

Cirlex<sup>®</sup> is an adhesiveless polyimide material that provides outstanding physical, electrical, and chemical performance that is ideal for applications with environmental extremes. Manufactured from Kapton<sup>®</sup> films, it is available in a wide range of thicknesses up to 125 mil.

## APPLICATIONS

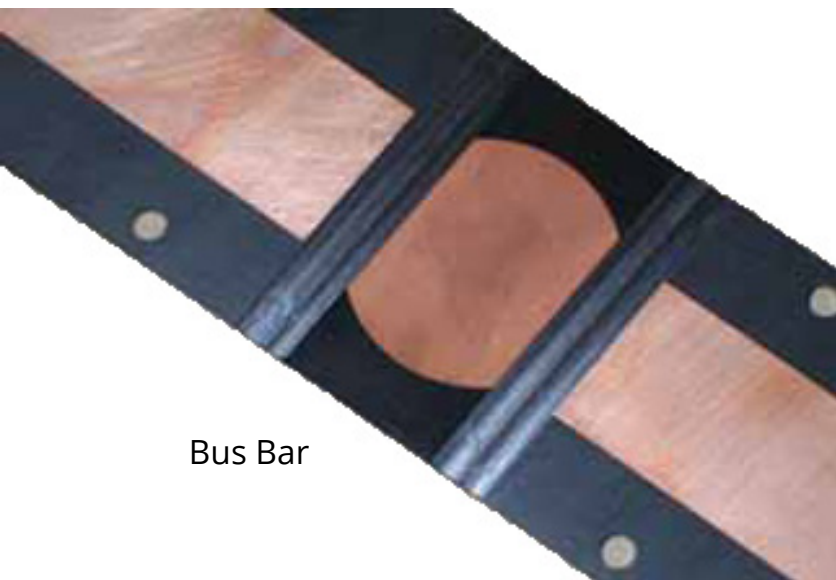
All Polyimide Diode Boards  
Extreme Environment Flex Circuits  
Diagnostic Instruments  
PGA / BGA Cards  
High Power Bus Bars & Magnetics  
Thermal Barriers  
Thermal Breaks  
Shims and Spacers  
High-Temperature, High-Pressure Gaskets  
Heat Reflectors

Provider of components manufactured with

# Cirlex<sup>®</sup>

## MATERIAL CHARACTERISTICS

- Thermal & Dimensional Stability
- Space Qualified
- Plasma Resistant
- Machines Easily
- Custom Adhesiveless Laminations



Bus Bar



Lithium Ion Battery  
Manufacturing Tool

800-372-5625

[www.fralock.com](http://www.fralock.com)  
USA Manufacturer

REGISTERED ISO and AS9100

CIRLEX® has been developed to provide the industry with a wider variety of thicker polyimide materials.

CIRLEX® has the same excellent balance of physical, chemical, and electrical properties over a wide temperature range as Kapton® films. Overall operating temperature range is -269°C to +351°C.

CIRLEX® is offered in thicknesses from 0.004" (0.1016 mm) to 0.125" (3.175mm). Thicker constructions are available.

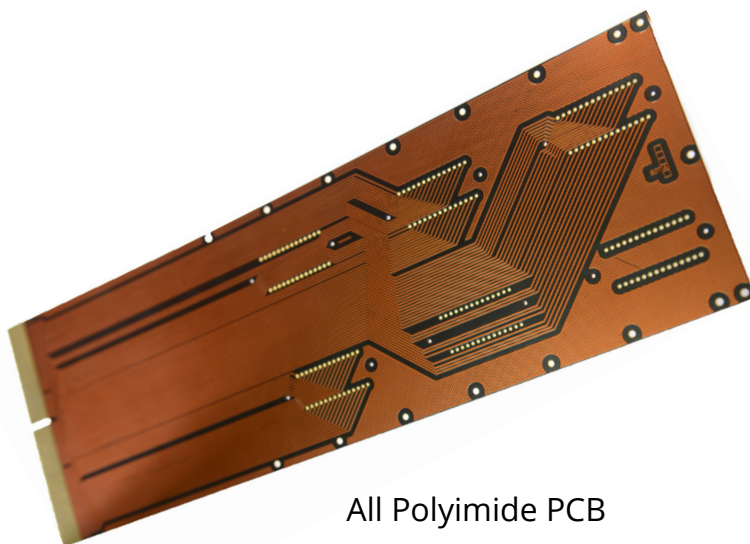
CIRLEX® can be modified by laser cutting, drilling, machining, stamping, shearing, and chemical etching to very exact tolerances. A processing guide is available upon request.

CIRLEX® is available with a wide variety of foils laminated on one or two surfaces or imbedded. This utilizes our all-polyimide adhesiveless technology.

## CIRLEX® Technical Data

Typical Properties of CIRLEX®  
at 23°C (73°F) and at 200°C (392°F)

Density (G/cc or G/ml)	1.42
Specific Heat (J/g K)	1.09
CTE (23° -350 °C), $\mu\text{m}/\text{m}^\circ\text{C}$	ASTM E831
in-plane	30
thru-thickness	118
Tg (°C)	~351°C
Moisture Absorption (% Regain @ 73 °F, 50% RH)	ASTM E595 0.75
Thermal Conductivity	0.17
UL Rating UL File # E39505	UL 94VO



All Polyimide PCB

Corporate Office  
28525 West Industry Drive  
Valencia, CA 91355  
800-372-5625 Toll Free  
661-702-6999 Local  
661-702-9899 Fax

Call Fralock at 1-800-372-5625 or contact Fralock on the web at [www.fralock.com](http://www.fralock.com) or [www.cirlex.com](http://www.cirlex.com)  
MSDS available upon request.

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