Shenzhen Elegoo Technology Co.,Ltd.
Technical Data Sheet

Basic Introduction

Product Name: ELEGOO PLA Glow

Applicable Industry: Interior decoration, desktop ornaments, and toys etc.

Manufacturer: Shenzhen Elegoo Technology Co.,Ltd.

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Advantages

ELEGOO PLA Glow is a functional filament which absorbs light and stores energy, emitting a luminous glow when it is dark. By combining the easy-to-print properties of PLA with a fantastical glowing effect, the creations will shine brilliantly in the dark.

Recommended Printing Settings

Drying Settings Before Printing: 55 °C, 8 h (Air Drying Oven)

Printing Temperature and Humidity: ≤ 20% RH (sealed with desiccant)

Storage Temperature and Humidity: ≤ 20% RH (sealed with desiccant)

Printer Type: Enclosed-frame, open-frame

Nozzle Size: 0.4, 0.6, 0.8 mm

Plate Type: Textured PEI plate, smooth PEI plate or other plates

Plate Surface Pretreatment: Applying the glue

Nozzle Temperature: 190 - 230 °C

Bed Temperature: 35 - 65 °C

Printing Speed: < 250 mm/s

Chamber Temperature: 20 - 45 °C

Support Material: Self-generated support or PLA special support

Physical Properties

Subjects	Testing Methods	Data
Density	ρ = m / v	1.24 g/cm³
Saturated Water Absorption Rate	25 °C , 55% RH, Indoor air	0.42%
Melt Index	210 °C, 2.16 kg	18.1 ± 3.8 g/10 min
Glass Transition Temperature	DSC, 10 °C/min	55 °C
Crystallization Temperature	DSC, 10 °C/min	N / A
Melting Temperature	DSC, 10 °C/min	157 °C
Vicar Softening Temperature	ISO 306, GB/T 1633	57 °C
Heat Deflection Temperature 1	ISO 75, 1.80 MPa	52 °C
Heat Deflection Temperature 2	ISO 75, 0.45 MPa	56 °C

Mechanical Properties

Subjects	Testing Methods	Data
Tensile Strength (XY)	ISO 527, GB/T 1040	42 ± 2 MPa
Tensile Strength (Z)	ISO 527, GB/T 1040	30 ± 1 MPa
Young’s Modulus (XY)	ISO 527, GB/T 1040	2324 ± 104 MPa
Young's Modulus (Z)	ISO 527, GB/T 1040	1418 ± 134 MPa
Breaking Elongation Rate (XY)	ISO 527, GB/T 1040	7.2% ± 0.6%
Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	5.3% ± 0.4%

Bending Strength (XY)	ISO 178, GB/T 9341	77 ± 2 MPa
Bending Strength (Z)	ISO 178, GB/T 9341	47 ± 4 MPa
Bending Modulus (XY)	ISO 178, GB/T 9341	3190 ± 131 MPa
Bending Modulus (Z)	ISO 178, GB/T 9341	3069 ± 101 MPa
Impact Strength (XY)	ISO 179, GB/T 1043	34.9 ± 3.2 kJ/m²
Impact Strength (Z)	ISO 179, GB/T 1043	6.4 ± 2.1 kJ/m²

Other Physical and Chemical Properties

Component: Polycarbonate

Skin Irritation: No

Chemical stability: Stable at normal temperature

Resistance to Water: Resistant

Resistance to Oil and Grease: Resistant to most kinds of oil and grease

Resistance to Organic Solvent: Not resistant to some kinds of organic solvents

Resistance to Acid: Resistant

Resistance to Alkali: Resistant

Flammability: Yes

Odor During Printing: Odorless

Specimen Information

Size: Refer to the following pictures.

