# **Conductive Tapes**



# SINGLE SIDE CONDUCTIVE FABRIC TAPES

Laird Performance Materials' line of Conductive Fabric Tapes are constructed of a copper nickel plated fabric with pressure sensitive adhesive. They offer high electrical conductivity in both XY and Z directions and provide good adhesion and EMI shielding performance.

Laird Conductive Fabric Tapes are available in a natural color and a black color. Additionally, Laird offers tapes with the UL510FR rating (halogen free). Contact us with any questions!



Ni/Cu Conductive Fabric **Conductive PSA** 



	Thickness (mm) <sup>*1</sup>	Color	Peel (N/25mm)	Rz $(Ω)^{*2}$	Rs (Ω/□) <sup>*3</sup>	UL510FR
96249	0.053	Black <sup>*4</sup>	>8	<0.1	<0.1	
96249J	0.10	Black	>8	<0.1	<0.1	
86748	0.06	Grey	>11	<0.05	<0.05	
86750	0.075	Grey	>9	<0.03	<0.05	
86285	0.12	Black	>10	<0.05	<0.07	
86250	0.08	Black	>12	<0.04	<0.06	
85785	0.12	Grey	>11	<0.04	<0.05	
86205	0.13	Black	>11	<0.04	<0.06	
81720	0.027	Grey	>8	<0.05	<0.05	
87580	0.13	Grey	>8	<0.04	<0.05	Pass

# STANDARD PRODUCTS

\*2: z-axis resistance \*3: Surface resistivity \*1: nominal thickness \*4: black on both sides

# **DIMENSION AVAILABILITY**

Laird offers several thicknesses of Single Side Conductive Fabric Tapes and they are available globally. Customized thickness is upon request between 0.03mm and 0.13mm, with MOQ 1000sqm or equivalent. The tapes selected can be further customized to an application by die-cutting, lamination, or assembling with other flex or metal materials.

NOTE CondTape 0521

Any information furnished by Laird Limited, its subsidiary companies and its agents (hereafter, "Laird") is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user, since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird disclaims liability for incidental or consequential damages of any kind. All Laird products for any specific or general uses. Laird disclaims liability for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Terms and Conditions of sale in effect at the time of sale. A current copy of the Laird Terms and Conditions will be furnished upon request. This document is © Copyright 2020, Laird, all rights reserved. Laird, Laird Ternslogies, the Laird Logo, and other marks are trademarks of Laird. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird or any third-party intellectual property rights.





#### **DOUBLE SIDES CONDUCTIVE FABRIC TAPES**

Laird Performance Materials' Double Sides Conductive Fabric Tapes are constructed of a copper nickel plated fabric with pressure sensitive adhesive on both sides. They offer high electrical conductivity in both x, y, and z directions and provide good adhesion and EMI shielding performance.



\*Note : release liner can be on one side or on both sides. We deliver per your request.

#### STANDARD PRODUCTS

	Thickness(mm) <sup>*1</sup>	Peel (N/25mm)	$Rz(\Omega)^{*2}$	Rs(Ω/□) <sup>*3</sup>
DT03B	0.03	>10	0.03	0.1
DT06B	0.06	>10	0.06	0.1
DT10C	0.1	>10*4	0.06	0.1
DT17A	0.17	>14	0.1	0.1
DN50A	0.50	>13	0.1	0.1

\*1: nominal thickness \*2: z-axis resistance \*3: surface resistivity \*4: dual adhesions

#### DIMENSION AVAILABILITY

Laird offers several thicknesses of Double Sides Conductive Fabric Tapes and they are available globally. Customized thickness upon request between 0.03mm and 0.50mm, with MOQ 1000sqm or equivalent. The tapes selected can be further customized to an application by die-cutting, lamination, or assembling with other flex or metal materials.

NOTE\_CondTape\_0521

Any information furnished by Laird Limited, its subsidiary companies and its agents (hereafter, "Laird") is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user, since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird disclaims liability for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Terms and Conditions of sale in effect at the time of sale. A current copy of the Laird Terms and Conditions will be furnished upon request. This document is © Copyright 2020, Laird, all rights reserved. Laird, laird Technologies, the Laird Logo, and other marks are trademarks of Laird. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird party intellectual property rights.

# **CONDUCTIVE TRANSFER ADHESIVES**

Laird Performance Materials' Conductive Transfer Adhesives are developed for application in a large number of Laird products such as fabric over foam, conductive foam, conductive fabric tape, etc. They offer high electrical conductivity in Z directions and provide good adhesion, high shear properties, and EMI shielding performance.

Conductive Transfer Adhesives are available in a natural color and in a black color. After laminating with specific fabrics, some of these adhesives also have a UL510FR rating.

