

Data Sheet

**Halogen-free
& Narrow Pitch IC Substrate Materials
(Black type)**

MEGTRON  **Laminate R-1515E**

Dec. 2019 No.19120304

Specification / Laminate R-1515E

Property		Units	Test Method	Condition	Typical Value	
THERMAL	Glass Transition Temp (Tg)		C	DMA	As received	270 * ¹
	Thermal Decomposition Temp (Td)			TGA		390
	Time to Delam (T260)	With Cu	Min	IPC TM-650 2.4.24.1		> 120
	Time to Delam (T288)					> 120
	CTE : α 1	X - axis	ppm / C	IPC TM-650 2.4.24	< Tg	8 - 10 * ¹
		Y - axis				8 - 10 * ¹
		Z - axis				22 * ²
	CTE : α 2	Z - axis			> Tg	95 * ²
Thermal Conductivity		W / mK	Laser Flash	25 C	0.7	
ELECTRICAL	Volume Resistivity		M Ω - cm	IPC TM-650 2.5.17.1	C-96/35/90	1 x 10 ⁹ * ¹
	Surface Resistivity					M Ω
	Dielectric Constant (Dk)	1GHz	-	IPC TM-650 2.5.5.9	C-24/23/50	4.7
	Dissipation Factor (Df)					0.011
PHYSICAL	Water Absorption		%	IPC TM-650 2.6.2.1	D-24/23	0.3 * ¹
	Tensile Modulus		GPa	ASTM D3039	25 C	27 * ¹
	Poisson's Ratio					0.2 * ²
	Flexural Modulus		GPa	JIS C6481	25 C	33
					250 C	18
	Peel Strength	12 μ m	kN / m	IPC TM-650 2.4.8	As Received	0.9
	Flammability		-	UL	C-48/23/50	94V-0

The sample thickness. *¹ 0.1mm , *² 0.8mm

* The data in the above table are not guaranteed values.

++ Before purchase ++

【Notes before you use】

- Please verify the suitability and fitness for intended application by quality testing, evaluation or other means at your own option before any adoption, use or change of use conditions of a product listed in the datasheet.
- We would like to have a delivery specifications mutually agreed for the product that you have decided to use. The agreements defined in the delivery specifications are assigned higher priority.
- Please note that images shown may somewhat differ from the actual product in color.
- Please note that specifications and external design are subject to change for product improvement without notice.
- For details on products in the datasheet, please contact your distributor or our sales department.

【Safety Information】

- Before using the product, please read the delivery specifications carefully or contact the distributor from which you purchased the product or our sales department in order to use the product correctly.
- The products in the datasheet are Electronic circuit board materials for electronic and electrical devices. Please do not use them for other than specified use.

Please Contact us of more

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- USA (Mountain view) TEL: 1-408-861-3946
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