









- (3) 3D printing process is slow, and the cost of the material is high;
- (4) 3D printing process is not suitable for large-scale production of photoelectric components;
- (5) XY2-100 3D printing process is not suitable for high-precision parts.

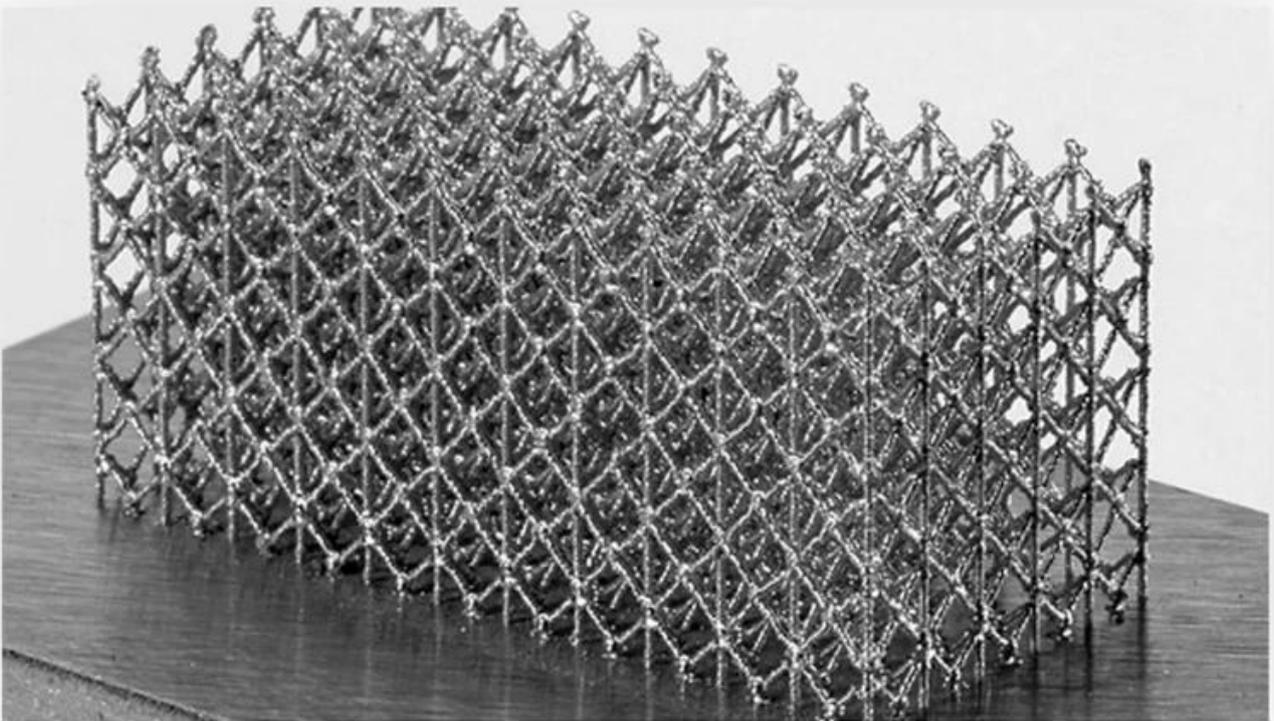
**SLA 3D printing process:**

SLA (Stereolithography) is a 3D printing process that uses a laser to cure a liquid resin layer by layer. The process involves a laser beam that is focused on a surface of a liquid resin. The laser beam causes the resin to solidify, forming a thin layer of the part. This process is repeated until the entire part is built. The process uses photopolymers that are photochemically solidified. 3D printing process is a 3D printing process that uses a laser to cure a liquid resin layer by layer. (3D printing process is a 3D printing process that uses a laser to cure a liquid resin layer by layer.)

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SELECTIVE LASER MELTING (SLM)

**Pros and Cons**



# Stainless Steel



Desktop FDM



Industrial FDM



Desktop SLA



Industrial SLA



Industrial SLS

## ZRPA12 ( PA12 Nylon Powder )



<b>PHYSICAL CHARACTERISTICS</b>	Grain Size: 50~55 $\mu$ m Shape: Spherical Apparent density: $\geq 0.40$ g/cm <sup>3</sup>
<b>THERMAL PROPERTY</b>	Melting Point: 182~185°C (10°C/min) Melting Enthalpy: $\geq 90$ J/g HDT: 83.8°C @1.8MPa / 146.1°C @0.45MPa
<b>MOLDING PERFORMANCE</b>	Density: 0.97 g/cm <sup>3</sup> Tensile Modulus: 1600 MPa Tensile Strength: 43 MPa Elongation at break: $\geq 15$ % Un-notched Impact Strength: 20.7 KJ/m <sup>2</sup> Notched Impact Strength: 3.8 KJ/m <sup>2</sup> Bending Modulus: 1432 MPa Bending Strength: 57 MPa

## ZRTPU ( Thermoplastic Polyurethanes Powder )

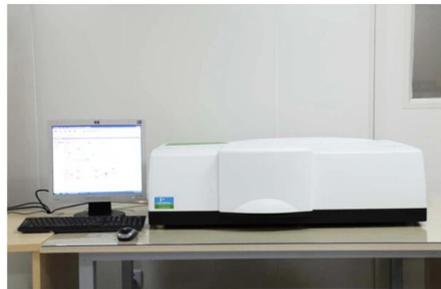


<b>PHYSICAL CHARACTERISTICS</b>	Grain Size: 60 $\mu$ m Shape: Spherical Apparent density: 0.47 g/cm <sup>3</sup>
<b>THERMAL PROPERTY</b>	Melting Point: 165°C HDT Heat deflection temperature: -25°C
<b>MOLDING PERFORMANCE</b>	Density: 1.15 g/cm <sup>3</sup> Tensile Modulus: 61 MPa Tensile Strength: 21 MPa Elongation at break: 310 % Tear strength: 101 N/mm Bending Modulus: 74 MPa Bending Strength: 3.3 MPa





**TRIOPTICS OptiSpheric 2000 AF**  
---Testing EFL, R, Centering Error, Wedge Angle, BFL, MTF



**PerkinElmer Lambda 950**---Testing Transmission and Reflectivity



**Carmanhaas Coating Machine**







