



GW1500&GW1500P

High Reliable Multi-functional Epoxy CCL&Prepreg

产品特点

- ◆适用于多层板无铅制程
- ◆Tg 值 150°C (DSC)
- ◆优良的耐热性能, T288>30min, T300>15min, Td>350°C
- ◆较低的 CTE (Z-axis)
- ◆较低的吸水率
- ◆优良的耐离子迁移性能

FEATURES

- ◆Suitable for multi-layer lead-free process
- ◆Tg 150°C (DSC)
- ◆High thermal resistance, T288>30min, T300>15min, Td>350°C
- ◆Low CTE(Z-axis)
- ◆Low moisture absorption
- ◆Excellent CAF resistance

基本性能 GENERAL PROPERTIES

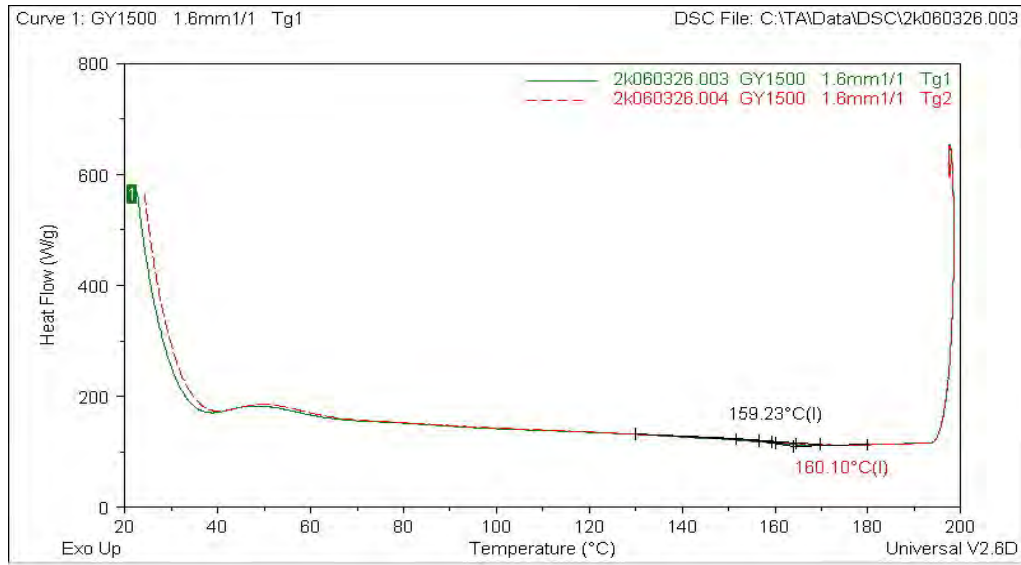
Test Item	Treatment Condition	Unit	SPEC	Typical Value	
Tg	DSC(E-2/105)	°C	135~150	159.23	
Td	TGA(5% Wt Loss, 10°C/min)	°C	>340	357	
CTE Z-axis	TMA	μ m/m°C	Before Tg	<60	45
			After Tg	<300	240
T260	TMA	min	>30	>60(T300>20min)	
Surface Resistivity	F	MΩ	≥10 ⁴	7.57×10 ⁷	
Volume Resistivity	F	MΩ-cm	≥10 ⁶	6.96×10 ⁸	
Dielectric Breakdown	D-48/50+D-0.5/23	KV	≥40	50	
Arc Resistance	A	s	≥60	97	
Thermal shock	288°C, 20s	s	no delamination	>600s	
Dielectric Constant (1MHz)	C-24/23/50	-	≤5.4	4.6	
Dissipation Factor (1MHz)	C-24/23/50	-	≤0.035	0.013	
Pressure Cooker Test	1.5atm/2hr/288°C Dipping 10s	s	no delamination	>480s	
Flexural Strength	A	N/mm ²	LW	≥415	452
			CW	≥345	357
Flammability	UL-94	-	V-0	Pass	
Peel Strength	A	N/mm	≥1.05	1.52	
Moisture Absorption	E-1/105+des+D-24/23	%	≤0.35	0.08	
CTI	A	V	≥175	200	

