

# N4000-2

Multifunctional Epoxy Laminate & Prepreg



The most established material of the comprehensive Park/  
Nelco product line is N4000-2. This system of multifunctional  
epoxy laminate and prepreg has one of the broadest operating  
and processing windows available. N4000-2 is widely used in a  
number of applications including fineline and high density  
multilayer boards.

**what you need...**  
**when you need it...**  
**where you need it...**

**PARK**  **nelco**<sup>TM</sup>

# N4000-2

## Multifunctional Epoxy Laminate & Prepreg

Designed for use in high-density multilayer boards, N4000-2 is suitable for surface-mount multilayers, MCM-Ls, direct-chip attach, automotive and wireless communications. The characteristics of N4000-2 also make it particularly beneficial in high-volume, fine-line multilayers and PCMCIA applications.

The predictability and consistency of this material provides for tremendous ease of processing at the circuit board fabrication site, and its electrical and mechanical characteristics make it user friendly for both designers and fabricators of critical circuits.

As with all Park/Nelco materials, the N4000-2 is vacuum laminated. N4000-2 is available in a wide variety of constructions, copper weights and glass styles. It is also available in standard copper, double-treat copper and our RTFOIL® Laminate.

N4000-2 is a reliable combination of managed cost, quality and performance for a multitude of high volume applications.

RTFOIL® is a trademark of Park Electrochemical Corp..

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Product Application Environments	
Fine-Line Multilayers	◆
Surface-Mount Multilayers	◆
PCMCIA	◆
MCM-Ls	◆
Direct-Chip Attach	◆
Automotive	◆
Underhood Automotive	◆
Wireless Communications	◆

Key Engineering Values	
X/Y CTE (ppm/°C)[-40 to 125°C]	12 - 16
Z Axis Expansion (%) [50 to 260°C]	4.5
T <sub>g</sub> by DSC (°C)	140
Dielectric Constant (50% resin content)	
@ 1 MHz	4.4
@ 1 GHz	4.1
Dissipation Factor (50% resin content)	
@ 1 MHz	0.027
@ 1 GHz	TBD

Vacuum Lamination Parameters	
Full Cure In Press	45 min. @ 170 °C
Heat Up Rate (°C/min.)	4 -7
Critical Range (°C )	70 - 130
Cool Down Rate (°C/min.)	< 3
Pressure (kg/cm <sup>2</sup> ) / (psi)	15 - 20 / 200 - 300

Set platen 3-5° C higher than cure temp. & control heat up rate through critical temperature range.

Partial cure in press is not recommended for this product.

### For More Information Contact One Of Our ISO 9002 Facilities or visit us at [www.parknelco.com](http://www.parknelco.com)

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