

# Y-201TS

## High Tg, White Laminate for package substrates

**产品特点:**

- 无卤素, Tg185°C (DMA)
- 高白度、高反射率
- 优异的耐黄变性能
- 厚度均匀性控制技术
- 适用无铅制程
- 优异的尺寸稳定性
- 低膨胀和优异的通孔可靠性

**应用领域:**

小间距/Mini/Micro LED、封装基板、摄像机等。

**Key Features:**

- Halogen Free and Tg185°C (DMA)
- High whiteness and high reflectivity
- Excellent yellowing resistance
- Thickness uniformity control technology
- Lead free process compatible
- Excellent dimensional stability
- Low Z-axis CTE and excellent through hole reliability

**Applications:**  
Small space/Mini/Micro LED, Package substrate, VCR .etc

**1、General properties**

| Property   | Item                                    | IPC-TM-650 | Test Condition    | Units          | Typical value    |     |
|--|---|------------|-------------------|----------------|------------------|-----|
| 热性能<br>Thermal                                   | 玻璃化转变温度<br>Glass Transition Temperature | 2.4.24.4   | DMA               | °C             | 185              |     |
|  | X,Y 轴方向膨胀系数<br>X,Y-CTE                  | 2.4.24.5   | TMA               | ppm/°C         | 10~12            |     |
|  | Z 轴方向膨胀系数<br>Z axis-CTE                 | 2.4.24     |                   | TMA, Before TG | ppm/°C           | 48  |
|  |   |            |                   | TMA, After TG  | ppm/°C           | 202 |
|  |   |            |                   | 50~260°C       | %                | 2.6 |
|  |   |            |                   | Etched         | min              | >60 |
|  | 288°C 热冲击<br>Thermal stress             | 2.6.8      | 288°C, solder dip | S              | >300             |     |
| 热失重(weight loss 5%)<br>Decomposition temperature | 2.4.24.6                                | TGA        | °C                | 380            |                  |     |
| 电性能<br>Electrical                                | 体积电阻<br>Volume Resistivity              | 2.5.17.1   | C-96/35/90        | MΩ-cm          | >10 <sup>8</sup> |     |
|  | 表面电阻<br>Surface Resistivity             | 2.5.17.1   | C-96/35/90        | MΩ             | >10 <sup>8</sup> |     |
|  | Dk (RC50%)                              | 2.5.5.9    | 1GHz;C-24/23/50   | /              | 5.6              |     |
|  | Df (RC50%)                              | 2.5.5.9    | 1GHz;C-24/23/50   | /              | 0.018            |     |

|                  |  |                   |                   |         |            |
|------------------|--|-------------------|-------------------|---------|------------|
| 物理性能<br>Physical | 白度<br>Whiteness                            | GB2911982         | Internal standard | %       | 90         |
|                  | 反光率<br>Reflectance rate                    | GJB 5023.1-2003   | Internal standard | %       | 92.5       |
|                  | 弯曲强度<br>Flexural Strength                  | LW<br>CW<br>2.4.4 | A                 | MPa     | 560<br>530 |
|                  | 杨氏模量<br>Young's modulus                    | JB/T 6544-1993    | A                 | GPa     | 25         |
|                  | 剥离强度<br>Peel Strength<br>(Hoz Copper Foil) | 2.4.8             | 288°C/10s         | lb/inch | 5.7        |
|                  | 阻燃等级<br>Flammability                       | UL94              | UL94              | /       | HB         |
|                  | 比较性漏电起痕指数<br>CTI                           | IEC-112           | IEC-112           | 级别      | 0          |
|                  | 热导率<br>Thermal conductivity                | ASTM-D5470        | C-96/35/90        | W/(m*k) | 0.7        |
|                  | 耐离子迁移性<br>CAF                              | ---               | 85°C/85%/50V      | Hours   | >1000      |
|                  | 吸水率<br>Moisture Absorption                 | 2.6.2.1           | D-24/23           | %       | 0.13       |

Specimen thickness: 0.4mm or 0.8mm. Test Method is according to IPC TM-650 or GB.