

3M Polycarbonate carrier selection guide

Safe and secure transport between the stages of the semiconductor fabrication process is critical for maximizing chip and chiplet yield. As chips architecture evolves to 2D, 2.5D and 3D in pursuit of smaller footprint, better power management and overall performance, the risks to chip integrity during transportation are significant due to the complex architecture. 3M Polycarbonate Carrier tapes are available in a range of precision manufactured designs and solutions to help minimize die migration and cracking and to help reduce pick-up failure. Plus, these tapes are available in transparent form, are compatible for clean room use and can offer additional features such as traceability that meet the needs of your manufacturing processes. Explore our range of solutions, or find out more by contacting a 3M carrier tape expert.

		3M™ Polycarbonate Carrier		
Properties	Unit	2703	2705	3000 (3000NB)
Opening R	mm	NA	NA	0.18~0.25*
Tolerance (A ₀ , B ₀ , K ₀)	mm	± 0.10	± 0.10	± 0.05 & ± 0.10 ± 0.03 (U series) ± 0.02 (X series)
K ₀ range	mm	0.33 ~ 6.00	0.33 ~ 6.00	0.20 ~ 6.00
D1 diameter	mm	1	1	D1 minimum<0.15
Surface resistance	ohm	Non-conductive	1.0*10 ⁸ ~ 1.0*10 ¹¹	1.0*10 ⁴ ~ 1.0*10 ¹¹
Additional Features				
Transparent	-	✓	✓	
Clean room compatible	-			
Raised platform (height)	-			Optional (BD, UB series)
Raised cross bar (height)	-			
Traceability	-			

		3M™ Polycarbonate Carrier		
Properties	Unit	3000R	3002	3200
Opening R	mm	<0.10 (for W=8mm) <0.12 (for W>12mm)	0.18~0.25*	0.18~0.25*
Tolerance (A ₀ , B ₀ , K ₀)	mm	± 0.05 & ± 0.10 ± 0.03 (U series) ± 0.02 (X series)	± 0.05 & ± 0.10 ± 0.03 (U series) ± 0.02 (X series)	± 0.05 & ± 0.10 ± 0.03 (U series) ± 0.02 (X series)
K ₀ range	mm	0.14 ~ 0.25	0.20 ~ 6.00	0.20 ~ 6.00
D1 diameter	mm	D1 minimum<0.15	D1 minimum<0.15	D1 minimum <0.1
Surface resistance	ohm	1.0*10 ⁴ ~ 1.0*10 ¹¹	1.0*10 ⁴ ~ 1.0*10 ¹¹	1.0*10 ⁴ ~ 1.0*10 ¹¹
Additional Features				
Transparent	-			
Clean room compatible	-	Optional (BD, UB series)	Optional (BD, UB series)	Optional (BD, UB series)
Raised platform (height)	-	Optional	Optional	Optional
Raised cross bar (height)	-	Optional	Optional	Optional
Traceability	-		✓	

* Typical performance

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3M Electronics Materials Solutions Division
3M Center
St. Paul, MN 55144 USA

Phone 1-800-810-8513
Web 3M.com/transport

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