



# ST210G

## Thermal Conductive CEM-3

### 特点

- 热导率  $\geq 1.0\text{W/m}\cdot\text{K}$
- CTI  $\geq 600\text{V}$
- 无铅兼容。
- 基材白色，不透明，遮光及反光性好
- 加工工艺与FR-4相同。
- 不含卤素、锑、红磷等成分

### FEATURES

- Good thermal conductivity ,  $\geq 1.0\text{W/m}\cdot\text{K}$ .
- CTI  $\geq 600\text{V}$
- Lead-free compatible CEM-3 laminate
- White Color and Good Reflection Ratio.
- PCB processing equivalent to FR-4
- Free of constituents such as halogen, antimony and red phosphorus.

### 应用领域

LED显示及照明、汽车电子、电源基板。

### APPLICATIONS

LED display and lighting, Automotive, Power base board.

## GENERAL PROPERTIES

Test Item		Treatment Condition	Unit	Property Data	
				SPEC .	Typical Value
Tg		DSC	℃	≥120	122
Flammability		C-48/23/50	-	V-0	V-0
		E-24/125			
Volume Resistivity		C-96/35/90	MΩ.cm	≥10 <sup>6</sup>	8.9×10 <sup>8</sup>
		E-24/125		≥10 <sup>3</sup>	2.5×10 <sup>6</sup>
Surface resistance		C-96/35/90	MΩ	≥10 <sup>4</sup>	5.7×10 <sup>7</sup>
		E-24/125		≥10 <sup>3</sup>	1.5×10 <sup>6</sup>
Arc resistance		D-48/50+D-0.5/23	s	≥60	115
Dielectric breakdown		D-48/50+D-0.5/23	kV	≥40	45+Kv NB
Dielectric Constant ( 1MHz )		C-24/23/50	-	≤5.4	5.1
Dissipation Factor ( 1MHz )		C-24/23/50	-	≤0.035	0.013
Thermal stress	Unetched	288℃	-	20s	60s
	Etched			No delamination	No delamination
Peel Strength	1oz Cu Foil	288℃、10s	N/mm	≥1.0	1.2
		105℃		≥0.7	1.0
		After chemical solution		≥0.8	1.1
Flexural strength	LW	A	MPa	≥276	450
	CW			≥186	340
Water absorption		D-24/23	%	≤0.5	0.12
CTE Z-axis	Before Tg	TMA	um/m℃	-	28.9
	After Tg		um/m℃	-	260
	50-260℃		%	-	3.5
Thermal conductivity		ASTM5470	W/m·K	≥1.0	1.05
CTI		IEC 60112 Method	-	PLC 0	PLC 0
Halogen Content,maximum		EN 14582:2007	ppm	≤900	232
-Chlorine				≤900	ND
-Bromine				≤1500	232
- Chlorine+ Bromine					

Remarks: 1.Specification sheet:IPC-4101/14, is for your reference only.  
2.All the typical value is based on the 1.6mm specimen,while the Tg is for specimen  $\geq 0.50\text{mm}$ .  
3.All the typical value listed above is for your reference only, please turn to Shengyi Technology Co., Ltd. for detailed information, and all rights from this data sheet are reserved by Shengyi Technology Co., Ltd.

Explanations: C = Humidity conditioning; D = Immersion conditioning in distilled water; E = Temperature conditioning.

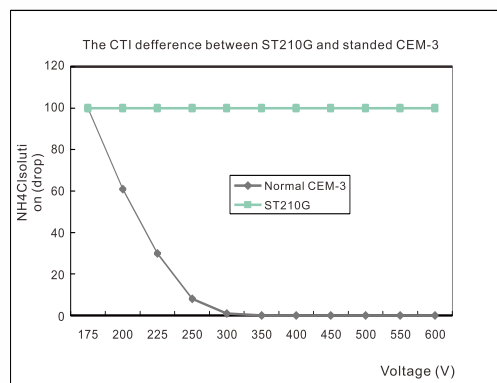
The figures following the letter symbols indicate with the first digit the duration of the preconditioning in hours, with the second digit the preconditioning temperature in °C and with the third digit the relative humidity.



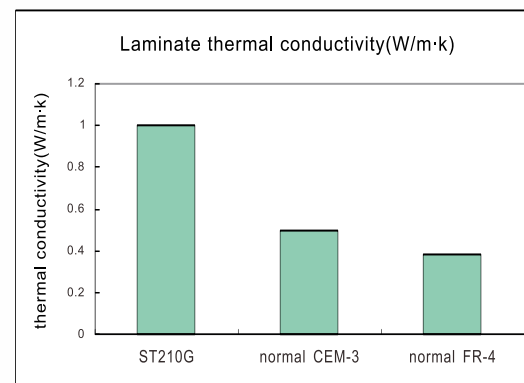
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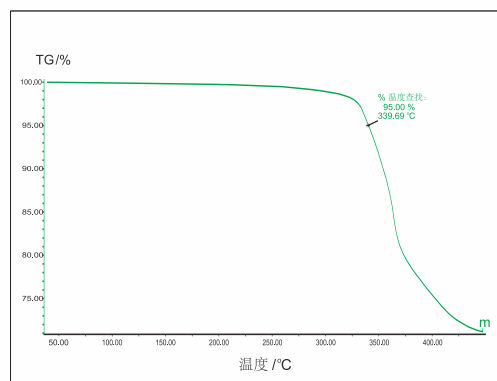
### CTI



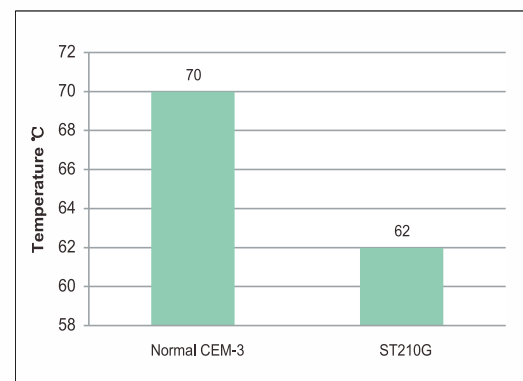
### Thermal Conductivity



### TGA



### Heat Dissipation Evaluation



- 1) Coupon info.: 1.0mm 1/1 70mm X 70mm.
- 2) LED lamp bead power: 1.5W; Working current: 600mA.
- 3) Test method: give a power to the lamp bead and use thermocouple to test the temperature changing trend.

## PURCHASING INFORMATION

Thickness	Copper foil	Standard Size	
0.5mm to 3.2mm	18 μ m to 105 μ m	1,020×1,220mm (40" ×48" )	915×1,220mm (36" ×48" )
		1,070×1,220mm (42" ×48" )	

❖ Other sheet size and thickness could be available upon request.