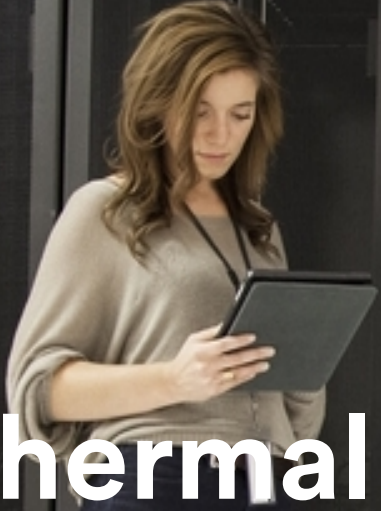




Science.
Applied to Life.™



3M™ Thermal Management Solutions for LED Assembly

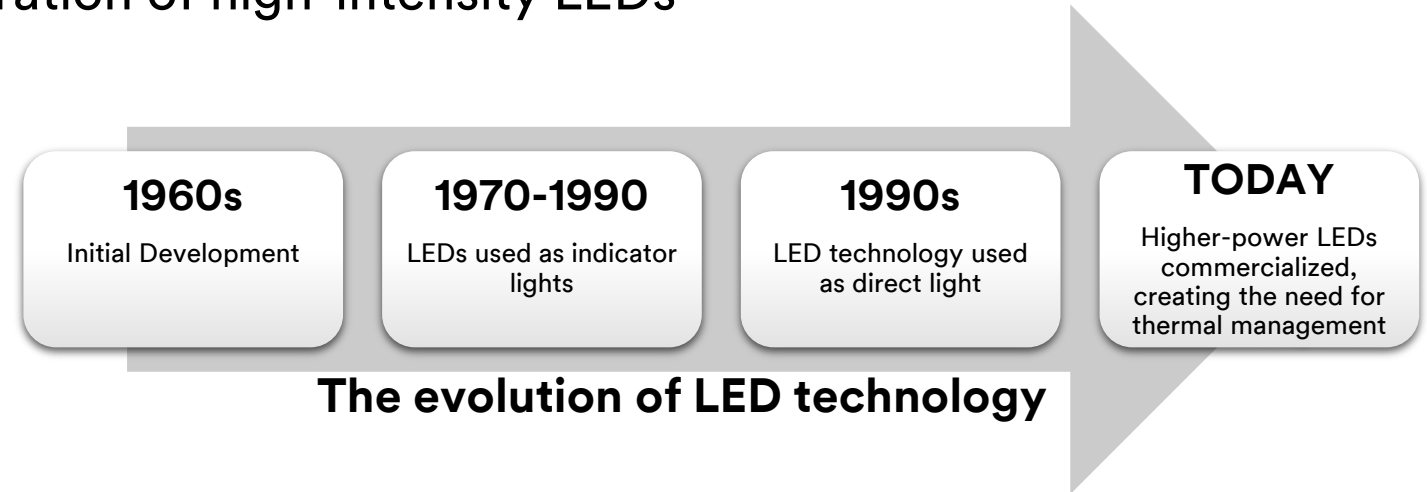
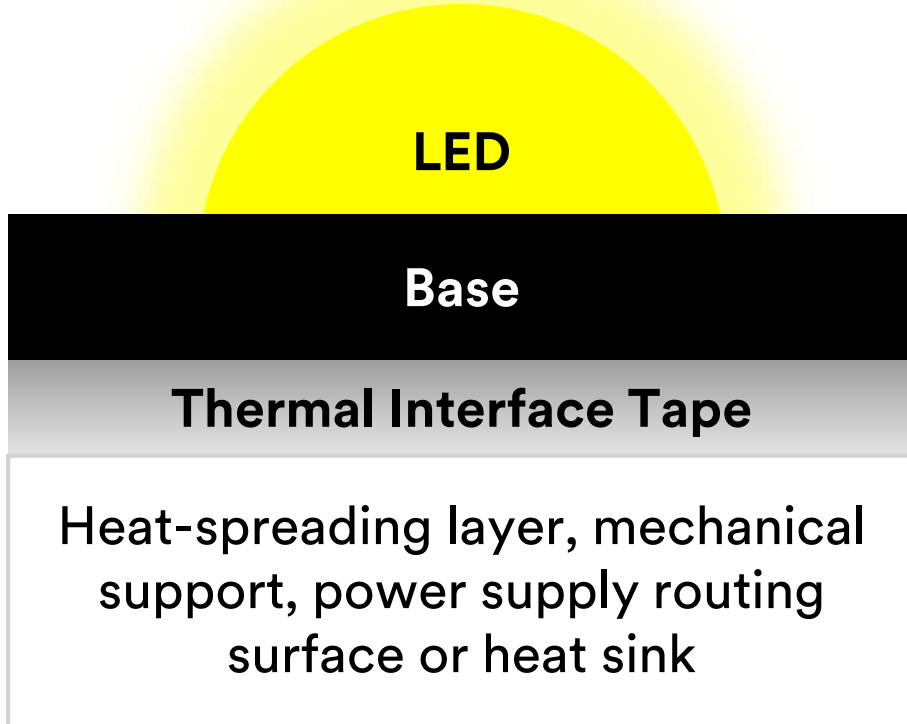
Electronics Materials Solutions Division

