

Record of Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: **China**

Global Technical Committee: **Photovoltaic Materials**

TC Chapter Cochairs: **Guangchun Zhang/CanadianSolar, Jun Liu/CESI**

StandardsStaff: **Sophia Huang**

	Scheduled in Background Statement	Actual
Date	04/18/2017	04/18/2017
Location	Evergreen Laurel Hotel Shanghai, No. 1136 Zuchongzhi Road, Pudong, Shanghai	Evergreen Laurel Hotel Shanghai, No. 1136 Zuchongzhi Road, Pudong, Shanghai
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
5843	Revision of SEMI PV22-0716, Specification for Silicon Wafers for Use in Photovoltaic Solar Cells

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 Vote		Distributio	=	Return Rate	
Letter Ballot	55	÷	86	=	64.0%	≥60%
Intercommittee Ballot	22					
Voting Interest Reject(s)	1		Total Voters with Rejects		1	
Voting Interest Accept(s)	45					

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

III. Rejects

Voting Interest Reject 1 (Voting Interest Name: Peter Wagner)

Voter Reject1 (Voter: Peter Wagner /Peter Wagner Consulting)

Negative 1

Negative	Referenced Section/Paragraph	Table 1	
	Negative Text	<p>*Original complete Negative text (e.g., issue, justification,suggestion) should be copied.</p> <p>1. Table 1: the new targets and tolerances for wafer edge length, diagonal and chamfer a fully covered by the minimum to maximum range in the current version of PV 22. There is no need to change the current specifications and to define new, awkward nominal sizes.</p>	
TF input (optional)			
Withdrawal (check one)	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.	GOTO "Related" subsection
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection →(A)
Related	Motion and Reason (check one)	<input checked="" type="checkbox"/>	'Related' is mutually agreed upon. (Needs no motion.) GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related.(Needs ≥2/3 votes to pass.)
	Reason	XXXX	
	Motion by/ 2nd by	Name (Company)/Name (Company)	
	Discussion		
Result of Vote (check one)	XXY-XXN; Motion passed/failed.		
	<input type="checkbox"/>	[Negative is not related.] <2/3	GOTO "Persuasive" subsection
	<input type="checkbox"/>	2/3≤ [Negative is not related.]	GO TO "Final" subsection →(B)
Persuasi ve	Motion and Reason (check one)	Negative is related and persuasive.(Needs >1/3 votes to pass.)	
	<input checked="" type="checkbox"/>	Negative is related and not persuasive.(Needs ≥2/3 votes to pass.)	

		Reason	<p>No change is recommended: the old tolerance of wafer edge length and diagonal is ±1mm and ±1.4mm, respectively. In order to regulate the wafer sizes and develop unified standard better, so the tolerance of wafer edge length and diagonal is revised to 0.25mm, 0.5mm, respectively. With the development of cutting technology, more appropriate size of silicon wafer is required, and the new tolerance can be achieved by existing cutting technology. The reduction in tolerance can well regulate the specifications of wafers and modules, and almost all of the wafer and solar cell manufacturers have already been promoted.</p> <p>In addition, the normal wafer size is 0.75mm larger than before, which is beneficial to increase the revenue of the PV industry chain. And these specifications also have been widely accepted in PV industry. Therefore, in order to comply with the development of the PV market, there is a need to be revised for the original specifications.</p>				
	Motion by/ 2nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)					
	Discussion	None					
		56Y-0N; Motion passed					
	Result of Vote (check one)	<input type="checkbox"/>	[Negative is related and persuasive.] >1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO "Address by Technical Change Option" subsection
		<input type="checkbox"/>	[Negative is related and not persuasive.] <2/3		<input type="checkbox"/>	N	GO TO "Final" subsection →(E)
		<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] <90%	GO TO "Final" subsection →(C)			
		<input checked="" type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection			
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)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative "not significant".				GO TO "Final" subsection →(D)
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative "significant".				GO TO "Final" subsection →(C)
		<input type="checkbox"/>	Whether or not the Negative is "not significant" is decided by a vote.				
	Motion	The Negative is "not significant".					
	Motion by/ 2nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)					
Vote	<input checked="" type="checkbox"/>	56Y-0N; Motion passed with simple majority				GO TO "Final" subsection →(D)	
	<input type="checkbox"/>	XXY-XXN; Motion failed with simple majority				GO TO "Final" subsection →(C)	
Final	(check if applicable)	<input type="checkbox"/>	(A)	Withdrawn (counted under h in disposition)			
		<input type="checkbox"/>	(B)	Not related (counted under i in disposition)			

		(C)	Related and not persuasive (significant)
	x	(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.	

