Arlon 35NQ

Electronic Substrates

High Performance Polyimide / Quartz

Superior Reliability

Exceptional Thermal Performance

- Tg Greater than 250° C
- Non-MDA chemistry
- Reduced Cure time
- Low Dielectric Constant
- Reduced Coefficient of Thermal Expansion

Description

Arlon's 35NQ is in the class of polyimide materials incorporating the high performance and reliability characteristics of pure polyimide resin systems. Utilizing our 35N resin provides the same known handling, cure processes, and performance expected of polyimide systems. The use of woven Quartz fabrics imparts reduced coefficient of thermal expansion values in the X, Y, and Z directions. This provides even greater assurance of reliability of the finished products. It can withstand the most severe processes and thermal excursions and retains it's copper adhesion properties at assembly and rework temperatures. 35NQ contains no MDA or other known potentially carcinogenic materials.

Applications

The 35NQ materials are an excellent choice for many different uses. The low in-plane expansion reduces the CTE mismatch with ceramic or other low expansion components. The low Z expansion provides reliable plated through holes where very thick (>0.093) finished boards are needed for mechanical purposes. High copper peel strength retention allows for multiple soldering or rework cycles or where field repair might be desirable with less risk to losing the whole assembly due to board failure. The pure polyimide chemistry provides the ultimate in thermal resistance for long high temperature burn-in ovens or down-hole analysis.

Typical Properties: 35NQ Laminate

Property	Test Method	Result
Peel strength after solder lb/in (Kg/m)	IPC-TM-650 2.4.8	6.0 (106)
Peel strength after process solutions lb/in (Kg/m)	IPC-TM-650 2.4.8	6.0 (106)
Tg (degrees C)	IPC-TM-650 2.4.24 (TMA)	>250
CTE – Z axis (ppm/°C)	IPC-TM-650 2.4.24 (TMA)	50
CTE – X,Y axis (ppm/°C)	IPC-TM-650 2.4.24 (TMA)	9-10
PERMITTIVITY (1 MHz)	IPC-TM-650 2.5.5.3	3.5
LOSS TANGENT (1 MHz)	IPC-TM-650 2.5.5.3	.009
FLAMMABILITY	UL94	N/A
VOLUME RESISTIVITY (megohm-cm)	IPC-TM-650 2.5.17.1	5×10^{9}
SURFACE RESISTIVITY (megohms)	IPC-TM-650 2.5.17.1	8×10^{7}
FLEXURAL STRENGTH psi (Kg/m)	IPC-TM-650 2.5.4	95,000 (6.7×10^{7})

Availability

Color:	Natural color only (brown)
Sheet Sizes:	Panels from 36” x 48”
Thickness:	0.005 to 0.062 inch
Prepreg:	B-Stage bonding sheets available.
Cladding:	Electrodeposited copper foil

ARLON
MATERIALS FOR ELECTRONICS

9433 Hyssop Drive, Rancho Cucamonga, California 91730 • Telephone: (909) 987-9533 • Fax: (909) 987-8541
1100 Governor Lea Road, Bear, Delaware, 19730 • Telephone: (302) 834-2100, (800) 635-9333 • Fax: (302) 834-2574
37 Rue Collange, 92300 LeVallois, Perret, France • Telephone: (33) 1-427-02642 • Fax: (33) 1-427-02798
44 Wilby Avenue, Little Lever, Bolton, Lancashire, BL31QE, UK • Telephone: (44) 120-457-6068 • Fax: (44) 120-479-6463
Website: www.arlonmed.com

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