

# VT-4B5 SP

UL Approval: E214381    Version: 23/08/2023

## Aluminum Base Laminate

### General Information

- > Thermal conductivity -- 4.2W/mK
- > Ceramic Filled
- > Halogen Free
- > Flammability UL94 V-0
- > MOT 130°C
- > Selective Preference Dielectric for Ultra Low Thermal Resistance

### Application

- > Matrix LED for Auto Bulb
- > High Power LED for Projector
- > Electric Power Steering

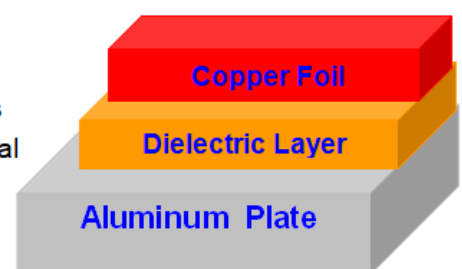
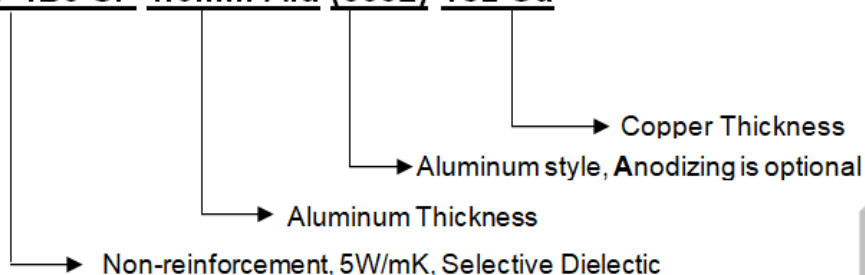
### Storage Condition

		Laminate
Storage Condition	Temperature	Room
	Relative humidity	/

The RCF exceeding shelf life should be retested.

### Designation of IMS Laminate

**VT-4B5 SP 1.0mm Alu (5052) 1oz Cu**



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### Laminate Properties

Item		Test Method (IPC-TM-650)	Unit	VT-4B5 SP
Thermal Conductivity		ISO22007-2	W/m*K	4.2
Thermal Impedance		ISO22007-2	°C*in <sup>2</sup> /W	0.015
Tg	DSC	2.4.25	°C	120
	DMA	2.4.24.4		145
Td	TGA	ASTM D3850	°C	380
Thermal Stress	Solder Dip @ 288°C	2.4.13.1	Minute	≥5
Hi-Pot Withstand	DC	2.5.7.2	V	1000
Breakdown Voltage	AC	2.5.6.3	V	3000
Dk @ 1MHz	C-24 /23 / 50	2.5.5.3	—	4.8
Df @ 1MHz	C-24/ 23 / 50	2.5.5.3	—	0.016
Volume Resistance	After Moisture	2.5.17.1	MΩ-cm	5.0E+8
	E-24/125			3.0E+7
Surface Resistance	After Moisture	2.5.17.1	MΩ	2.0E+7
	E-24/125			5.0E+6
Peel strength (1oz)	As Received	2.4.8	Lb/in	7
CTI	As Received	ASTM D3638	V	600
Flammability	As Received	UL 94	Rating	V-0
RTI	Electric	UL 94	°C	130
	Mechanical	UL 94	°C	130

All test data provided are typical values and not intended to be specification values.

Disclaimer: The information and data contained in this technical literature is based on data and knowledge correct at the time of publishing/printing and is believed to be accurate and is offered in good faith for the benefit of the user. The user should make his own tests to verify the suitability of this product for any application before its use. All data are typical values only and subject to change without notice.

# VT-4B5 SP

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## Aluminum Base Laminate

### Availability

### Laminate

Item	Availability	
Dielectric Thickness	50 µm (SP: selected)	
Standard Size	Imperial	18.11*24.02, 20.08*24.02, 20.98*24.02, 18.11*48.03, 20.08*48.03, 20.98*48.03
	Metric	460*610, 510*610, 533*610, 460*1220, 510*1220, 533*1220
Copper Weight	1/3oz, Hoz, 1oz, 2oz, 3oz, 4oz, 6oz	
Aluminum Thickness	0.6mm, 0.8mm, 1.0mm, 1.2mm, 1.5mm, 2.0mm, 3.0mm	
Aluminum Alloy	1100, 5052, or as required	

### Protective Film for Aluminium Plate

Type	Material	Max Operation Temperature
Standard	PET	170 °C
High Temperature	Polyimide	270 °C