Negative 2

Negative	Referenced Section/Paragraph	Table 1	
	Negative Text	<p>*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.</p> <p>2. In addition, the current specifications in Table 1 are still in use. Therefore they cannot be removed from PV 22.</p>	
TF input (optional)			
Withdrawal (check one)	x	No Negative withdrawal made by Voter.	GOTO "Related" subsection
		Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection → (A)
Related	Motion and Reason (check one)	x	'Related' is mutually agreed upon. (Needs no motion.) GOTO "Persuasive" subsection
			Negative is not related. (Needs ≥2/3 votes to pass.)
		Reason	XXXX
	Motion by/ 2 nd by	Name (Company)/Name (Company)	
	Discussion		
	Result of Vote (check one)	XXY-XXN; Motion passed/failed.	
		[Negative is not related.] <2/3	GOTO "Persuasive" subsection
		2/3 ≤ [Negative is not related.]	GO TO "Final" subsection → (B)
Persuasive	Motion and Reason (check one)		Negative is related and persuasive. (Needs >1/3 votes to pass.)
		x	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)

		Reason	<p>No change is recommended: the old tolerance of wafer edge length and diagonal is ±1mm and ±1.4mm, respectively. In order to regulate the wafer sizes and develop unified standard better, so the tolerance of wafer edge length and diagonal is revised to 0.25mm, 0.5mm, respectively. With the development of cutting technology, more appropriate size of silicon wafer is required, and the new tolerance can be achieved by existing cutting technology. The reduction in tolerance can well regulate the specifications of wafers and modules, and almost all of the wafer and solar cell manufacturers have already been promoted.</p> <p>In addition, the normal wafer size is 0.75mm larger than before, which is beneficial to increase the revenue of the PV industry chain. And these specifications also have been widely accepted in PV industry. Therefore, in order to comply with the development of the PV market, there is a need to be revised for the original specifications.</p>				
	Motion by/ 2nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)					
	Discussion	None					
		56Y-0N; Motion passed					
	Result of Vote (check one)	<input type="checkbox"/>	[Negative is related and persuasive.] >1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO "Address by Technical Change Option" subsection
		<input type="checkbox"/>	[Negative is related and not persuasive.] <2/3		<input type="checkbox"/>	N	GO TO "Final" subsection →(E)
		<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] <90%	GO TO "Final" subsection →(C)			
		<input checked="" type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection			
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)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative "not significant".				GO TO "Final" subsection →(D)
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative "significant".				GO TO "Final" subsection →(C)
		<input type="checkbox"/>	Whether or not the Negative is "not significant" is decided by a vote.				
	Motion	The Negative is "not significant".					
	Motion by/ 2nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)					
Vote	<input checked="" type="checkbox"/>	56Y-0N; Motion passed with simple majority				GO TO "Final" subsection →(D)	
	<input type="checkbox"/>	XXY-XXN; Motion failed with simple majority				GO TO "Final" subsection →(C)	
Final	(check if applicable)	<input type="checkbox"/>	(A)	Withdrawn (counted under h in disposition)			
		<input type="checkbox"/>	(B)	Not related (counted under i in disposition)			

		(C)	Related and not persuasive (significant)
	x	(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.	

