

# 3M™ Thermally Conductive Interface Tape 8926 Series

## Product Description

3M™ Thermally Conductive Interface Tape (TCIT) 8926 Series has 0.20mm, 0.25mm, and 0.50mm thick pressure sensitive adhesive tapes filled with thermally conductive ceramic particles. These products are designed to have good converting ability, handling and re-workability through the introduction of a thin PET carrier. 3M tape series 8926 is designed with a soft acrylic polymer and multiple thickness options to allow excellent wet-out or conformability to many surfaces. The tape series has good adhesion performance to many substrate types and has excellent dielectric performance.

## Product Use

These products can be used for heat management in electronic devices and for general heat dissipation in devices. They may also be used for bonding/joining parts in electronic products.

## Key Features

- Good thermal conductivity (>1.5W/m-K)
- Excellent dielectric performance
- Low thermal impedance
- Good and reliable adhesion performance to Al and SS
- Vibration damping

## Product Construction/Material Description

**Note:** The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

### 3M™ Thermally Conductive Interface Tape (TCIT) 8926 Series

Property	Value
Adhesive Type	Soft Acrylic Adhesive
Tape Thickness	TCIT 8926-02: 0.20 mm TCIT 8926-025: 0.25 mm TCIT 8926-05: 0.50 mm
Tape Color	Yellowish White
Filler Type	Ceramic Particle
Product Liner	75 µm PET Film Liner
Roll Length	Standard: 40m (0.20mm, 0.25mm & 0.50mm) Custom size can be supplied by request.

## 3M™ Thermally Conductive Interface Tape 8926 Series

### Applications

- General heat sink bonding
- IC chip packaging heat conduction
- Printed circuit board
- LED module/board bonding
- Flat panel display assembly (e.g. LCD and PDP devices)
- COF chip heat conduction
- Mechanical fastening such as clamp, bracket, or screw can be used in parallel with this tape

### Typical Physical Properties and Performance Characteristics

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#### 3M™ Thermally Conductive Interface Tape 8926 Series

3M™ Thermally Conductive Interface Tape 8926 Series				
Tested in accordance with ASTM D-3330 test method	90 Angle Peel Adhesion Crosshead speed: 508 mm/min	Unit gram/25.4mm width		
		0.2	0.25	0.5
SUS 304 Test substrate				
15 min dwell at 23°C	Liner side	1300	1300	1300
	Non-liner side	1300	1300	1300
72 hr Dwell at 70°C (For reference)	Liner side	2000	2000	2000
	Non-liner side	2000	2000	2000
Tested in accordance with ASTM D-1002 test method		Unit : Kg/6.25cm <sup>2</sup>		
Dynamic Shear	Initial Adhesion	15		
Crosshead speed: 305 mm/min	(SUS to SUS)			
Foam Density (gram/cm <sup>3</sup> )		1.60 (+/- 0.10)		
Dielectric Strength (KV/mm)		15		
Thermal Conductivity*		1.5 W/m-K		
Operating Temperature Range** 3M Test Method	Long Term (Weeks-Months)	Up to 80°C		
	Short Term (Hours-Days)	Up to 90°C		
Product Series		8926-02	8926-025	8926-05
Thermal Conductivity		1.5 W/m-K	1.5 W/m-K	1.5 W/m-K
Thermal Impedance		1.31°C-in <sup>2</sup> /W	1.35°C-in <sup>2</sup> /W	1.50°C-in <sup>2</sup> /W
Thermal Impedance (metric)		8.49°C-cm <sup>2</sup> /W	8.74°C-cm <sup>2</sup> /W	9.70°C-cm <sup>2</sup> /W

\*Thermal Conductivity Interface Tape 8926 Test Methods:

- 1.5W/m-K in XY direction per Hot wire plane Test method (Test equipment: QTM-500)
- 1.5W/m-K in Z direction tested in accordance with a simplified ASTM D5470 type method (Test equipment: T3ster DynTIM)

\*\*Note: The end use customer application, design & verification testing will determine the final in use effective temperature range based on each application's environmental conditions.

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### Applications

- Bond strength is dependent upon the amount of adhesive to surface contact developed. Firm application pressure helps to develop better adhesive contact and improve bonding strength.
- To obtain optimal adhesion, the bonding surfaces must be clean, dry and well unified. Typical surface cleaning solvents are isopropyl alcohol and water (rubbing alcohol) or heptane. **Note:** Be sure to follow manufacturer's safety precautions and directions for use when using solvents.
- Ideal tape application temperature range is 21°C to 38°C (70°F to 100°F). Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

### Storage and Shelf Life

The shelf life of 3M™ Thermally Conductive Interface Tape 8926 Series is 12 months from the date of manufacture when stored in original cartons at 21°C (70°F) and 50% relative humidity.

**Safety Data Sheet:** Consult Safety Data Sheet before use.

**Regulatory:** For regulatory information about this product, contact your 3M representative.

**Technical Information:** The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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