PLA

Technical Data Sheet (TDS)

Physical Properties

Property	Testing Method	Typical Value
Density(g/cm^3 at 21.5°)	ASTM D792 (ISO 1183)	1.24
Glass transition Temperature （℃)	DSC,10℃/min	50-60
Melt index （g/10min)	190℃,2.16kg	5~8
Solubility	/	Insoluble in water; soluble in chloroform, acetone and tetrahydrofuran and so on

Mechanical Properties

Property	Testing Method	Typical Value/ Printing	Typical Value/Injection moulding
Tensile strength(MPa)	ASTM D638 (ISO 527)	44.2±1.3	66.5±0.5
Elongation at break(%)	ASTM D638 (ISO 527)	2.0±0.4	2.2±0.3
Bending modulus(MPa)	ASTM D790 (ISO 178)	3100±220	3295±210
Bending Strength(MPa)	ASTM D790 (ISO 178)	84.1±2.2	98.0±1.2
Impact strength(KJ/m^2)	ASTM D256 (ISO 179)	2.8±0.21 KJ	3.0±0.25

All testing specimens were printed using a 3D printing machine (our machine) under the following conditions: Printing temperature= 210°C, printing speed=80mm/s, number of shells=2, Nozzle size=0.4mm, and 100% infill.

Injection molding processing conditions: Temperation:190°C; Back pressure: 0-1MPa; mould temperature: 30-40°

Termal Properties

Property	Testing Method	Typical Value
Heat distortion temperature (1.81MPa) / ℃	ISO 75	----
Coefficient of linear thermal expansion (K-1.10^{-5})	ISO 11359	-------

Electrical properties

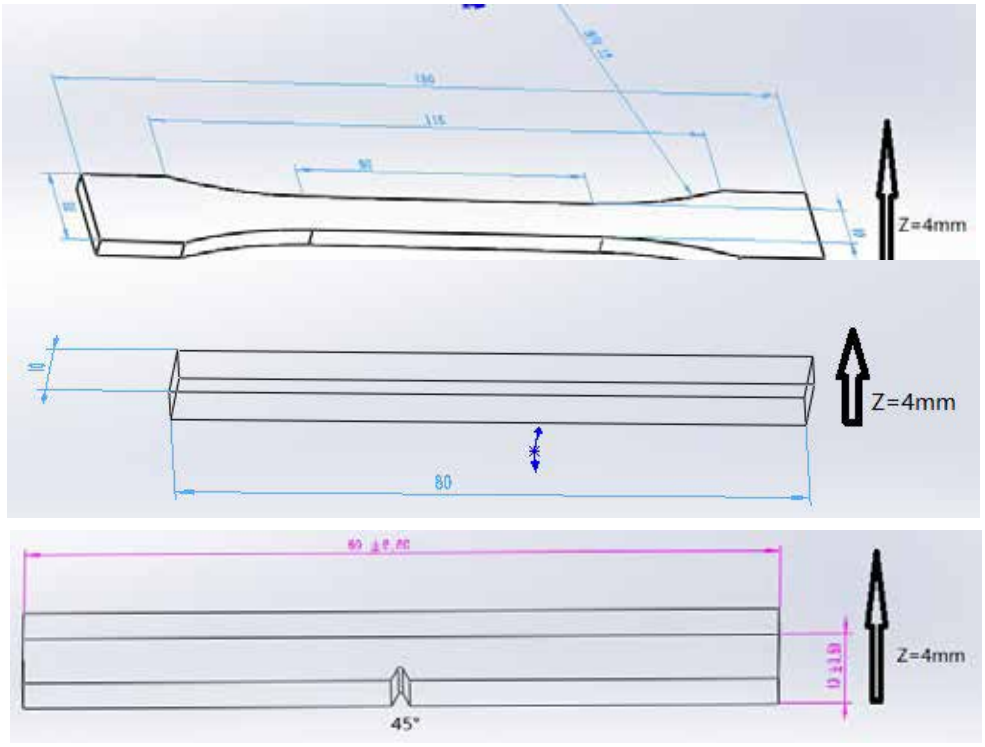
Property	Testing Method	Typical Value
Surface resistivity /Ω	ASTM D257	---
Comparative tracking index/V	IEC 60112	---

Typical Conditions of Printing

Recommended Printing Temperature	190-230℃

Recommended Printing Speed	30-100mm/s
Recommended Heated Bed	Room temprature-40℃
Temperature Layer Height	0.1-0.2mm
Infill	As needed up to 100%
Matters need attention	General print

The Geometries of Mechanical Properties



Disclaimer

This information is based on our experience and we believe it to be reliable, they are intended for reference and comparison purposes only. The values of printing samples may vary significantly with printing conditions. None of this information is to be taken as a license to operate under, or a recommendation to infringe, any patents.