

GW1500

High Reliable Multi-functional Epoxy CCL

产品特点

- ◆适用于多层板无铅制程
- ◆Tg 值 150℃ (DSC)
- ◆优良的耐热性能, T288>30min, T300>15min, Td≥340℃
- ◆较低的 CTE (Z-axis)
- ◆较低的吸水率
- ◆优良的耐 CAF 性能

FEATURES

- ◆Suitable for multi-layer lead-free process
- ◆Tg 150℃(DSC)
- ◆ High thermal resistance, T288>30min, T300>15min, Td≥340℃
- ◆Low CTE (Z-axis)
- ◆Low moisture absorption
- ◆Excellent CAF resistance

基本性能 GENERAL PROPERTIES

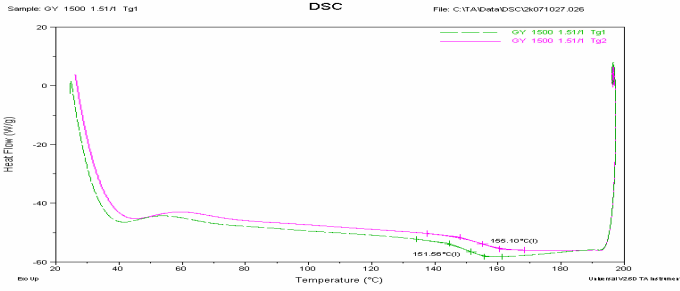
Test Item		Treatment Condition	Unit	SPEC	Typical Value
Tg		DSC(E-2/105)	℃	≥145	151
Td		TGA(5% Wt Loss, 10℃/min, N ₂)	℃	≥325	340
CTE Z-axis	Before Tg	TMA	μ m/m℃	<60	47
	After Tg			<300	191
T260		TMA	min	≥30	>60(T288>30min)
Surface Resistivity		F	M Ω	≥10 ⁴	7.57×10 ⁷
Volume Resistivity		F	M Ω -cm	≥10 ⁶	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℃, 20s	s	no delamination	>600s
Dielectric Constant (1MHz)		C-24/23/50	-	≤5.4	4.4
Dissipation Factor (1MHz)		C-24/23/50	-	≤0.035	0.013
Pressure Cooker Test		1.5atm/2hr/288℃ Dipping 10s	s	no delamination	>480s
Flexural Strength	LW	A	N/mm ²	≥415	422
	CW			≥345	381
Flammability		UL-94	-	V-0	V-0
Peel Strength		A	N/mm	≥1.05	1.63
Moisture Absorption		E-1/105+des+D-24/23	%	≤0.35	0.08
CTI		A	V	≥175	200

Sample Thickness: 1.5mm, copper foil 1 oz

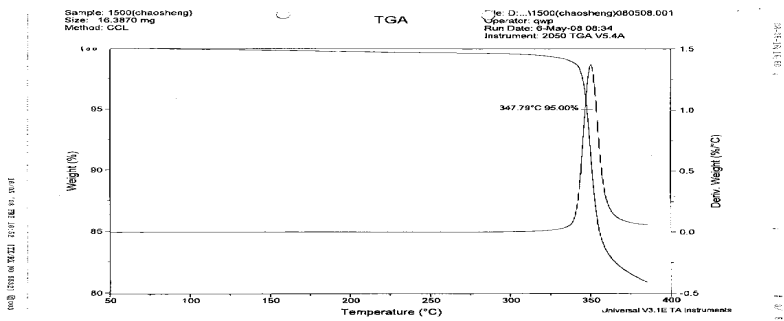
GW1500

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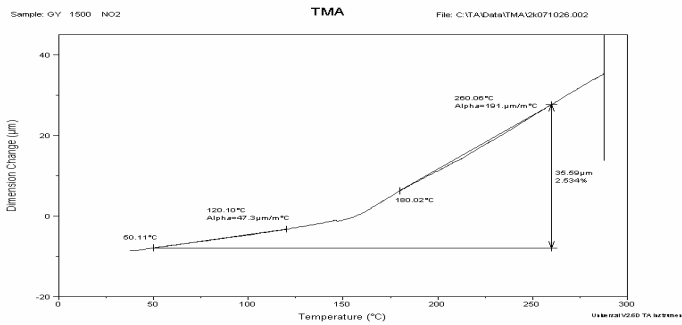
◆ Tg(DSC) = 151 °C



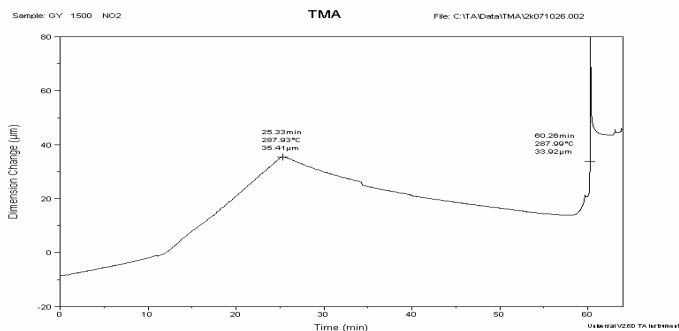
◆ High Td: TGA-Td(5% Wt Loss, 10 °C/min, N₂) = 340 °C



◆ Lower CTE (Z-axis)



