



# Autolad3G

Halogen Free Material, High performance, Automotive-use laminate

## FEATURES

- Lead-free compatible
- Very low Z-axis CTE: 1.8% (50~260°C)
- Excellent performance in anti-CAF performance and temperature cycling test
- High thermal resistance

## APPLICATIONS

Specified for Automotive Electronics, including junction box, ECU in engine and body

## GENERAL PROPERTIES

Test Items	Test Method	Test Condition	Unit	Typical Value
Tg	IPC-TM-650 2.4.25D	DSC	°C	190
	IPC-TM-650 2.4.24.3	TMA	°C	180
	IPC-TM-650 2.4.24.2	DMA	°C	200
Td	IPC-TM-650 2.4.24.6	Wt 5% loss	°C	408
T300	IPC-TM-650 2.4.24.1	TMA	min	> 60
T288	IPC-TM-650 2.4.24.1	TMA	min	> 60
Thermal Stress	IPC-TM-650 2.4.13.1	288°C,20s (Unetched/Etched)	-	Pass/Pass
CTE(Z-axis)	IPC-TM-650 2.4.24	Before Tg	ppm/°C	35
	IPC-TM-650 2.4.24	After Tg	ppm/°C	180
	IPC-TM-650 2.4.24	50-260°C	%	1.8
Dielectric Constant(10GHz)	IPC-TM-650 2.5.5.5	C-24/23/50	-	4.0
Dissipation Factor(10GHz)	IPC-TM-650 2.5.5.5	C-24/23/50	-	0.013
Volume Resistivity	IPC-TM-650 2.5.17.1	After moisture resistance	MΩ-cm	4.0×10 <sup>9</sup>
	IPC-TM-650 2.5.17.1	E-24/125		5.0×10 <sup>6</sup>
Surface Resistivity	IPC-TM-650 2.5.17.1	After moisture resistance	MΩ	8.0×10 <sup>8</sup>
	IPC-TM-650 2.5.17.1	E-24/125		2.0×10 <sup>8</sup>
Arc Resistance	IPC-TM-650 2.5.1	D-48/50+D-0.5/23	s	160
Dielectric Breakdown	IPC-TM-650 2.5.6	D-48/50+D-0.5/23	kV	45+KV NB
Peel Strength (1 Oz)	IPC-TM-650 2.4.8	288°C, 10s/125°C	N/mm	1.3/1.25
Flexural Strength(LW/CW)	IPC-TM-650 2.4.4	A	Mpa	560/450
Water Absorption	IPC-TM-650 2.6.2.1	D-24/23	%	0.13
Flammability	UL94	C-48/23/50, E-24/125+des	Rating	V-0

Remark:

1. All the typical value is based on the 1.6mm (8\*7628) specimen. The Dk and Df value is based on 57% RC.
2. 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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(UL ANSI: FR-15.1) Bonding Prepreg for Autolad3G

## PREPREG PARAMETERS

Glass fabric type	Resin content (%)	Cured thickness (mm)
106	74	0.051
1067	67	0.051
	71	0.058
1080/1078	65	0.076
	69	0.086
3313	53	0.089
	58	0.102
2116	52	0.109
	53	0.114
	57	0.127
	58	0.130
	61	0.142
1506	46	0.150
	48	0.160
7628	47	0.203
	50	0.213

Other type, resin content and size could be available upon request.

## HOT PRESSING CYCLE

- The heat-up rate depends on the inner copper or the structure of multilayer PCB.
- Curing time: >90min (195~205°C).
- If you need any more detail information, please turn to Shengyi Technology Co., Ltd.

## STORAGE CONDITION

- 3 months when stored at < 23°C and <50% RH.
- 6 months when stored at <5°C. Normalize in room temperature for at least 4h before using.
- Beware of moisture, always keep wrapped in damp-proof material. Keeping in normal condition, prepreg might absorb moisture and its bonding strength would be weakened.
- Avoid UV-rays and strong light.

## PURCHASING INFORMATION

Thickness	Copper foil	Standard size	
0.05mm to 3.2mm	12um	1,020mm×1,220mm (40"×48")	915mm×1,220mm (36"×48")
	to 210 um	1,070mm×1,220mm (42"×48")	

Remarks: Other sheet size and thickness could be available upon request.