



# S1600

(UL ANSI:FR-4) High CTI

## FEATURES

- Excellent tracking resistance, CTI $\geq$ 600V.
- UV Blocking.
- Good PCB processability.

## APPLICATIONS

PDP,LCD,power base board, TV, refrigerator, washing machine, and etc.

## GENERAL PROPERTIES

Test Item	Treatment Condition	Unit	Property Data		
			SPEC	Typical Value	
Tg	DSC	°C	$\geq 125$	135	
Flammability	C-48/23/50	Rating	V-0	V-0	
	E-24/125				
Volume Resistivity	After moisture resistance	M $\Omega$ -cm	$\geq 10^6$	$5.0 \times 10^8$	
	E-24/125		$\geq 10^3$	$5.0 \times 10^6$	
Surface Resistivity	After moisture resistance	M $\Omega$	$\geq 10^4$	$5.0 \times 10^7$	
	E-24/125		$\geq 10^3$	$5.0 \times 10^6$	
Arc Resistance	D-48/50+D-0.5/23	S	$\geq 60$	126	
Dielectric Breakdown	D-48/50+D-0.5/23	KV	$\geq 40$	60	
Dielectric Constant (1MHz)	C-24/23/50	-	$\leq 5.4$	4.7	
Dissipation Factor (1MHz)	C-24/23/50	-	$\leq 0.035$	0.016	
Thermal Stress	Unetched Etched	288°C, solder dip	-	$> 10s$	60s
				No delamination	No delamination
Peel Strength	1oz Cu. Foil	288°C, 10s	N/mm	$\geq 1.05$	1.8
		125°C		$\geq 0.70$	1.6
Flexural Strength	LW	A	M Pa	$\geq 415$	550
	CW			$\geq 345$	450
Water Absorption	D-24/23	%	$\leq 0.80$	0.10	
CTI	IEC60112 Method	V	PLC 0( $\geq 600V$ )	PLC 0	
CTE z-axis	Before Tg	TMA	PPM/°C	-	55
	After Tg			-	308
Td	10°C/min, N <sub>2</sub> , 5%Wt Loss	°C	-	310	

Remarks: 1.Specification sheet:IPC-4101/21, is for your reference only.  
 2.All the typical value is based on the 1.6mm specimen,while the Tg is for specimen  $\geq 0.50mm$ .  
 3.All the typical value listed above is for your reference only, please turn to Shengyi Sci.Tech.Co., Ltd . for detailed information, and all rights from this data sheet are reserved by Shengyi Sci.Tech.Co., Ltd .

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

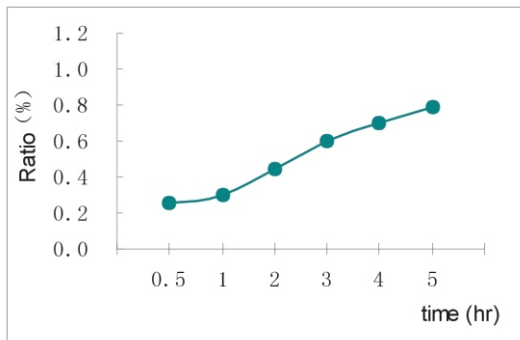
The figures following the letter symbols indicate with the first digit the duration of the preconditioning in hours, with the second digit the preconditioning temperature in °C and with the third digit the relative humidity.



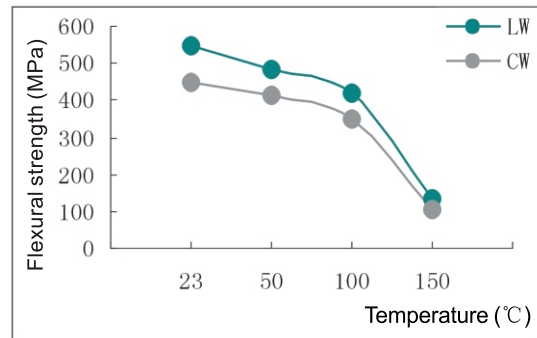
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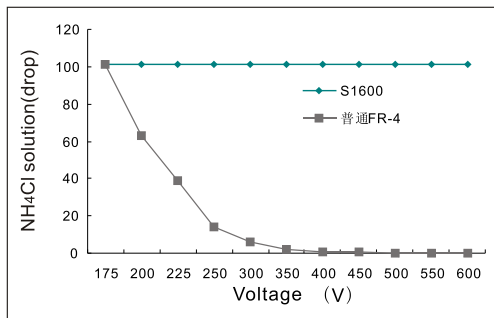
## Water absorption at pressure cooker



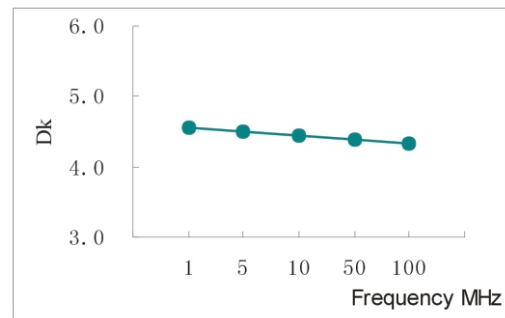
## Flexural strength



## The CTI difference between S1600 and standard FR-4



## Dielectric constant



## PURCHASING INFORMATION

Thickness	Copper foil	Standard Size	
0.8mm to 3.2mm	12 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.