

BT Materials for Chip-LED

These are the de facto standard materials for Chip-LED use. They excel in high reflectivity of visible light. And, they are very suitable for wire-bonding because of its stable mechanical properties at elevated temperatures and high heat resistance for longer term. In addition, they are halogen free materials.

Copper Clad Laminates	Prepregs	CCL Thickness	Prepreg Thickness
CCL-HL820WDI	-	0.04, 0.05, 0.06, 0.1-1.0(0.1step), 0.46	-

Features

White material with high reflectance of visible light, much suitable for chip LED substrate. Less discoloration after heat treatment and light irradiation.

Typical applications

Chip-LED

Typical properties of Materials

Item	Condition	Unit	HL820WDI
Dielectric Constant	1MHz	A	-
	1GHz	A	5.7
Dissipation Factor	1MHz	A	-
	1GHz	A	0.020
Insulation Resistance		C-96/20/65 Ω	5x10 ¹³⁻¹⁵
Surface Resistance		C-96/20/65 Ω	5x10 ¹³⁻¹⁵
Volume Resistivity		C-96/20/65 Ω · cm	5x10 ¹⁴⁻¹⁶
Flexural Strength	Warp	A	MPa 480
	Fill	A	MPa 470
Flexural Modulus	Warp	A	GPa 23
	Fill	A	GPa 22
Tensile Strength	Warp	A	MPa 290
	Fill	A	MPa 280
Young's Modulus	Warp	A	GPa 25
	Fill	A	GPa 24
Glass Transition Temp.	DMA	A	°C 210
	TMA	A	°C 180
Coefficient of Thermal Expansion	Warp, Fill	A	ppm/°C 15
	Z(α1, α2)	A	ppm/°C 45/180
Peel Strength	12μ	A	KN/m 1.0
	18μ	A	KN/m 1.1
Flame Resistance	UL94	E-168/70	- HB

Inquiries Concerning Products

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