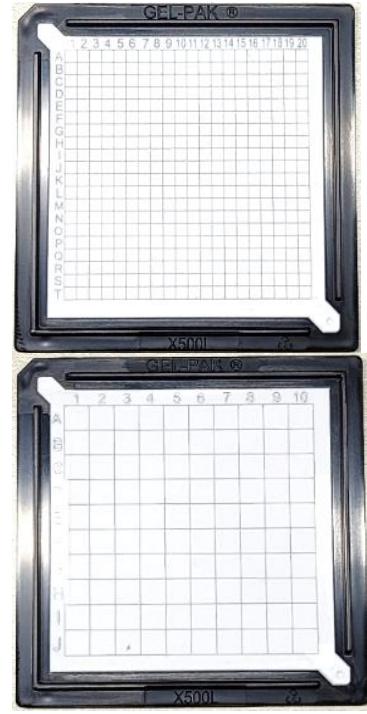


WPX-22 WP-VERTEC TEXTURED DEVICE CARRIER

Preliminary Product Datasheet

Gel-Pak's 2" x 2" WPX Tray is a textured, pocketless device carrier based on our proprietary Vertec® elastomer. The tray is designed to secure semiconductor components, optical lenses/filters during shipping and handling.

- Safely immobilizes semiconductor devices and optical lenses/filters.
- Comprised of 2" molded tray with textured non-silicone elastomer.
- Devices can be easily handled manually or with automated pick-and-place equipment.
- Ideal for high volume applications.
- Better alternative to waffle pack.
 - No device migration
 - Better compatibility with smaller devices
 - No Tyvek, lid/clip required
 - More devices per tray



White Vertec Elastomer with Grid

PROPERTIES	
Part Number System	WPX-W-22-500C-L / WPX-W-22-500CC-00B-L / WPX-W-22-500CC-STK25-L WPX-W-22-100C-M / WPX-W-22-100CC-00B-M / WPX-W-22-100CC-STK25-M WPX-W-22-100C-H / WPX-W-22-100CC-00B-H / WPX-W-22-100CC-STK25-H (Black background - Optional)
Polymer Material	WP-Vertec® Non-Silicone Textured Elastomer in standard White or Optional Black (Clear Elastomer) (FDA and USP Approved)
Tray / Lid Material	Conductive Polycarbonate
Useable Area	40mm x 40mm
Device Size	Low Tack: Size: 100um-1mm (in X/Y), Thickness < 200 µm Medium Tack: Size 1-10mm, or Thickness <750um High Tack: Thickness > 750um (optical filters, lenses)
Surface "Tack"	Low (L), Medium (M), High (H)
Surface Resistance	>E12ohms

GEL-PAK

31398 Huntwood Avenue, Hayward, CA 94544

Toll-Free 888-621-4147 **Phone** 510-576-2220 **Fax** 510-576-2282

Website www.gelpak.com

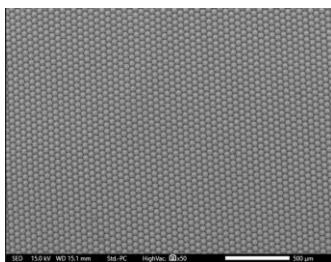
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Storage Temperature	-10 to +50° C
Printed Grids	10mm x10mm (P0863) and 20mm x 20mm (P0864). Custom grid available upon request
Unique Features	Silicone Free. Vacuum not required on backside of tray.
Recyclable	
Shelf Life	2 years minimum

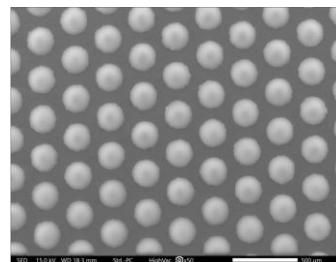
Notes:

1. These values are for reference purposes only and are not intended for use in preparing specifications.
2. Extended temperature ranges are possible; however, testing may be needed.

- Texturized surface SEM images.



Low Tack grid (SEM @50x)



Medium / High Tack grid (SEM @50x)

WPX-22 Usage General Guidelines

Recommended Device Loading Method

- Once the devices are placed on the WPX tray, it reaches 80% of its tack strength within 1 hour and achieves full tack after 6 hours. The trays can be subjected to standard shock and vibration in Pick-and-Place (PnP) handling or packaging immediately upon placing. However, more rigorous drop testing should ideally be conducted after 1 hour, and preferably after 6 hours, to ensure optimal tack performance.

Recommended Device pick Method

- The vacuum pickup tip should reach a minimum of 20 inches of Hg (4.7psia) before initiating pickup. This typically takes less than 100ms for most commercial P&P tools.
- Pickup speed should be between 1mm/sec to 3mm/sec until the device separates from the WPX surface. Time to achieve this displacement usually takes less than 100ms, beyond which the pickup tip can move at any desired speed.
- If picking is not successful, optimize the process by adjusting a) pickup tip downforce, b) pickup tip vacuum, c) and/or pickup speed.