



Dream Is the Challenger's

DIC CO., Ltd.

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1. Properties of FCCL (For PI thickness 25 μ m /1.0 mil only)

Property Items			Unit	FT-2504ES FT-2506ES FT-2508ES FT-2512ES (Single-sided)	FT-2504ED FT-2506ED FT-2508ED FT-2512ED (Double-sided)	Test Method
Mechanical Properties	Adhesion to Cu (Peel Strength)	As Received	Kg-f/cm	≥ 1.2	≥ 1.2	IPC-TM650 2.4.9D
		After Soldering		≥ 1.2	≥ 1.2	
		Temperature cycle		≥ 1.0	≥ 1.0	
		Chemical Resistance		≥ 1.0	≥ 1.0	IPC-TM650 2.3.2
	Tensile Strength (Base Film)		kg/mm ²	20	20	IPC-TM-650 Method 2.4.19
	Elongation (Base Film)		%	20	20	
	Tensile Strength		kg/mm ²	720	720	ASTM D882
	Initiation Tear Strength		g	1500	1500	IPC-TM-650 Method 2.4.16
	Propagation Tear Strength		g	15	15	IPC-TM-650 Method 2.4.17.1
	Deflection Test	Mechanical Direction (MD)	Times	≥ 300	≥ 300	JIS-C6471 0.8mmR, 0.5kg
Transverse Direction (TD)		≥ 300		≥ 300		
Physical, & Thermodynamic Properties	Dimensional Stability	Mechanical Direction (MD)	%	± 0.1	± 0.1	IPC-TM650 2.2.4C
		Transverse Direction (TD)		± 0.1	± 0.1	
	solder Float (10 sec at 288 $^{\circ}$ C)		-	Pass	Pass	IPC-TM650 2.4.13
	Dielectric Thickness Tolerance		μ m	$\pm 10\%$	$\pm 10\%$	FT Data
	Flammability Rating (UL)		-	94 V-0	94 V-0	UL 94V
Electrical Characteristics	Surface Resistance		Ω	$\geq 1.0 \times 10^{11}$	$\geq 1.0 \times 10^{11}$	IPC-TM650 2.5.17
	Volume Resistivity		Ω -cm	$\geq 1.0 \times 10^{12}$	$\geq 1.0 \times 10^{12}$	
	Insulation Resistance		Ω	$\geq 1.0 \times 10^9$	$\geq 1.0 \times 10^9$	IPC-TM650 2.6.3.2
	Dielectric Strength		Kv/mil	6.0	6.0	ASTM-D-149

* The above are the results of the test data, and provide a reference only, but should not be regarded as a guarantee when purchas our products specification credentials.

* Procurement according to the order specifications provided by the Company shall prevail.