November 2016

More light. Less heat.

High performance cooling for a new generation of high-intensity LEDs

Cooling off an LED



Advanced designs drive need for more efficient cooling

- High speed/multi-function components → More heat generated
- Smaller enclosures → No room for heat to dissipate

3M™ Thermal Management Solutions

High intensity LEDs require improved thermal management for optimal performance

- Efficient thermal transfer for long-term reliability and performance optimization in applications using high brightness LEDs
- Proven track record of durability through accelerated aging tests
 - *Especially in external applications of LEDs, durability of the thermal interface is important to support efficiency in different environmental conditions*
- High thermal performance in a variety of environmental conditions to meet the demanding needs of applications today and in the future

Full selection of products to meet your process and performance requirements:

- 3M™ Thermally Conductive Interface Pads
- 3M™ Thermally Conductive Interface Tapes
- 3M™ Thermally Conductive Adhesives
- 3M™ Thermally Conductive Greases



3M™ Thermal Management Materials

Product portfolio for LED assembly applications

Product Category	Product Number	Description	Features
3M™ Thermally Conductive Interface Pads	<ul style="list-style-type: none"> 5570N (1.3 W/m-K) 5589H (Softer) 5590H (Higher thermal conductivity) 	<ul style="list-style-type: none"> Acrylic pads, 0.5 mm and thicker* <p>*Note: 5589H is not available for 0.5 mm.</p>	<ul style="list-style-type: none"> High thermal conductivity Excellent gap filling Die cut to size and shape No silicone oil breeding / contamination
3M™ Thermally Conductive Interface Pads	<ul style="list-style-type: none"> 5515-20 5515-25 <p>(S version is also available)</p>	<ul style="list-style-type: none"> Silicone pad, thin and higher K 	<ul style="list-style-type: none"> Higher thermal conductivity (3 W/m-K) Thin thickness (0.2 mm - 0.25 mm) S version: One side is laminated with thin film for better handling and converting
3M™ Thermally Conductive Interface Tapes	<ul style="list-style-type: none"> 8926-02 (0.20 mm) 8926-025 (0.25 mm) 8926-05 (0.50 mm) 	<ul style="list-style-type: none"> Acrylic adhesive tapes with thin PET carrier 	<ul style="list-style-type: none"> Higher thermal conductivity (1.5 W/m-K) Reworkable
3M™ Thermally Conductive Interface Tapes	<ul style="list-style-type: none"> 8805 8810 8815 8820 	<ul style="list-style-type: none"> Acrylic double-sided tapes, 0.5 mm and thinner 	<ul style="list-style-type: none"> High adhesion Die cut to size and shape Excellent wet-out
3M™ Thermally Conductive Epoxy Adhesives	<ul style="list-style-type: none"> TC-2810 TC-2707 	<ul style="list-style-type: none"> Epoxy adhesives 	<ul style="list-style-type: none"> Ultra-thin bond line Higher thermal conductivity than tape Higher shear, peel strength than tape

Important Notice

Regulatory: For regulatory information about these products, contact your 3M representative.

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Thank you