

150 mm SmartStack® Contactless Horizontal Wafer Shippers

Enables safe transport and storage of wafers without risk of contamination

To meet the demands for smaller, thinner wafers, semiconductor manufacturers require equally smaller transport devices that guard against contamination and damage. The SmartStack® contactless horizontal wafer shipper is the right choice for shipping and storing finished 150 mm wafers of varying thicknesses in a clean, safe environment. Constructed of engineering-grade polymers, the rugged design eliminates the need for TYVEK® interleaf wafer separators or PE foam. The perimeter support ring minimizes the potential for surface area damage and interleaf contamination to finished wafers.

In addition to the superior protection of the contactless horizontal wafer shipper, we also offer secondary packaging to ensure wafers arrive safely and damage free. This secondary packaging complies with ISTA-2A drop testing.

APPLICATIONS

- Advanced chip designs for 3D
- 2.5D, MEMS, LED and power semiconductors
- Shipping and storing thin 3D, lens, or bumped wafers



Advanced contactless wafer shipping solution

FEATURES & BENEFITS

Stackable configuration	Increases shipping density
	Safely stores and transports up to 25 wafers in full, thin, or ultrathin thicknesses
	Enables automation compatibility
Rugged, engineering-grade polymer construction	Eliminates the need for TYVEK interleaf wafer separators or PE foam, minimizing damage and contamination
Perimeter support ring	Minimizes the potential for surface area damage and interleaf contamination to finished wafers
	Eliminates the likelihood of scuffed or marred wafers or bump damage on finished wafers

SPECIFICATIONS

The performance data and physical properties in the following table are based on internal product testing. Each sample was loaded with 26 perimeter support rings and 25 wafers. Single pack secondary packaging was used. Other details about the testing are:

- Performed internal drop tests on two samples using both 150 µm and 725 µm thick wafers
- Passing results rendered for both samples with standard thickness and thin silicon wafers for all drop heights tested
- No unlatched or visual damage to the shippers or rings
- ISTA-2A testing performed with passing results

Property	Test Method	Typical Values
Specific gravity	ASTM D-792	0.97 g/cc
Tensile strength	ASTM D-638	33.3 MPa
Tensile modulus	ASTM D-638	2,207 MPa
Tensile elongation	ASTM D-638	9.7%
Flexural modulus	ASTM D-790	2,069 MPa
Notched izod	ASTM D-256	42.4 J/m
Unnotched izod	ASTM D-256	742 J/m
Volume resistivity	ASTM D-257	10 ¹ -10 ³ ohms/cm
Surface resistivity	ASTM D-257	10 ³ -10 ⁸ ohms/sq.

Note: Properties may be affected by the molding techniques and by the size and shape of each item molded. Favorable results are not guaranteed, and assurances cannot be implied that all molded articles have the sample properties as those listed.

Wafer size	150 mm	
Wafer capacity	25	
Wafer thickness	Variable (maximum 950 µm)	
Wafer shipper dimensions	Length	176.02 mm (6.93")
	Width	176.02 mm (6.93")
	Height	90.17 mm (3.55")
	Weight (includes 26 rings)	0.562 kg (1.25 lb)

ORDERING INFORMATION

PART NUMBER	PRODUCT TYPE
HWS150C-101-61C02M	Shipper
HWS150C-1PK-KIT	Shipper kit

FOR MORE INFORMATION

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