Negative 3

Negative	Referenced Section/Paragraph	Table 2	
	Negative Text	<p>*Original complete Negative text (e.g., issue, justification,suggestion) should be copied.</p> <p>3. Table 2:</p> <p>a. The improvements claimed by the authors of the draft document are only theoretically calculated. In reality an increased current would lead to increased Ohmic losses. Therefore, in reality, the anyhow marginal improvements would be even smaller.</p> <p>b. The authors should present and publish real, measured data showing the improvements and compare them with the increased cost for the silicon wafers.</p> <p>c. Again, the new specifications for wafer edge length would be covered by the minimum to maximum range in the current version of PV 22.</p> <p>d. For the new 156 I specification the diameter specification is again fully covered by the current version of PV 22. For 100, 125 and 210 mm wafers the diameter tolerance of the current version of PV 22 would have to be marginally increased by only 0.25 mm! Only for the new size 156 II the diameter target value would have to be increased.</p> <p>e. Again, the current specifications in Table 2 are still in use. Therefore they cannot be removed from PV 22.</p>	
TF input (optional)			
Withdrawal(check one)	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.	GOTO "Related" subsection
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final"subsection →(A)
Related	Motion and Reason (check one)	<input checked="" type="checkbox"/>	'Related' is mutually agreed upon.(Needs no motion.) GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related.(Needs ≥2/3 votes to pass.)
	Reason		
	Motion by/ 2 nd by	Name (Company)/Name (Company)	
	Discussion		
Result of Vote(check one)	XXY-XXN;Motion passed/failed.		
	<input type="checkbox"/>	[Negativeis not related.] <2/3	GOTO "Persuasive" subsection
<input type="checkbox"/>	2/3≤ [Negative is not related.]	GO TO "Final" subsection →(B)	
sua siv	Motion and Reason	Negative is related and persuasive.(Needs >1/3 votes to pass.)	

	(check one)	<input checked="" type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)		
			Reason	<p>No change is recommended: Through materials searching, we collect the actual operating data of different specification from 2015-2016. We find with the increase of wafer area, output power also improved. From feedback data of cell chain and module chain, comparing with 8 inch wafer, 156I, 156II type cell and module can bring positive value.</p> <p>Comparing with 8 inch wafer, there is the positive return of 156I, 156II type cells and modules. In order to regulate the wafer size and develop unified standard better, the tolerance of wafer size is reduced. With the development of cutting technology, more appropriate size of silicon wafer is required, and the new tolerance can be achieved by existing cutting technology. The reduction in tolerance can well regulate the specifications of wafers and modules, and almost all of wafer and solar cell manufacturers have already been promoted.</p> <p>At present, the wafer specification in most mono wafer manufacture is 0.75mm bigger than old specifications, and also be promoted in mono-crystalline silicon manufactures. These specifications also have been widely accepted by cell customers.</p>	
	Motion by/ 2 nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)			
	Discussion	None			
	Result of Vote (check one)	56Y-0N; Motion passed			
		<input type="checkbox"/>	[Negative is related and persuasive.] >1/3	Is a technical change recommended? (check one)	<input type="checkbox"/> Y GO TO “Address by Technical Change Option” subsection
		<input type="checkbox"/>	[Negative is related and not persuasive.] <2/3	<input type="checkbox"/> N	GO TO “Final” subsection →(E)
		<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] <90%	GO TO “Final” subsection →(C)	
	<input checked="" type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO “Not Significant Finding Option” subsection		
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)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative “not significant”.		GO TO “Final” subsection →(D)
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative “significant”.		GO TO “Final” subsection →(C)
		<input type="checkbox"/>	Whether or not the Negative is “not significant” is decided by a vote.		
	Motion	The Negative is “not significant”.			
	Motion by/ 2 nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)			
Vote	<input checked="" type="checkbox"/>	56Y-0N; Motion passed with simple majority		GO TO “Final” subsection →(D)	
	<input type="checkbox"/>	XXY-XXN; Motion failed with simple majority		GO TO “Final” subsection →(C)	
Final	(check if applicable)	<input type="checkbox"/>	(A)	Withdrawn (counted under h in disposition)	
		<input type="checkbox"/>	(B)	Not related (counted under i in disposition)	

		(C)	Related and not persuasive (significant)
	x	(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.

Negative 4

Negative	Referenced Section/Paragraph	§ 8.1.1		
	Negative Text	*Original complete Negative text (e.g., issue, justification, suggestion) should be copied. 4. In § 8.1.1 SEMI PV46 should be referenced.		
TF input (optional)				
Withdrawal (check one)	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.	GOTO "Related" subsection	
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection →(A)	
Related	Motion and Reason (check one)	<input checked="" type="checkbox"/>	'Related' is mutually agreed upon. (Needs no motion.) GOTO "Persuasive" subsection	
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)	
	Reason			
	Motion by/ 2 nd by	Name (Company)/Name (Company)		
	Discussion			
	Result of Vote (check one)	XXY-XXN; Motion passed/failed.		
		<input type="checkbox"/>	[Negative is not related.] <2/3	GOTO "Persuasive" subsection
<input type="checkbox"/>	2/3 ≤ [Negative is not related.]	GO TO "Final" subsection →(B)		
Persuasive	Motion and Reason (check one)	<input type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)	
		x	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)	
	Reason	No change is recommended: SEMI PV46 is not referenced in the original version. And we only modify the size specifications this time. If PV46 is need to be added to PV22, We can re-modify the project later.		
	Motion by/ 2 nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)		
	Discussion	None		
Result of	56Y-0N; Motion passed			