Sample Thickness: 1.6mm, copper foil, 1 oz

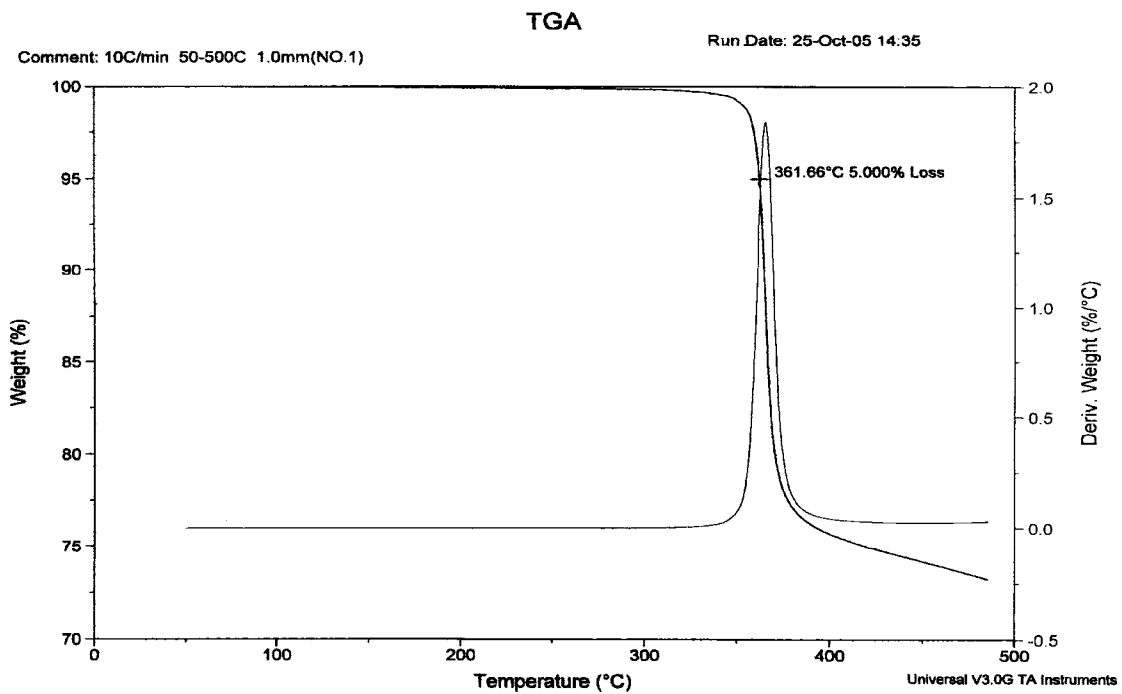
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◆Tg(DSC)=159°C



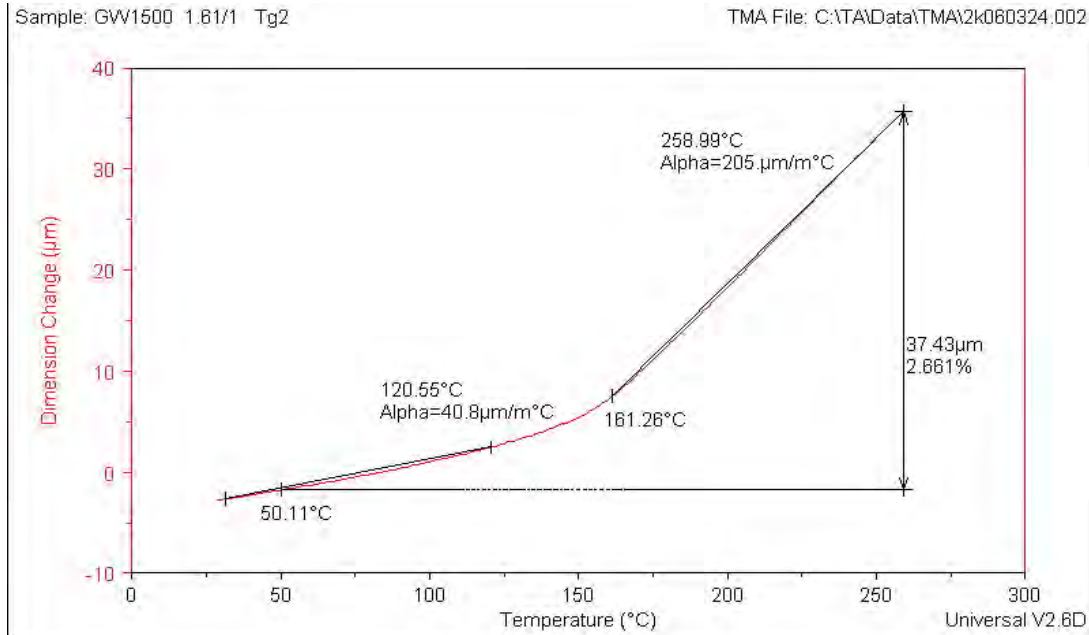
◆High Td:TGA-Td(5% Wt Loss,10°C/min)=361°C



