PLA UV Color Change

Technical Data Sheet

PLA UV Color Change is an innovative material derived from traditional PLA, with the addition of a unique photochromic property. Upon exposure to light, the filament changes color on its own, creating an extraordinary visual effect. It displays two colors in a single line, significantly enhancing its appeal and fun factor. The material prints smoothly, resulting in a surface that is smooth and free from layer lines. The support material is easier to remove from the model surface compared to other materials. This product is a modified version of PLA material, retaining the easy-printability characteristic of PLA.

Material Status	Mass Production
Characteristics	• Green environmental protection • Support easy to peel off • Photochromic • Cost-effective • Excellent printability • Low density • Not easy to break
Applications	• Decoration • Cosplay
Form	• Filament
Processing method	• 3D Print, FDM Print

	Testing method	Typical value
Physical Properties		
Density	GB/T 1033	1.25 g/cm³
Melt Flow Index	GB/T 3682	8.5 (190℃/2.16kg)
Mechanical Properties		
Tensile Strength	GB/T 1040	27.58 MPa
Elongation at Break	GB/T 1040	2.88 %
Flexural Strength	GB/T 9341	72.8 MPa
Flexural Modulus	GB/T 9341	2897.38 MPa
IZOD Impact Strength	GB/T 1843	4.67 (kJ/㎡)
Thermal Properties		
Heat distortion Temperature	GB/T 1634	50.75 (℃,0.45MPa)
Continuous Service Temperature	IEC 60216	N/A
Maximum (short term) Use Temperature		N/A
Electrical Properties		
Insulation Resistance	DIN IEC 60167	N/A
Surface Resistance	DIN IEC 60093	N/A

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Recommended printing parameters

Extruder Temperature	190-230°C
Build Platform Temperature	45-60°C
Fan Speed	100%
Printing Speed	40 - 300mm/s

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2. Printing conditions may vary with different nozzle diameters

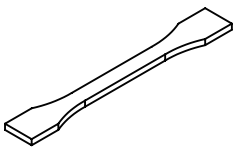
Drying Recommendations

N/A

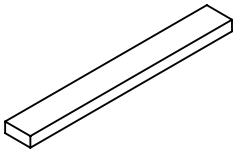
Notes

The ePLA-Matte filament is softer than others, and the extruder's tension adjustment shall not be too tight, so as not to affect the printing.

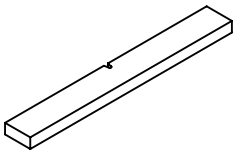
Mechanical Properties



Tensile testing specimen GB/T 1040



Flexural testing specimen GB/T 9341



Impact testing specimen GB/T 1043

The physical properties, mechanical properties, thermal properties, and electrical properties of the filament are obtained based on the injection molding spline test.

Print test condition:

Extruder Temperature	210°C
Build Platform Temperature	55°C
Outline/Perimeter Shells	4
Top/Bottom Layers	4
Infill Percentage	20%
Fan speed	100%
Printing speed	40mm/s

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2.

Notice

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