

SEMI M23.6-0703

SPECIFICATION FOR ROUND 150 mm POLISHED MONOCRYSTALLINE INDIUM PHOSPHIDE WAFERS (NOTCHED)

This specification was technically approved by the Global Compound Semiconductor Materials Committee and is the direct responsibility of the Japanese Compound Semiconductor Materials Committee. Current edition approved by the Japanese Regional Standards Committee on April 28, 2003. Initially available at www.semi.org June 2003; to be published July 2003.

1 Purpose

1.1 This specification defines properties of 150 mm monocrystalline InP substrates, in agreement with presently established industry practice. It uniquely defines those mechanical parameters that do not need, for technical reasons, a choice of different values.

2 Scope

2.1 The parameters defined include the values and tolerances of wafer diameter, thickness and surface orientation. The position and depth of the notch and laser marking are also specified.

2.2 The complete specification of this product includes the requirements of SEMI M23, excluding those that are not relevant to this specification (e.g., flat positions).

NOTICE: This standard does not purport to address safety issues, if any, associated with its use. It is the responsibility of the users of this standard to establish appropriate safety and health practices and determine the applicability of regulatory or other limitations prior to use.

3 Referenced Standards

3.1 SEMI Standards

SEMI M12 — Specification for Serial Alphanumeric Marking of the Front Surface of Wafers

NOTICE: Unless otherwise indicated, all documents cited shall be the latest published versions.

4 Terminology

4.1 None.

5 Physical Requirements

Table 1 Physical Requirements

<i>Property</i>	<i>Specification</i>	<i>Tolerance</i>	<i>Unit</i>	<i>Reference</i>
WAFER				
Diameter	150.0	± 0.5	mm	
Thickness, center point	675	± 25	μm	
Surface orientation A	(100)	0.5 max.	degrees	Figure 2
Surface orientation B				
Tilt	2 off (100) towards (110)	± 0.5	degrees	Figure 3
Orthogonal misorientation	0	± 5 max.	degrees	Figure 4
NOTCH				
Orientation	[010]	± 2	degrees	Figure 1
Depth	1.00	+ 0.25, -0.00	mm	Figure 5
Opening angle	90	+ 5, -1	degrees	Figure 5

Property	Specification	Tolerance	Unit	Reference
LASER MARKING				
Surface	front side			
Position	adjacent to notch			Figure 6
Mandatory content	check characters			SEMI M12

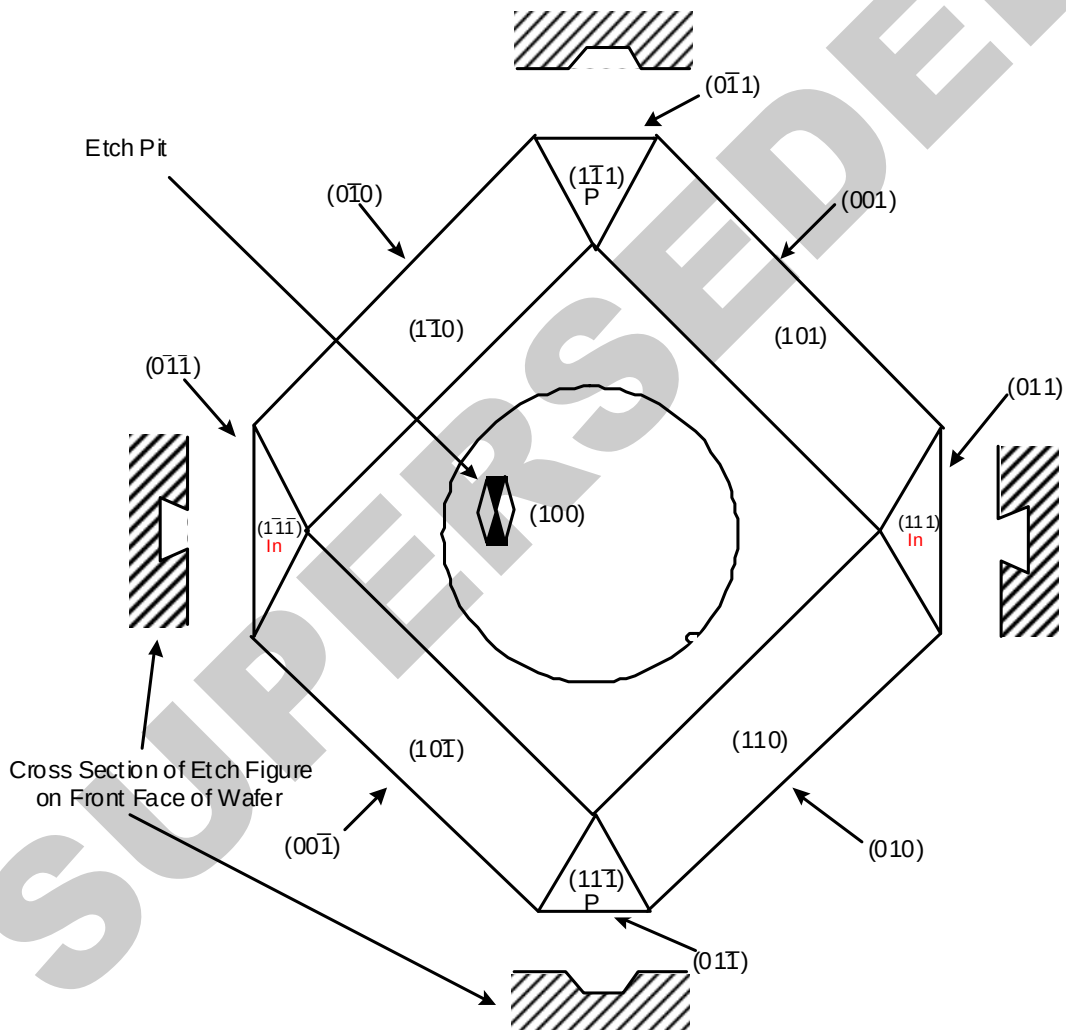


Figure 1
Diagram Shows a InP Wafer with Notch