

**Data Sheet**

**Halogen Free  
& High elasticity Low CTE IC substrate materials**

**LEXCMGX** Laminate R-1515W

Aug. 2022 No.22081002

# Specification / Laminate R-1515W

Property		Units	Test Method	Condition	Typical Value	
THERMAL	Glass Transition Temp ( Tg )		C	DMA	As received	250
	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 : α1	X - axis	ppm / C	IPC TM-650 2.4.24	< Tg	8 – 10
		Y – axis				8 – 10
		Z – axis			22	
	CTE : α2	Z - axis			> Tg	97
Thermal Conductivity		W / mK	Laser Flash	25 C	0.7	
ELECTRICAL	Volume Resistivity		MΩ - cm	IPC TM-650 2.5.17.1	C-96/35/90	1 x 10 <sup>9</sup>
	Surface Resistivity		MΩ			1 x 10 <sup>8</sup>
	Dielectric Constant ( Dk )	1GHz	-	IPC TM-650 2.5.5.9	C-24/23/50	4.8
	Dissipation Factor ( Df )					0.015
PHYSICAL	Water Absorption		%	IPC TM-650 2.6.2.1	D-24/23	0.12
	Flexural Strength	X	N / mm <sup>2</sup>	IPC TM-650 2.4.4	As Received	520
		Y				480
	Flexural Modulus	X	Gpa	JIS C6481		35
		Y				33
	Peel Strength	35 um	kN / m	IPC TM-650 2.4.8		1.2
Flammability		-	UL	C-48/23/50		94V-0

The sample thickness is 0.8mm.

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

## ++ Before purchase ++

### 【Important Notices Before Use】

- The customer must verify the suitability and fitness of the product for use in their application.
- Customers communicating delivery specifications and usage forecasts in advance will be given higher priority in manufacturing and delivery from Panasonic.
- Product specifications are subject to change without notice
- For additional product information contact your distributor or local Panasonic location listed below.

### 【Safety Information】

- Please review the Safety Data Sheet (SDS) and use the product safely.
  - ▶ This product is intended only for use as an IC substrate laminate. Do not use this product for any other purpose.
  - ▶ For assistance in processing, contact your distributor or local Panasonic location listed below.

### Contact Information

#### Technical Marketing

- Japan (Mie)  
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- USA (Mountain View)  
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- Austria (Enns)  
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- China (Shanghai)  
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- Thailand (Ayutthaya)  
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#### Sales Offices

- China (Shanghai) TEL: 86-21-3855-2332
- Singapore TEL: 65-6241-6754
- Philippines (Makati) TEL: 63-632-886-6291 to 94
- Korea (Seoul) TEL: 82-2-361-7873
- Taiwan (Hsin Chu) TEL: 886-3-598-3201
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