	Vote (check one)	<input type="checkbox"/>	[Negative is related and persuasive.] >1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO “Address by Technical Change Option” subsection	
		<input type="checkbox"/>	[Negative is related and not persuasive.] <2/3		<input type="checkbox"/>	N	GO TO “Final” subsection →(E)	
		<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] <90%	GO TO “Final” subsection →(C)				
		<input checked="" type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO “Not Significant Finding Option” subsection				
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)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative “not significant”.				GO TO “Final” subsection →(D)	
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative “significant”.				GO TO “Final” subsection →(C)	
		<input type="checkbox"/>	Whether or not the Negative is “not significant” is decided by a vote.					
	Motion	The Negative is “not significant”.						
	Motion by/ 2nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)						
Vote	<input checked="" type="checkbox"/>	56Y-0N; Motion passed with simple majority				GO TO “Final” subsection →(D)		
	<input type="checkbox"/>	XXY-XXN; Motion failed with simple majority				GO TO “Final” subsection →(C)		
Final	(check if applicable)	<input type="checkbox"/>	(A)	Withdrawn (counted under h in disposition)				
		<input type="checkbox"/>	(B)	Not related (counted under i in disposition)				
		<input type="checkbox"/>	(C)	Related and not persuasive (significant)				
		<input checked="" type="checkbox"/>	(D)	Not significant (counted under j in disposition)				
		<input type="checkbox"/>	(E)	Related and persuasive and not addressed by technical change				DOCUMENT FAILS
	<input type="checkbox"/>	(F)	Addressed by technical change (counted under k disposition)					
(check if applicable)	<input type="checkbox"/>	Comment generated. See Section V-(ii) Comment #X.						

Negative 5

Negative	Referenced Section/Paragraph						
	Negative Text	<p>*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.</p> <p>5. In summary, there is no need and no reason to change the current specifications for square wafers (Table 1). For pseudo-square wafers, if at all, it would be sufficient to add a new nominal size 156 II to the existing Table 2 and to modify the diameter tolerances slightly. However, the improvements claimed by the authors of the draft document 5843 should be demonstrated by providing corresponding data.</p>					
TF input (optional)							
Withdrawal (check one)	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.				GOTO “Related” subsection	

		Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection →(A)		
Related	Motion and Reason (check one)	<input checked="" type="checkbox"/>	'Related' is mutually agreed upon.(Needs no motion.) GO TO "Persuasive" subsection		
		<input type="checkbox"/>	Negative is not related.(Needs ≥2/3 votes to pass.)		
		Reason			
	Motion by/ 2 nd by	Name (Company)/Name (Company)			
	Discussion				
Persuasive	Motion and Reason (check one)	<input type="checkbox"/>	Negative is related and persuasive.(Needs >1/3 votes to pass.)		
		<input checked="" type="checkbox"/>	Negative is related and not persuasive.(Needs ≥2/3 votes to pass.)		
		Reason	No change is recommended: for square wafers and pseudo-square wafers, they both need to regulate the wafer sizes and develop unified standard better. More appropriate size of silicon wafer is required with the development of PV standard. With the development of cutting technology, more appropriate size of silicon wafer is required, and the new tolerance can be achieved by existing cutting technology. The reduction in tolerance can well regulate the specifications of wafers and modules, and almost all of wafer and solar cell manufacturers have already been promoted.		
	Motion by/ 2 nd by	Nannan Fu (LONGi)/ Zhixin Li (Linton)			
	Discussion	None			
Not Significant Finding Option	Result of Vote(check one)	<input type="checkbox"/>	[Negative is related and persuasive.] >1/3	Is a technical change recommended? (check one)	<input type="checkbox"/> Y GO TO "Address by Technical Change Option" subsection
		<input type="checkbox"/>	[Negative is related and not persuasive.] <2/3		<input type="checkbox"/> N GO TO "Final" subsection →(E)
	<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] <90%	GO TO "Final" subsection →(C)		
	<input checked="" type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection		
	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)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative "not significant".			GO TO "Final" subsection →(D)
	<input type="checkbox"/>	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	Nannan Fu (LONGi)/ Zhixin Li (Linton)		
	Vote	x	56Y-0N; Motion passed with simple majority	GO TO “Final” subsection →(D)
		XXY-XXN; 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)	
		x	(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.	