Family	Available Thickness (mm)	Typical PSA	Peel Strength (N/25mm)	Features	Key Application
GT Family	0.05-0.09	LT307C, LT301, LT210H	12	Well-balance in adhesion and resistance	Conductive foam; fabric over foam.
86 Family	0.03-0.07	LT209, LT210	10	Excellent in long term adhesion	Conductive fabric tapes. ex. 86773, 86748, etc.
10U Family	0.01-0.02	LT212	7.5	Very thin with good adhesion	Conductive fabric tapes. ex. 81720, DT03B, DT06B
96 Family	0.015-0.05	LT315	8	Black color adhesive	Black conductive fabric tapes. ex. 96249
87 Family	0.04-0.08	LT87	8	Flame retardant Flame retardant (UL510FR) tapes 87580 Series, DT	
HT Family	0.03-0.07	LT209HT	8	Pass solder reflow temp. profile	
591 Family	0.02-0.11	LT591, LT350	12	Non-conductive PSA	Good adhesion to wide variety of metal and plastic substrates

#### STANDARD PRODUCTS

Note: These adhesives were developed for Laird products such as Fabric-over-Foam, fabric tapes, or conductive foams exclusively. If you are interested in adhesive only, please contact the Product Management Team to confirm availability in advance.

#### DIMENSION AVAILABILITY

Laird offers a wide thickness range of Conductive Transfer Adhesives and can be further processed with die cutting or lamination. Also available upon request are adhesives with thicknesses between 0.01mm and 0.10mm, with MOQ 1000sqm or the equivalent.

NOTE\_CondTape\_0521

Any information furnished by Laird Limited, its subsidiary companies and its agents (hereafter, "Laird") is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user, since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird disclaims liability for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Terms and Conditions of sale in effect at the time of sale. A current copy of the Laird Terms and Conditions will be furnished upon request. This document is © Copyright 2020, Laird, all rights reserved. Laird Laird Terms laird Logo, and other marks are trademarks of Laird. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird or any third-party intellectual property rights.

# **Conductive Tapes**

4

# **APPLICATION TECHNIQUES**

- Adhesion is dependent upon the amount of adhesive-to-surface contact which can be developed. Applying pressure to the bonding surface will develop better adhesive contact and thus improve adhesion.
- To a 25mm(1in.) width tape, Laird recommends using a 2Kgf rubber roller to press back and forth twice under the speed of 5mm/sec.
- Users may adjust the speed (recommended within 3-10mm/sec.) or roller loading (recommended 1-3Kgf) depending on the different applications. If available, apply heat up to 120°C for several seconds to ensure better adhesion.
- Users may also apply 10-30psi for 5-15seconds to the surface. The loading and residual time can be adjusted as well according to the application, area(dimension), and surface. In general, higher loading and longer residual time will make the contact between the adhesive and the surface more stable and thus enhance the conductivity and adhesion.
- After applying the tape onto a surface, the adhesion will build up gradually.
  Keeping the PSA assembly under recommended compression or loading for 24 to 72 hours would be helpful in reaching high adhesion.
- To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. A typical surface cleaning solvent is isopropyl alcohol. Use proper safety precautions for handling solvents.
- The ideal tape application temperature range is 21°C to 38°C. Initial tape application to surfaces at temperatures below 10°C is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, a low temperature holding is generally satisfactory.

# **OPERATION TEMPERATURE**

After application, many Laird Single Side and Double Sides Conductive Fabric Tapes will retain strong adhesion and very little resistance change for several years under -40°C to 85°C. Even under high temperature environment such as 105°C or even 125°C, the performance of some tapes will be high after weeks to months.

NOTE\_CondTape\_0521

Any information furnished by Laird Limited, its subsidiary companies and its agents (hereafter, "Laird") is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user, since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird disclaims liability for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Terms and Conditions of sale in effect at the time of sale. A current copy of the Laird Terms and Conditions will be furnished upon request. This document is © Copyright 2020, Laird, all rights reserved. Laird, Laird Technologies, the Laird Logo, and other marks are trademarks of Laird. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird or any third-party intellectual property rights.



### **ORDERING INFORMATION**

#### MANUFACTURING SITES

Laird Shenzhen and Shanghai are the main manufacturing site of EMI Tapes.

#### LENGTH and WIDTH AVAILABILITY

Standard length of conductive tapes is 20M.

Jumbo roll is available for some selected items as below. Please contact manufacturing site for more details.

		Width (mm)	Length (M)	Joint number, max.	Manufacturing Site
96249	Single side	1000	100	2	Laird Shenzhen
86750	Single side	1000	100	1	Laird Shanghai
86285	Single side	1000	50	1	Laird Shanghai
86250	Single side	1000	100	1	Laird Shanghai
85785	Single side	1000	50	1	Laird Shanghai
87580	Single side	1200	50	1	Laird Shenzhen
DT03B	Double sides	1000	100	2	Laird Shenzhen
DT06A	Double sides	1000	100	2	Laird Shenzhen
DT17A	Double sides	1000	50	1	Laird Shenzhen

## SHELF LIFE AND STORAGE CONDITION

1 year from date of shipment in sealed bag under 0 - 40°C. No humidity control is required.

USA: +1.866.928.8181 Europe: +49.8031.24600 Asia: +86.755.2714.1166

www.laird.com



NOTE\_CondTape\_0521

Any information furnished by Laird Limited, its subsidiary companies and its agents (hereafter, "Laird") is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user, since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird disclaims liability for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Terms and Conditions of sale in effect at the time of sale. A current copy of the Laird Terms and Conditions will be furnished upon request. This document is © Copyright 2020, Laird, all rights reserved. Laird, Laird Terms and Conditions, we can applicate to the aird Terms and Conditions will be furnished upon request. Using darget of any Laird or any third-party intellectual property of third parties. Nothing herein provides a license under any Laird or any third-party intellectual property rights.