









- (3) 3D printing process is faster, 3D printing process is faster than traditional manufacturing;
- (4) 3D printing process is faster than traditional manufacturing process, photoelectric 3D printing process is faster than traditional manufacturing process;
- (5) XY2-100 3D printing process is faster than traditional manufacturing process

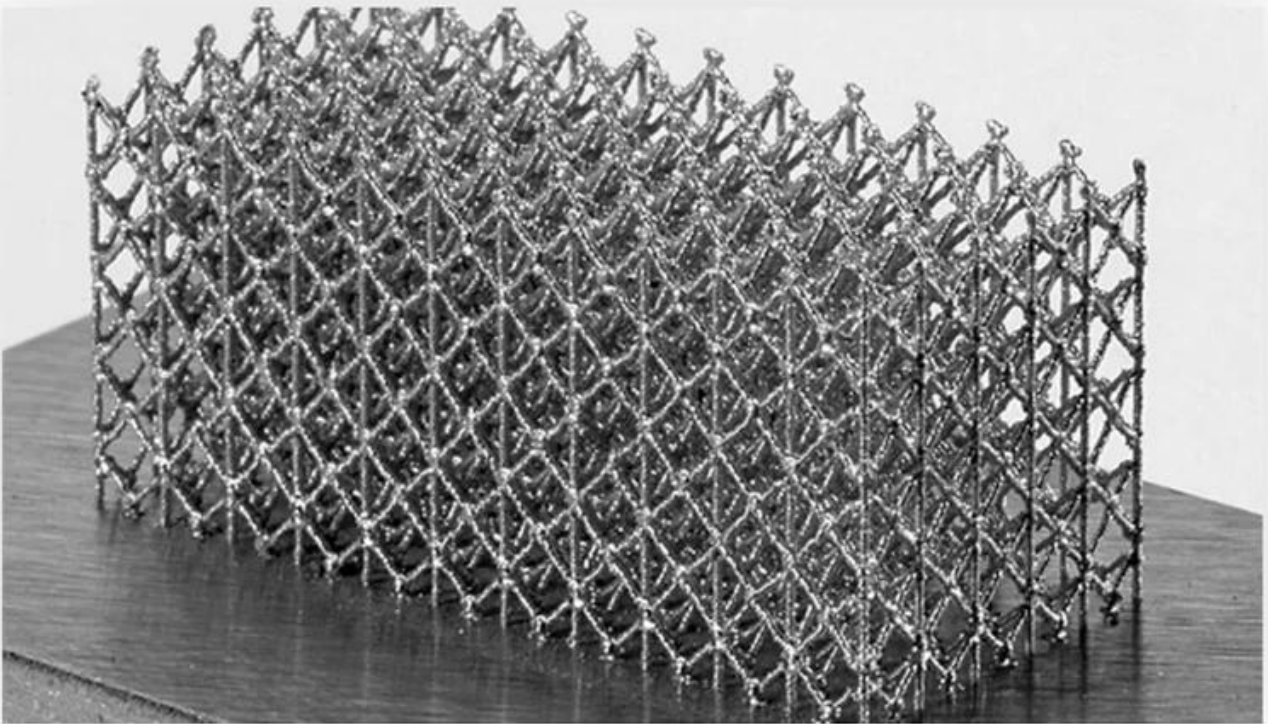
**SLA 3D printing process:**

SLA (Stereolithography) is a 3D printing process that uses a laser to cure a liquid resin into a solid object. The process involves a laser beam that is directed at a liquid resin in a vat. The laser beam is focused on a specific point, and the resin at that point is cured, forming a solid layer. This process is repeated layer by layer until the entire object is built. The resin used in SLA is typically a photopolymer, which is a type of polymer that can be cured by light. The process is known as photochemically solidified 3D printing. (3D printing process is faster than traditional manufacturing process)

3D printing process is faster than traditional manufacturing process, 3D printing process is faster than traditional manufacturing process, 3D printing process is faster than traditional manufacturing process, 3D printing process is faster than traditional manufacturing process

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 )

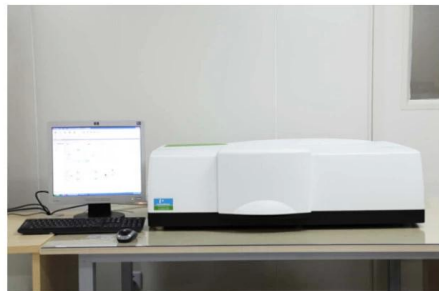


<b>PHYSICAL CHARACTERISTICS</b>	Grain Size: 60 $\mu$ m Shape: Spherical Apparent density: 0.47 g/cm <sup>3</sup>
<b>THERMAL PROPERTY</b>	Melting Point: 165°C HDT Heat deflection temperature: -25°C
<b>MOLDING PERFORMANCE</b>	Density: 1.15 g/cm <sup>3</sup> Tensile Modulus: 61 MPa Tensile Strength: 21 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**





