

SEMI D42-0305

SPECIFICATION FOR ULTRA LARGE SIZE MASK SUBSTRATE CASE

This Standard was technically approved by the Flat Panel Display Global Technical Committee. This edition was approved for publication by the global Audits and Reviews Subcommittee on January 11, 2005. Available at www.semi.org in March 2005.

1 Purpose

1.1 This Standard defines the specification for ultra large size substrate case used in liquid crystal display (LCD) manufacturing process.

2 Scope

2.1 The specification defined by this Standard is applicable to the case for containing substrate materials used in LCD mask manufacturing process. The objective substrate range for the mask size defined by this Standard is 850 × 1,200 mm and more.

2.2 The automatic handling of the mask substrate becomes indispensable, in accordance with the larger size of the substrate. This Specification defines the handling volume for mask substrate inside the case.

NOTICE: SEMI Standards and Safety Guidelines do not purport to address all safety issues associated with their use. It is the responsibility of the users of the Documents to establish appropriate safety and health practices, and determine the applicability of regulatory or other limitations prior to use.

3 Referenced Standards and Documents

3.1 None.

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

4 Terminology

4.1 Definitions

4.1.1 *case* — an enclosed container for storing one mask substrate.

5 Requirements

5.1 Handling volume for ultra large size mask substrate used in LCD manufacturing process.

5.1.1 The hatched area in Figure 1 shall be the exclusion volume for handling ultra large size mask substrate used in LCD manufacturing process.

5.1.2 Symbols used in Figure 1 are defined in Table 1.

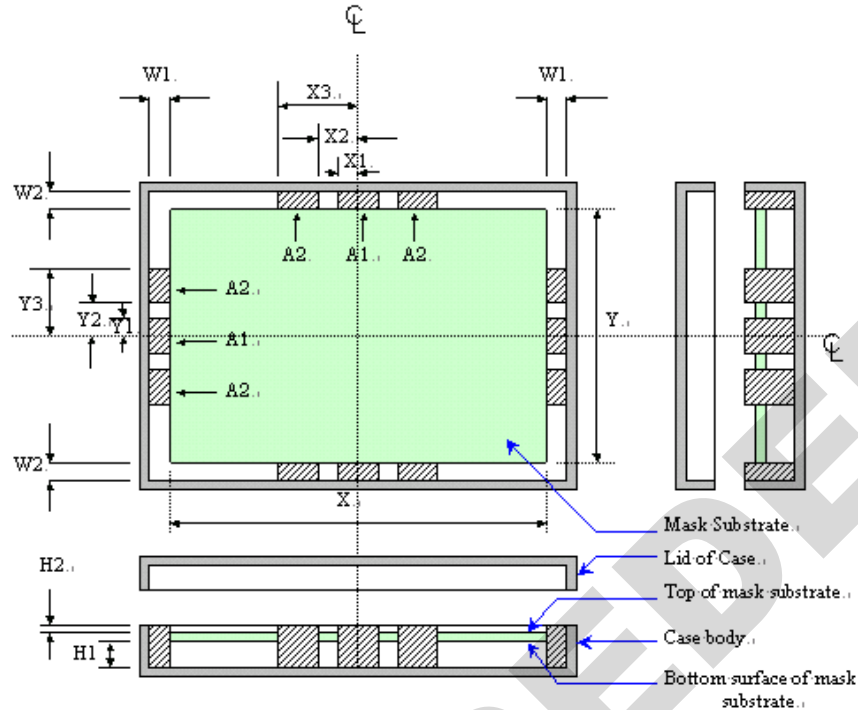


Figure 1
Handling Volume for Ultra Large Size Mask Substrate
used in LCD Manufacturing Process

Table 1 Symbols Outline

<i>Symbol Used</i>	<i>Definition</i>	<i>Specification</i>
A1	Exclusion Volume (Handling Volume)	Defined by X1, X2, X3, W1, Y1, Y2, Y3, W2, H1, and H2
A2	Exclusion Volume (Handling Volume)	Defined by X1, X2, X3, W1, Y1, Y2, Y3, W2, H1, and H2
X	Long Side Length of Mask Substrate	Defined by the Substrate Size
Y	Short Side Length of Mask Substrate	Defined by the Substrate Size
X1	Center of Long Side Length of Mask Substrate to the edge of A1 volume	75 mm
X2	Center of Long Side Length of Mask Substrate to the inside of A2 volume	165 mm
X3	Center of Long Side Length of Mask Substrate to the outside of A2 volume	350 mm
W1	Edge of Long Side Length of Mask Substrate to the inside of the case	≥ 70 mm
Y1	Center of Short Side Length of Mask Substrate to the edge of A1 volume	75 mm
Y2	Center of Short Side Length of Mask Substrate to the inside of A2 volume	165 mm
Y3	Center of Short Side Length of Mask Substrate to the outside of A2 volume	350 mm
W2	Edge of Short Side Length of Mask Substrate to the inside of the case	≥ 80 mm
H1	Bottom surface of mask substrate to the inside of the case body	≥ 50 mm