◆ Long De-lamination Time: TMA-T288 > 30min

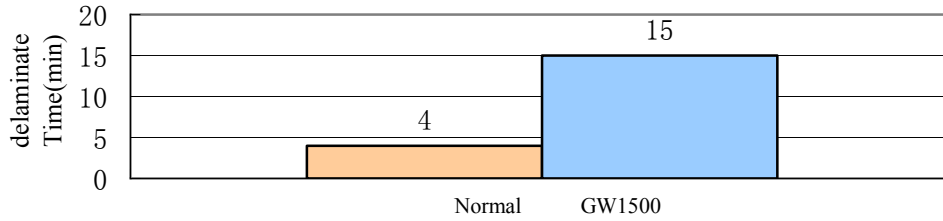


GW1500

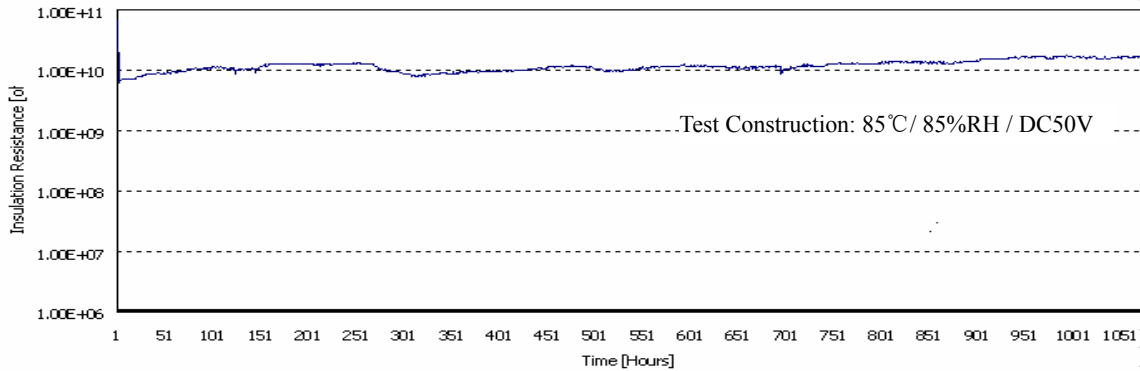
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High thermal resistance

Test of solder dip 288°C with copper



Excellent CAF resistance



Test Construction: 85°C / 85%RH / DC50V

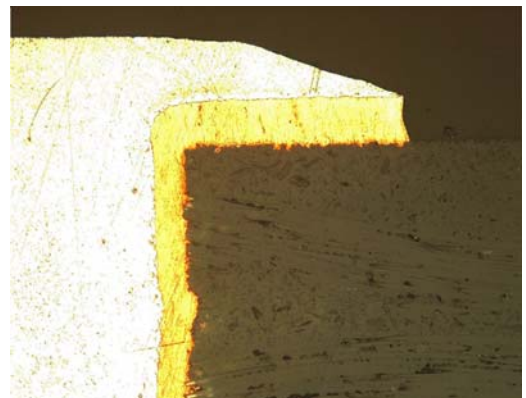
Sample Construction: TH-TH 0.45mm, Space 0.35mm

Higher PTH Reliability (less pad lift and PTH Crack)

经无铅喷锡 2 次及 3 次热冲击 (288°C/10s)
After unleaded spray tin twice and
3 cycles of thermal shocking (288°C/10s)



经无铅喷锡 1 次及 6 次回流焊
After unleaded spray tin once and
6 times of reflowing



GW1500P

High Reliable Multi-functional Epoxy Prepreg

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)
1078LDP	66±3	38±5	110±20	<0.5	0.075±10
2116	55±3	32±5			0.115±15
7628	45±3	21±5			0.190±20

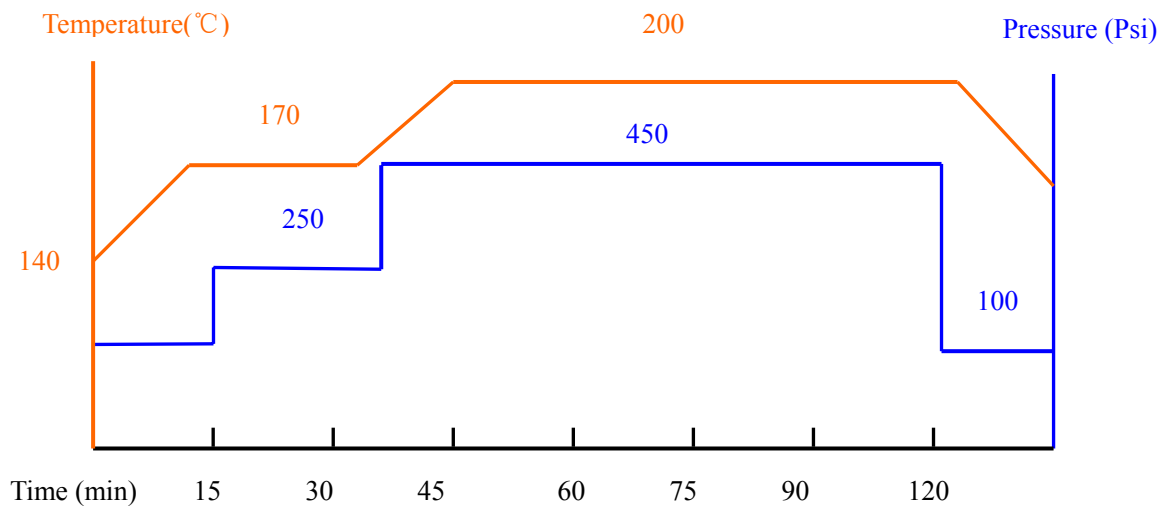
可根据客户要求提供不同布型和含量的半固化片

We can provide PP with different style and resin content to satisfy the consumers.

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

- ◇料温 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 50~60min，确保环氧树脂完全固化
- ◇最高压力 400±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 of material above 190°C, must be held for 50~60 minutes to ensure epoxy resin to fully cure
- ◇The high pressure should be kept 400±50psi

GW1500P

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储存条件

- ◆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 4 小时以上
- ◆避免紫外光和强光照射

Storage Condition

- ◆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