Nozzle Temperature: 220 ℃

Bed Temperature: 55 ℃

Printing Speed: 150 mm/s

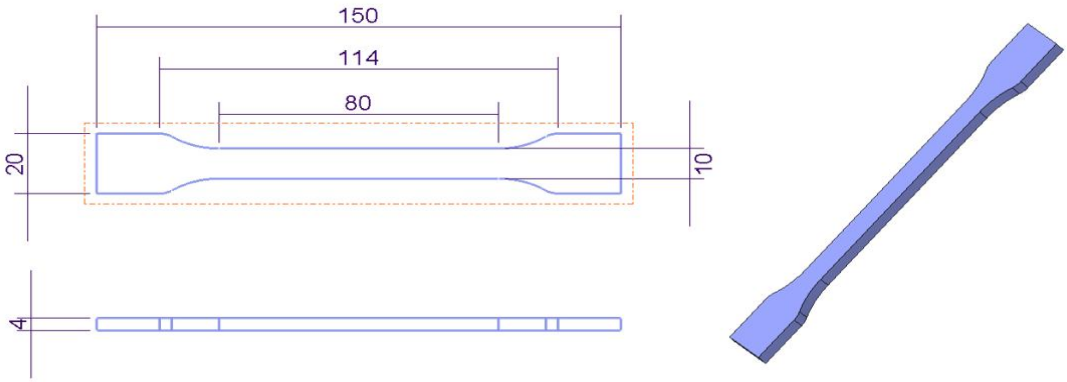
Infill Density: 100%

Infill Pattern: Concentric pattern

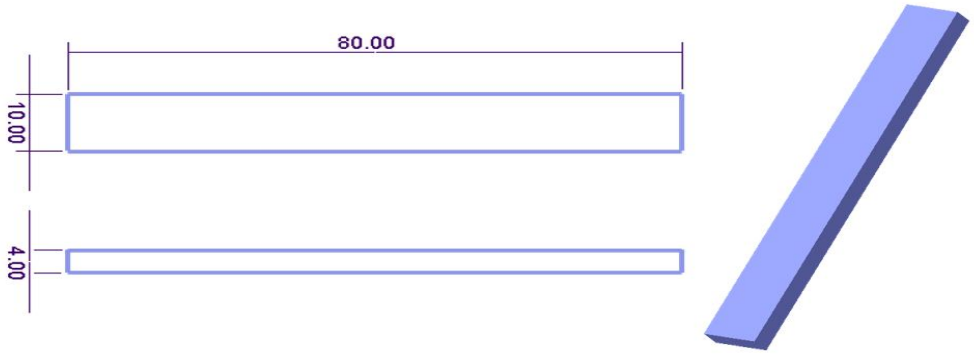
Statements: The test specimens were printed under the key parameters mentioned above. Before testing, all specimens

were annealed at 55 °C for 8 hours and then placed in an indoor environment at approximately 25 °C for 24 hours.

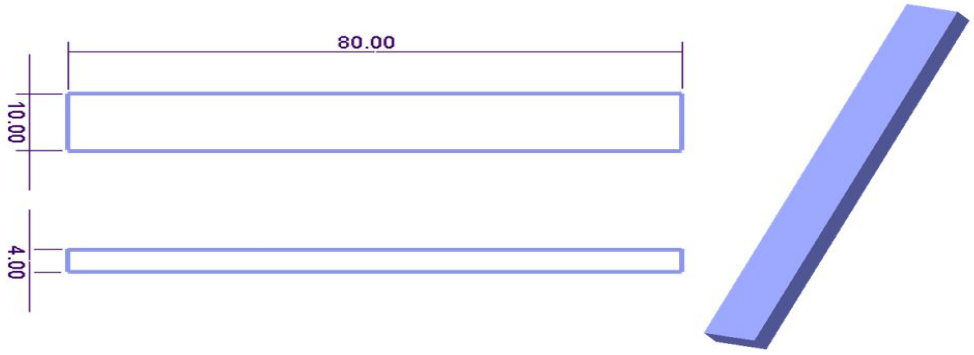
1. Tensile Testing



2. Bending Testing



3. Impact Testing



Disclaimer

The above properties data is obtained by ELEGOO through testing with standard samples, standard methods, and specific equipment, and is for reference and comparison only. The actual performance of 3D printed products depends not only on the characteristics used but also on many factors, such as the moisture absorption of the filaments, the printer, environmental conditions, model characteristics, printing parameters, etc.

When using the ELEGOO FDM 3D printing filaments, users are responsible for the legality, safety, and performance of the printing. ELEGOO is not responsible for the usage scenarios, or any damage or injury that occurs during using our filaments.