

# TFUER-T312

Epoxy Glassfiber Laminates



## DESCRIPTION

Tfuer-T312(FR4) is one of the most widely used materials for printed circuit boards (PCBs). It is a fiberglass-reinforced epoxy resin laminate and is the standard material used for most PCBs in the electronics industry.

**Thickness:** 0.2 mm ~ 50 mm.

**Dimension:** 1020 x 1220 mm, 1220 x 2440 mm.

## KEY FEATURES

1. Electrical Insulation
2. High Mechanical Strength
3. Flame Resistance
4. Thermal Stability
5. Chemical Resistance



## APPLICATION

1. **Printed Circuit Boards (PCBs):** T312 is primarily used in PCBs due to its electrical insulating properties, strength, and thermal stability. It is the standard material for most consumer electronics.
2. **Connector Insulation:** T312 is used to insulate connectors, switches, and relays in electronic assemblies.
3. **Electrical Enclosures:** It is commonly used for electrical enclosures and insulating components in various electronic devices.

## BENEFITS

1. **Availability and Cost:** T312 is one of the most widely available and cost-effective PCB materials, making it the go-to choice for most electronic applications.
2. **Versatility:** T312 can be manufactured with varying thicknesses and grades, providing versatility in different applications.
3. **Ease of Processing:** T312 is easy to work with during the PCB manufacturing process, allowing it to be drilled, milled, and etched easily to create detailed circuit patterns.

Specification Data Sheet	Method	Unit	T312
Density	ISO 1183 / A	g/cm <sup>3</sup>	2.0
Flexural strength	ISO 178	MPA	350 min.
Flexural modulus of elasticity	ISO 178	MPA	24000 min.
Tensile strength	ISO 527	MPA	300 min.
Compressive strength perpendicular	ISO 604	MPA	350 min.
Impact strength (Charpy) parallel	ISO 179/3C	kJ/m <sup>2</sup>	45 min.
Electric strength perpendicular	IEC 60243-1 (90°C in oil)	KV/mm	10.6 min.
Breakdown voltage parallel	IEC 60243-1 (90°C in oil)	KV	45 min.
Insulation resistance after immersion	IEC 60167 (in water)	MOhm	5x10 <sup>5</sup> min
Comparative tracking index CTI	IEC 60112	CTI	200 min
Thermal endurance	IEC 60216	°C	110
Water Absorption	ISO 62	%	0.2 max
Flame Retardant	UL 94		V0
Color			Green,Natural,Yellow,Black

All information provided is based on the results of experiments conducted with the utmost care in our laboratories. However, it remains the user's responsibility to conduct additional tests to confirm the material's suitability for specific applications and ensure successful processing and usage.

RoHS Declaration: This material complies with the requirements of the EU Directive 2011/65/EU (RoHS). It does not contain any substances of very high concern (SVHC) as specified in Article 4, Paragraph 1 of the directive.