Quick Ship

· Same day shipment on stock units with orders received by 11:00 a.m. CST.

Flexible Heaters

Kapton[®] Material

A thin, lightweight organic polymer film, Kapton[®] provides excellent tensile strength, tear resistance and dimensional stability. This heater is ideal for applications requiring low outgassing in a vacuum, or resistance to radiation, fungus and chemicals. Kapton[®] is also very resistant to solvents.

Performance Capabilities

- · For operating environments as low as -319°F (-195°C), heater temperature as high as 392°F (200°C)
- Watt densities to 50 W/in² (7.75 W/cm²)^①

Features and Benefits

- Excellent physical and electrical properties result in thermal stability over a wide temperature range.
- Transparent Kapton[®] material allows inspection of internal details.
- · Resists radiation and fungus, allowing its use in a wide range of applications.
- UR[®] and cUR[®] available on many custom designs.

Applications

- Military/aerospace, where low outgassing properties are required
- · Medical, where thorough cleaning or sterilization is needed
- Laboratory research
- Photographic equipment
- Optical equipment
- LCD displays
- Computer equipment

Standard Specifications

Thickness: 0.007 inch (0.2 mm)

Flexibility (min. radius): 1/32 inch (0.8 mm)

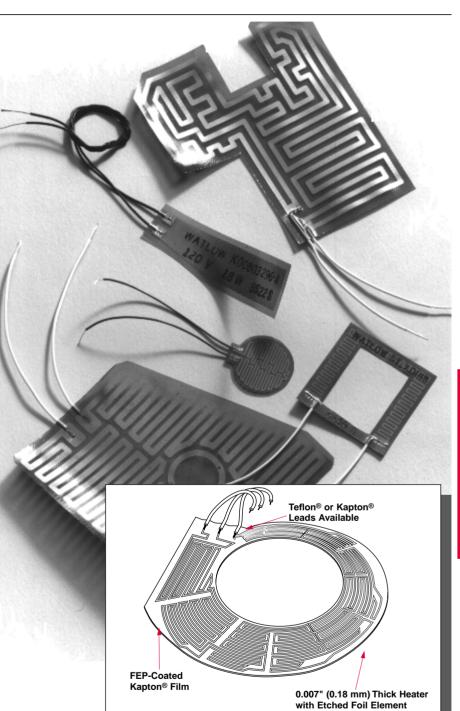
Weight: 1.5 oz./ft² (0.05 g/cm²)

Operating temperature: ² Maximum: 392°F (200°C)

Minimum: -319°F (-195°C)

Kapton[®] and Teflon[®] are registered trademarks of E.I. du Pont de Nemours & Company.

UR® and cUR® are registered trademarks of Underwriter's Laboratories, Inc.



Maximum operating watt density:

At 77°F (25°C) in open air: 7 W/in² (1 W/cm²) At 300°F (150°C): 10 W/in2

Watt density rating on stock

units: 5 W/in² (0.8 W/cm²)

Dielectric strength:

Minimum V~(ac): 1000

Flammability rating:

Self-extinguishing

Heater size limitations: 20 x 26 inches (510 mm x 660 mm)

Weight loss (outgassing): 0.51 percent

Standard lead length: 12 inches (305 mm) Teflon[®] E

① Watt density limits are application dependent (operating temperatures, bonding method and heat sink). 2 We recommend maximum part temperature at 300°F (150°C). For more information, ask for technical letter #4, Kapton® heaters.

189

Flexible Heaters

Kapton Material Options

Stock

• Pressure Sensitive Adhesive Surface (PSAS) (see **page 165** for more information)

Made-to-Order

- PSAS
- Factory bonding
- Holes, cutouts, notches
- Special leads

How to Order

Determine width, length, volts and watts. Specify the code number and quantity if the heater is listed in the stock list above. To specify PSAS add **A** to code number. For **made-toorder** heaters, please provide the following:

V in.	Vidth (mm)	Le in.	ength (mm)	Volts	Watts	Availability	Code Number 28V	Code Number 120V~(ac)
0.5	(13)	2	(50)	28	5	Stock	K005020C5	
1	(25)	1	(25)	28	5	Stock	K010010C5	
1	(25)	3	(75)	28	15	Stock	K010030C5	
1	(25)	5	(125)	120	25	Stock		K010050C3
1	(25)	15	(380)	120	75	Stock		K010150C3
2	(50)	10	(255)	120	100	Stock		K020100C3
3	(75)	5	(125)	120	75	Stock		K030050C3
4	(100)	4	(100)	120	80	Stock		K040040C3
5	(125)	5	(125)	120	125	Stock		K050050C3

- Quantity
- Size (dimensions)
- Voltage
- Wattage/watt density
- Operating temperature
- Options, such as holes, PSAS.

Approx. net weight: 1.5 ounces/ft2 (0.05 g/cm2)

• Will heater be subject to flexing?

Availability

Stock: Same day shipment of orders received by 11:00 a.m. CST.

Made-to-Order: Consult factory

Special Product Offering Kapton[®] Handy Heater Kit—For Quick Heating Solutions

Watlow offers a convenient way to use Kapton[®] heaters. The Handy Heater Kit consists of 16 Kapton[®] heaters—13 rectangular and three circular—in different sizes and resistances. So when you need a small flexible heater in a hurry, you can pick the one that fits your application.

Circuit	Resistance (ohms)	Size (inches)
А	40	½ x 2 ⅓
В	90	1 x 2 ¼
С	145	1 ½ x 2 ½
D	205	2 x 2 ¼
E	80	½ x 3 %
F	165	1 x 3 %
G	275	1 ½ x 3 %
Н	375	2 x 3 %
Ι	130	½ x 5 ¾
J	255	1 x 5 ¾
К	28	1 x 1 ¼
L	13	½ x 1 ½
Μ	32	1 O.D.
Ν	180	2 O.D.
0	185	4 O.D.
Р	45	1 x 1 ¾

F.O.B.: Columbia, Missouri

Kapton [®] Kit							
Description	Availability	Code Number					
Heater Kit Only	Stock	K05711980					
Kit with PSAS	Stock	K05711980A					
Kit with 3 Lead Pairs	Stock	K05711980L					
Kit with PSAS and Leads	Stock	K05711980AL					

Individual heaters are K05711980-circuit letter.

Other Features

- The heater sheet can be ordered with or without pressure sensitive adhesive (PSAS), depending on your needs. To specify PSAS add **A** to code number.
- The kit comes with instructions for wiring, lead attachment and selection and installation. Pretinned solder pads are provided for easy lead connections.
- The instructions also show you how to dial in your desired wattage using a variable voltage transformer.
- The heaters can be wired individually, in series, or parallel for hundreds of variations to satisfy your special application.

Availability

Stock: Same day shipment of orders received by 11:00 a.m. CST.

F.O.B.: Columbia, Missouri