above editorial change(s).			
Motion by/ 2ⁿᵈ by	Name (Company)/Name (Company)			
Discussion	XXXX			

Vote	XX **Y**-XX **N**; Motion passed (or failed)

VII. Approval Conditions Check

VII. - (i). Approval Rate

APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change. (*Regulations* ¶ 9.7.1.2)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations* ¶ 9.7.1.3)

Note: If both approval conditions are not satisfied, the Document fails.

		Accepts	**(Accepts + Valid Rejects)**			
Approval Rate	=		/	=	**#DIV/0!**	**≥90%**

VII. – (ii) Approval Level (check one)

Note: See *Regulations* § 9.7.2 for further information.

☐ **Globally Approved (No Ratification Ballot needed):**
The Letter Ballot meets the Letter Ballot approval conditions for the global technical committee.

☐ **Need a Ratification Ballot:**
The Letter Ballot meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

VIII. Safety Check

Note: See *Regulations* § 15 for further information.

Motion	☐	**This is not a Safety Document**, when all safety-related information is removed, the Document is still technically sound and complete. (*Regulations* ¶ 8.7.1)	
	☐	**This is a Safety Document**, when all safety-related information is removed, the Document is not technically sound and complete. (*Regulations* ¶ 8.7.2)	
	■	☐ Safety Checklist (*Regulations* ¶ 15.3) is complete and has been included with the Document throughout the balloting process. (*Regulations* ¶ 15.1.2)	
Motion by/2ⁿᵈ by		Name (Company)/Name (Company)	
Discussion		XXXX	

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Vote	XX **Y**-XX **N**; Motion passed or failed

IX. Intellectual Property (IP) Check

Note: This Letter Ballot may cover all or part of a Standard or Safety Guideline. This IP check applies to the entire Standard or Safety Guideline. See *Regulations* § 16 for further information.

	The TC Chapter meeting chair asked those participating, if they were aware of any potentially material patented technology or copyrighted items* in the Standard or Guideline. (*Regulations* ¶ 8.8.1)		
		No potentially material patented technology or reproduction of copyrighted items is known.	**GO TO SECTION X.**
		Potentially material patented technology or reproduction of copyrighted items is known, but a Letter of Assurance (LOA) or copyright release letter for such items has been obtained or presented to the TC Chapter.	**GO TO SECTION X.**
		Potentially material patented technology or reproduction of copyrighted items is known and use of such materials is technically justified by the TC Chapter, but an LOA or copyright release letter for some of the item(s) has NOT been obtained or presented to the TC Chapter.	
Motion		Ask ISC for special permission to publish.	
		Quit activity.	
		Wait for LOA for patented technology or release of copyrighted items.	
Motion by/2ⁿᵈ by		Name (Company)/Name (Company)	
Discussion		XXXX	
Vote		XX **Y**-XX **N**	
Final Action		Motion passed	
		Motion failed	

* Note: Such potentially material patented technology or copyrighted items might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this Letter Ballot.

X. Action for This Document

Motion		This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
		This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.
		This Document passed TC Chapter review with technical changes and with or without editorial changes and will be forwarded to the ISC A&R SC for procedural review. A Ratification Ballot will be issued to verify the technical changes.
		This Document failed TC Chapter review and will be returned to the TF for rework.
		This Document failed TC Chapter review and work will be discontinued.
Motion by/ 2ⁿᵈ by		Name (Company)/Name (Company)
Discussion		XXXX
Vote		XX **Y**-XX **N**

Final Action		Motion passed
		Motion failed

A&R		Approved for publication
		Approved pending acceptance of the Ratification Ballot
		Not approved
	Reason:	