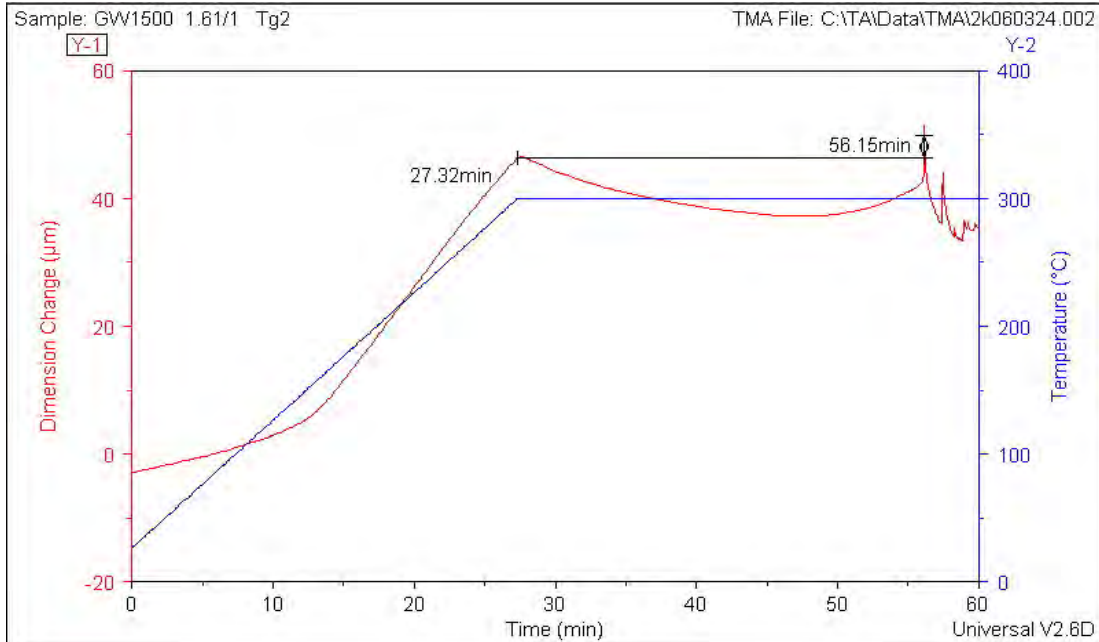
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◆ Lower CTE(Z-axis)



◆ Long De-lamination Time: TMA-T300>20min

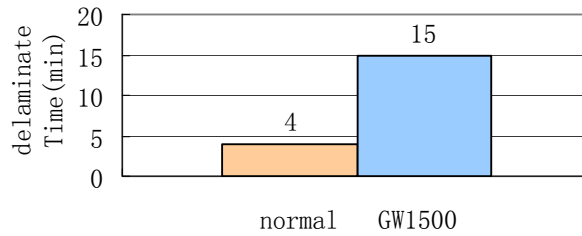


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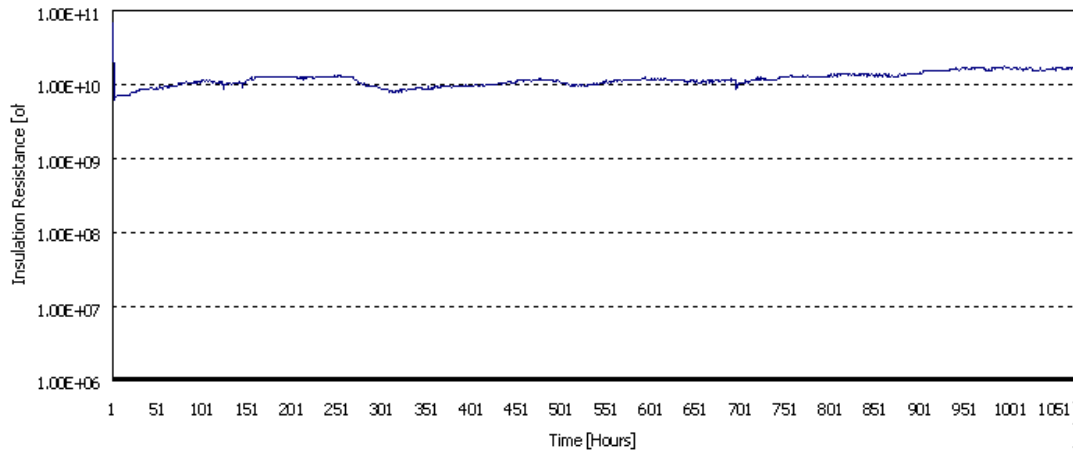
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High thermal resistance

