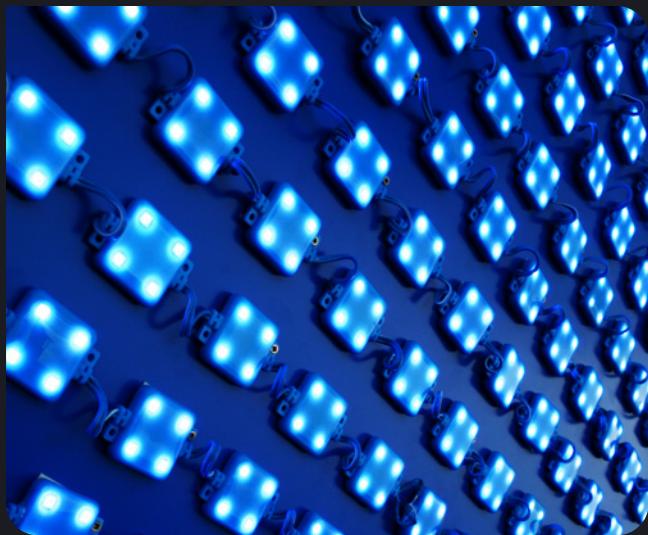




Bonding solutions for LED lighting



Typical applications



Bonding LED strips

LED strips for industrial lighting manufacturers can be bonded with 3M double-sided tapes, which ensure heat transfer as well as reliable bond to the substrate.



High performance applications

Thermally conductive tapes, pads and adhesives are used under electronic components or COB chips, where it is necessary to ensure the transfer of heat from the component to the cooling surface during operation.

Converting solutions

Adhesive transfer tapes and double-sided tapes can be converted into requested shapes in order to achieve faster and more precise applications



Die cutting

When cutting, both the adhesive material and liner are cut through. The converted parts are delivered in individual pieces for further processing.



Kiss cutting

The finished products remain on the roll or sheet after cutting, which makes it very easy to remove them from the liner sheet.

Current requirements for thermal management in production



Faster and easier installation



Lighter construction



Electrically safer connection



Higher heat flux response rate



Modern solutions

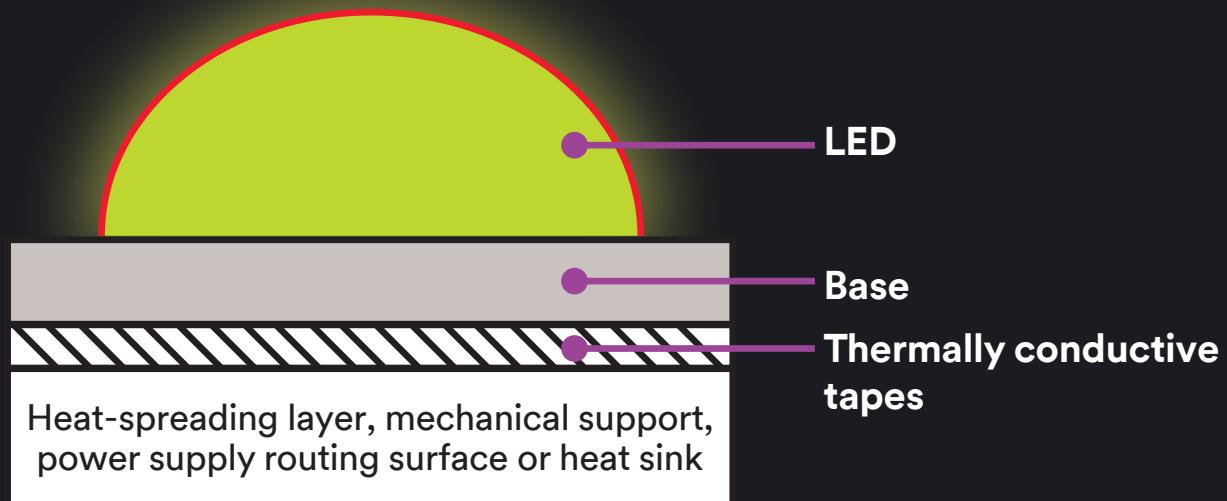


Constant joint thickness

Product features:

- Good adhesion on multiple substrates
- Good thermal conductivity while being electrically isolating
- Good wettability for better thermal conductivity
- Highly conformable
- Easy handling
- Can be converted into requested shapes

LED cooling



Durability of the adhesive joints: Especially when using outdoor LED lights, the durability of the adhesive joint is important to support efficiency in various environmental conditions. 3M products have been proven to have excellent durability in accelerated aging tests.

