



## tec-speed 4.0 - VT-462(L) PP

UL Approval: E214381 Preliminary B1.0

## Low Dk / Low Loss No &amp; Low Flow Prepreg

## General Information

- > High Tg
- > FR4.0
- > Low Dk & Low Loss
- > Excellent Thermal Reliability
- > Lead Free Process Compatible
- > Ease of Manufacturing

## Application

All flex-rigid applications with high BPS data rates, High speed flex-rigid connectors, High frequency & high Speed, satellite communication, navigation, GPS, etc

## Availability

| Type   | Glass Fabric | Resin Content | Flow Range |            | Pressed Thickness |        |
|--------|--------------|---------------|------------|------------|-------------------|--------|
|        |              |               | mil        | mm         | mil/ply           | mm/ply |
| 1067NF | 1067         | 65%           | 5~50       | 0.125~1.25 | 2.2               | 0.056  |
| 1067LF | 1067         | 68%           | 60~120     | 1.5~3.0    | 2.4               | 0.060  |
| 1078NF | 1078         | 60%           | 5~50       | 0.125~1.25 | 2.8               | 0.071  |
| 1080LF | 1080         | 65%           | 60~120     | 1.5~3.0    | 3.3               | 0.084  |

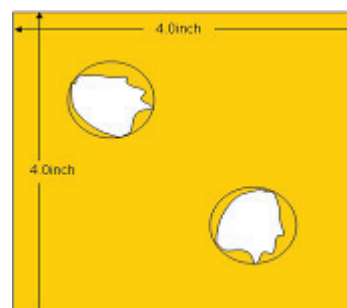
## Remark:

"NF" ---- No Flow PP

"LF" ---- Low Flow PP

Right picture shows Flow-in test method:-&gt;

1. Press Temperature ---- 171°C
2. 3 plys per pressing
3. Press Pressure ---- 200psi Built on IPC-TM650, 2.3.17.2



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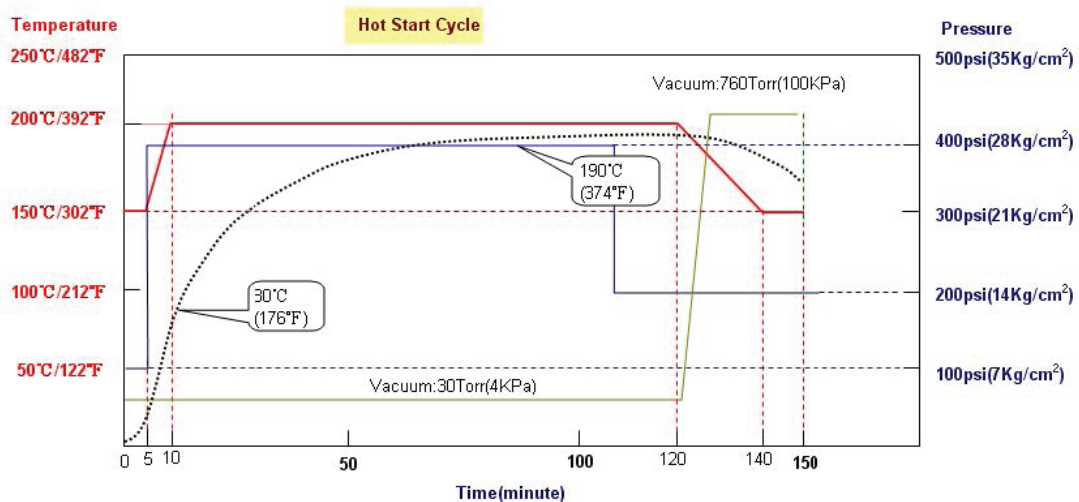
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### Pressing Condition



|   |                           |                   |
|---|---------------------------|-------------------|
| 1 | Temp Ramp Rate            | ≥ 3.0 °C/min      |
| 2 | Curing Time               | ≥ 185 °C/ ~100min |
| 3 | Max. Material Temperature | 200~205 °C        |
| 4 | Full Pressure             | ≥ 28 kg (400 PSI) |
| 5 | Full Pressure Temperature | ≤ 80 °C           |

### Properties Sheet IPC-4101E /126

| Properties          |                             | Test Method         | Units  | Specification |
|---------------------|-----------------------------|---------------------|--------|---------------|
| Tg                  | TMA                         | IPC-TM-650 2.4.24   | °C     | 175           |
| Td (5% Wt. Loss)    |                             | ASTM D3850          | °C     | 360           |
| Peel Strength (1oz) |                             | IPC-TM-650 2.4.8    | lb/in  | 6             |
| T288                |                             | IPC-TM-650 2.4.24.1 | Minute | >30           |
| Z-axis CTE          | Before Tg                   | IPC-TM-650 2.4.24   | ppm/°C | 50            |
|                     | After Tg                    | IPC-TM-650 2.4.24   | ppm/°C | 220           |
|                     | Total Expansion (50~260 °C) | IPC-TM-650 2.4.24   | %      | 2.50          |
| DK (RC 50%)         | @ 10GHz                     | Cavity Resonator    | —      | 3.8           |
| DF (RC 50%)         | @ 10GHz                     | Cavity Resonator    | —      | 0.007         |

Disclaimer: The information and data contained in this technical literature is based on data and knowledge correct at the time of publishing/printing and is believed to be accurate and is offered in good faith for the benefit of the user. The user should make his own tests to verify the suitability of this product for any application before its use. All data are typical values only and subject to change without notice.

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