Disposition of Voting Interest Reject 1

Check only when the Document has not been failed.

5	Original number (#) of Negatives	(g)	
#	Number of Negatives withdrawn	(h)	
#	Number of Negatives found not related	(i)	
5	Number of Negatives found not significant	(j)	
#	Number of Negatives addressed by technicalchange (Negative becomes not significant)	(k)	
Final	x	$g-(h+i+j+k)=0$	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)

IV. Other Technical Issues

None

V. Comments

V- (i) Voters' Comments

Commenter 1 (Hartsough, Larry / U.A. Associates)- Comment 1

Comment	*TF/TC Chapter to fill in section/paragraph #, if necessary.	
	<p>1. A wiser tactic might have been to submit a Line-Item Letter ballot. Using a major revision ballot risks negatives on any part of the document.</p> <p>2. The word 'must' is used in 5.2 and 5.3. This is only to be used where the following phrase results from a situation or physical law. Use 'shall' to state a requirement. Use a Line-Item Ballot to correct this.</p> <p>3. In sections 7 & 8, there are many places where there is no space between the organization acronym (SEMI,ASTM, etc.) and the designation (PV41,E122,etc.). This can be corrected by submitting a PIP form.</p>	
	<p>The TC Chapter agreed to do one of the following actions.</p> <p>*No motion is required in this step.</p>	
Action	<input type="checkbox"/>	Already addressed by Commenter #, Comment #
	<input checked="" type="checkbox"/>	No further action was taken by the TC Chapter. See Discussion below.
	<input type="checkbox"/>	Refer to the TF for more consideration.
	<input type="checkbox"/>	New Business
	<input type="checkbox"/>	Editorial Change
Discussion	<p>TF: Thank you for your feedback for us about the revision of SEMI PV22-0716. The formatting issues you suggested will be adjusted as requested by us. Follow your reminder, we confirmed that the word 'must' also used in 5.2 and 5.3 in the original standard, so we need to consider this point again.</p> <p>The revision of this standard is based on the maximizing of silicon wafer utilization and improvement of solar cell power. Meanwhile, it aims at the purpose of standardizing the sizes of wafers used in PV industry.</p> <p>The attachment provides you with an introductory PPT that will give you a better understanding of the purpose of this revision. Also hope your agreement and support. I'm so glad to communicate with you about these. If you have any questions, we are always ready to answer.</p> <p>Larry Hartsough: Whether you change 'must' to 'shall' depends on the intended meaning where it is used. The intent of preferring (in the Style Manual) the use of 'shall' for requirements is to provide for clarity of meaning through its uniform use. See the Style Manual Table 4, line # 4-4.</p> <p>The use of both 'must' and 'shall' in the same Standard might be interpreted by the reader in different ways, with the misunderstanding that 'must' does not indicate a requirement.</p> <p>In summary, changing 'must' to 'shall' is preferred, but not required.</p>	

V-(ii) Comments Created by Handling Negative

None

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

None

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	=	45	/	45	=	100.0%		≥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	<input checked="" type="checkbox"/>	This is not a Safety Document , when all safety-related information is removed, the Document is still technically sound and complete. (<i>Regulations ¶ 8.7.1</i>)
	<input type="checkbox"/>	This is a Safety Document , when all safety-related information is removed, the Document is not technically sound and complete. (<i>Regulations ¶ 8.7.2</i>)
	<input type="checkbox"/>	Safety Checklist (<i>Regulations ¶ 15.3</i>) is complete and has been included with the Document throughout the balloting process. (<i>Regulations ¶ 15.1.2</i>)
Motion by/2 nd by		Nannan Fu (LONGi)/ Zhixin Li (Linton)
Discussion		None
Vote		56Y-0N; Motion passed

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. (<i>Regulations</i> ¶ 8.8.1)
×	No potentially material patented technology or reproduction of copyrighted items is known.
GO TO SECTION X.	

* **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		Nannan Fu (LONGi)/ Zhixin Li (Linton)	
Discussion		None	
Vote		56-0N	
Final Action		X	Motion passed
			Motion failed

Standards staff to record the result of the A&R procedural review here:

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