3M bonding and thermal conductive solutions

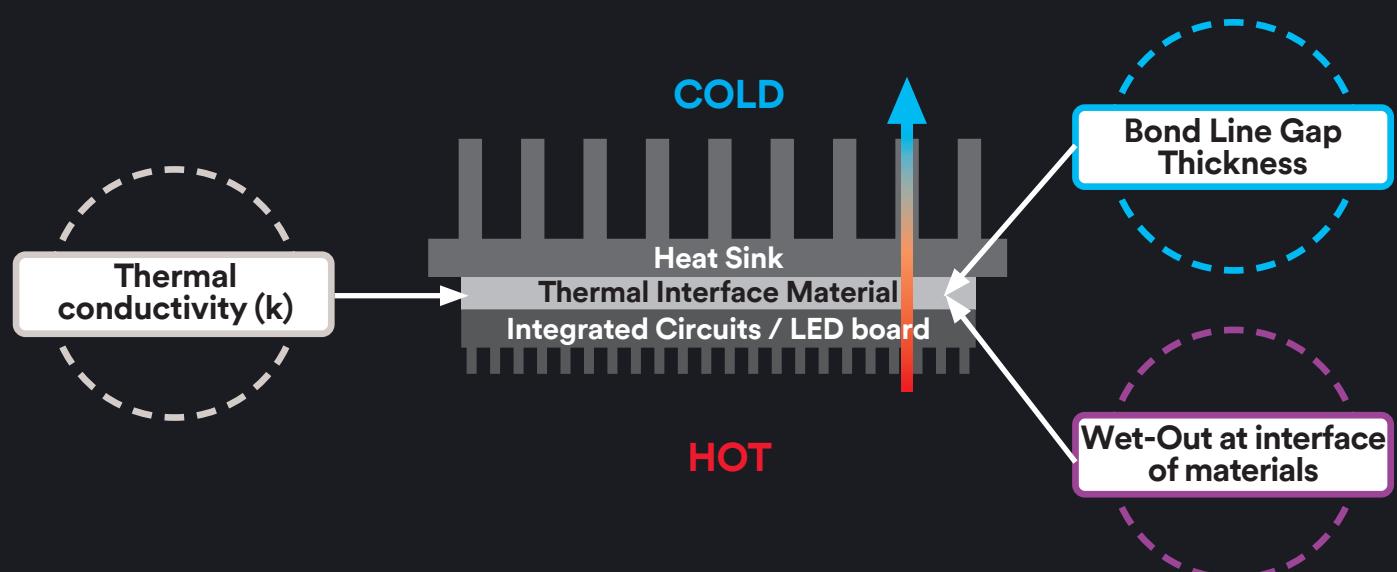
Application	Product	Product description	Thermal Conductivity (W/m*K)
LED strips bonding	467MP	Adhesive Transfer Tape	0,18 (ASTM C518)
	F9469PC	VHB™ Adhesive Transfer Tape	0,16 (ASTM C177)
	9080HL	Double Coated Tape	–
	93010LE	Double Coated Tape with Polyester Carrier	–
	GPT-020F	Double sided adhesive tape	–
	9882	Thermally Conductive Tapes	0,6 (ASTM C177)
	8810	Thermally Conductive Tapes	0,6 (ASTM C177)
	8708	Thermally Conductive Tapes	0,6 (ASTM D5470)
	8926	Thermally Conductive Tapes	1,5 (ASTM D5470)
LED fixtures bonding	TC 2810	Thermally Conductive Adhesives	0,8 - 1,4 (ASTM D5470)
	4910	VHB™ tape	0,16 (ASTM D149)
	GPH-060GF	VHB™ tape	0,15 (ASTM E1530)
High performance applications	5925	VHB™ tape	0,05 (ASTM D149)
	5500H	Thermally conductive pads	2 (ASTM D5470)
	5570N	Thermally conductive pads	1,3 (ASTM D5470)
	5571N / 5571	Thermally conductive pads	1,6 (ASTM D5470)

Thermally conductive materials

3M products are offering a balanced combination of

- wet-out which helps to eliminate air at interface
- thermal conductivity (k)
- a variety of different thicknesses

to an effective heat transfer with good dielectric strength.



Dielectric Strength (kV/mm) (ASTM D149)	Thickness (mm)	Temperature Resistance (°C) long-term	Temperature Resistance (°C) short-term	Certification	Color
27	0,06	150	204	UL-969	Transparent
23	0,13	150	260	UL-969	Transparent
–	0,16	80	120	–	White
–	0,1	121	149	–	Transparent
–	0,2	90	190	–	Transparent
30	0,05	100	130	–	White
26	0,25	100	130	UL-746C	White
15	0,13 / 0,25	80	90	–	Yellowish White
15	0,2 / 0,25 / 0,5	80	90	UL-94 V0	Yellowish White
44	Variable	90	130	–	Cream
16	1	149	93	UL-746C	Transparent
17,7	0,6	150	230	UL-746C	Grey
18	0,6	121	149	UL-746C	Black
18	0,5 / 1,0 / 1,5 / 2,0	130	150	UL-94 V0	White
20	0,5 / 1,0 / 1,5 / 2,0	110	130	UL-94 V0	White
13	0,5 / 1,0 / 1,5 / 2,0	110	130	UL-94 V2 (0,5 mm), UL-94 V0 (1,0 / 1,5 / 2,0 mm)	White

3M Industrial Tapes and Adhesives

Remaking the world of making things.

Whether you are in need for a solution in bonding LED lighting, or you could use a sparring partner for re-thinking your design; our tapes and adhesives experts are here for you.



Important information: All of the details provided above constitute our experience and must not be incorporated in specifications. Before using our products, please check whether they are suitable for your intended purpose, also in terms of possible application - specific influences. Please consider all occupational health and safety regulations to be observed during use. All questions of warranty and liability for our products are governed by the terms of the sales contract, unless statutory regulations provide otherwise. Technical changes and printing errors accepted.

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