



LEXCMGX

Laminate

Prepreg

R-1515E R-1410E

High elasticity Low CTE Ultra-thin IC substrate materials

Contribute to thin IC package by ultra-thin material and decrease the substrate warpage by low CTE property.

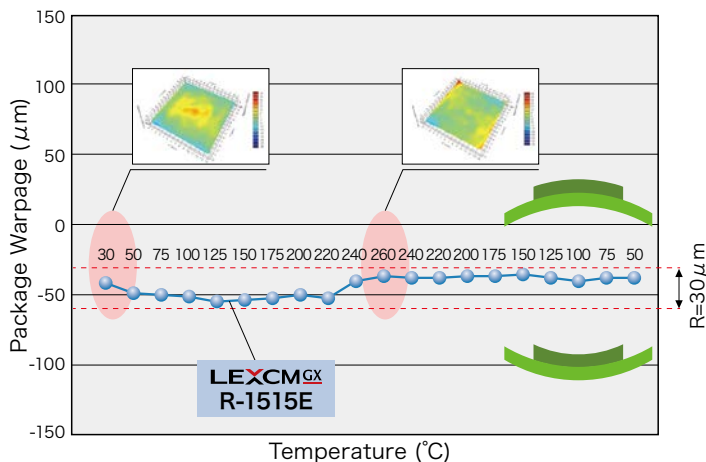
Flexural modulus
25°C 33GPa

CTE x, y-axis
9ppm/°C

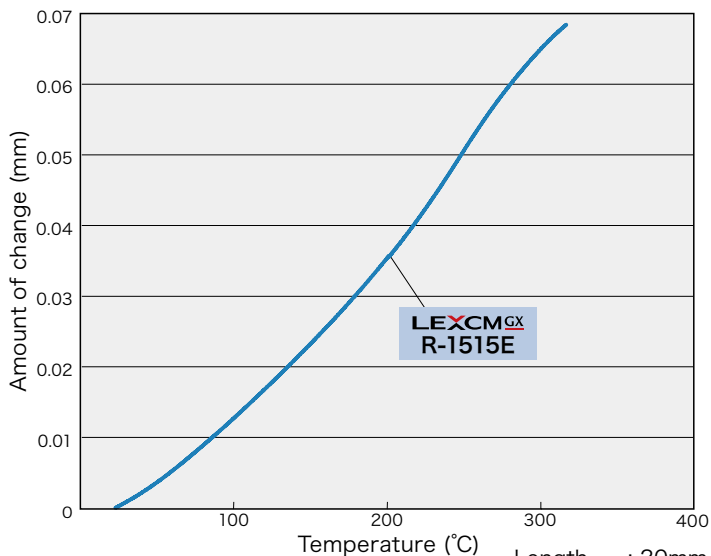
Tg(DMA) 270°C

Applications
IC Package
CSP (DRAM, NAND/ PMIC, Mini LED, etc.),
FC-CSP (APU, RF-IC, etc.)

Package warpage (FBGA)



Thermal expansion (x-axis)



Length : 20mm
Thickness : 0.1mm
Method : TMA

Construction

FBGA	14x14mm
Chip size	10x10x0.15mm
Substrate thickness	0.10mm (Core 0.04mm)

General properties

Item	Test method	Condition	Unit	LEXCMGX R-1515E
Glass transition temp.(Tg)	DMA*2	A	°C	270
Thermal decomposition temp.(Td)	TGA	A	°C	390
CTE x-axis	Internal method	A	ppm/°C	9
CTE y-axis				9
CTE z-axis	IPC-TM-650 2.4.24	A		22*1
				95*1
Flexural modulus	JIS C 6481	25°C	GPa	33*1
		250°C		18*1

The sample thickness is 0.1mm.
*1 0.8mm *2 measurement in tensile mode

Please see our website for Notes before you use.

Our Halogen-free materials are based on JPCA-ES-01-2003 standard and others.

The above data are typical values and not guaranteed values.