



Encapsulation Material
WLP

Rev 2014-02-27

WLP Encapsulation Material Properties			Value
1	Glass Transition Temp (TMA)		~70 °C
2	Linear Expansion Coefficient	$\alpha 1$	5~7 ppm/°C
		$\alpha 2$	12~15 ppm/°C
3	Young's Modulus		20.7 GPa @ 25 °C 9.7 GPa @100 °C 2.4 GPa @125 °C
4	Poisson's Ratio		0.22 ~ 0.24
5	Coefficient of thermal conductivity		1.0 ~ 1.1 W/m*k
6	Relative density		1.9 ~ 2.1 g/cm ³
7	Elastic Modulus		17~19 GPa
8	Saturation wafer absorption	85 °C	0.16 Wt%
		PCT	0.16 Wt%
9	Water vapor permeability		7.9 g/m ² *24h
10	Dielectric constant	@1 GHz	3.74 Ghz
11	Dielectric dissipation factor	@1 GHz	0.00087