Test of solder dip 288°C with copper



Excellent CAF resistance



Test Construction:85°C/85%RH/DC50V

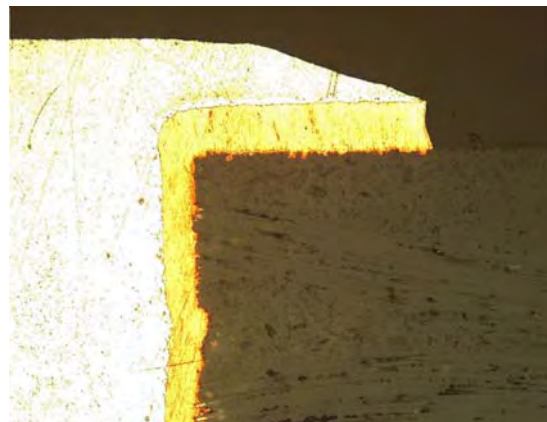
Sample Construction:TH-TH 0.45mm,Sapce 0.35mm

Higher PTH Reliability(less pad lift and PTH Crack)

经两次无铅喷锡及 288°C/10s/3cycle flow



经无铅喷锡及 6 次模拟无铅回流焊



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半固化片性能表 Performance List for prepreg

Glass Fabric Style	Resin Content (%)	Resin Flow (%)	Gel Time(s)	Volatile Content (%)	Scaled Flow Thickness(mm)
1080	66±3	35±5	85±20	<0.5	0.075±10
2116	55±3	27±5			0.115±15
7628	45±3	19±5			0.190±20

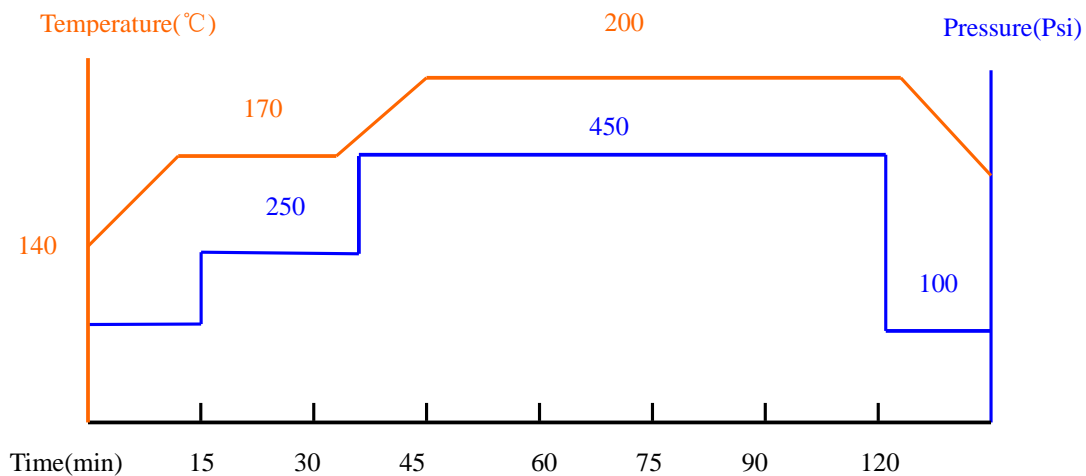
可根据客户要求提供不同布型和含量的半固化片

We can provide PP with different style and Resin Content to satisfy the consumer.

标准长度 Standard Size

Style	Standard Size
7628、2116	1255mm×137m (150yards)
1080	1255mm×274m (300yards)

热压程式 Hot Pressing Cycle



建议

- ◇材料温度 80~120°C 温度范围内, 升温速率 1~2.5 °C/min (最佳为 1.5~2.0 °C/min)。
- ◇料温 190°C 以上, 保温 60~70min, 确保环氧树脂完全固化。
- ◇最高压力 450±50psi。

Suggestions

- ◇Temperature of material range 80 ~120°C, heating rate suggestions 1~2.5 °C/min (ideally 1.5~2.0°C/min).
- ◇Temperature above 190°C, must be held for 60~70 minutes to ensure epoxy resin to fully cure.
- ◇The high pressure should be kept 450±50psi.

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储存条件 Storage Condition

- ◆在 20℃, 50%RH 环境中, 储存期为 3 个月。
- ◆在低于 5℃环境中, 储存期为 6 个月。
- ◆使用前必须于室温下静置 4hr 以上。
- ◆避免紫外光和强光照射。
- ◆20 , 50% RH for 3 months
- ◆Below 5 for 6 months
- ◆Prepreg must be normalized in the room temperature at least 4 hours before use.
- ◆Avoid ultraviolet rays and strong lights.

储存性能 Prepreg Storage Stability

