

COMPANY PROFILE

INTAMSYS TECHNOLOGY CO., LTD.





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The background features a collage of geometric shapes. A large blue triangle is in the top right, containing a grayscale image of a city skyline with several skyscrapers. Below this, there are several overlapping squares and diamonds in shades of blue and gray. The number '01' is prominently displayed in a large, bold, gray font inside a light gray diamond shape on the left side.

01

COMPANY INTRODUCTION

INTAMSYS is an industrial-grade 3D printer manufacturer specializing in high performance engineering thermoplastics 3D printing. The company was founded by a team of engineers with in-depth experience and know-how in engineering ultra-precision industrial machinery.

The company's state-of-the-art FUNMAT 3D printers are designed for high performance functional materials 3D printing at affordable prices. FUNMAT is the abbreviation of functional materials. INTAMSYS is committed to the highest manufacturing design and quality standards.

Today, INTAMSYS is trusted globally by customers from aerospace, automotive, medical and research institutions, etc..

Founded the company
HONSMAKER



Launched 1st Generation 3D
Printers – BESSEN, CHEETAH

1st Round VC
Renamed the company INTAMSYS



Launched FUNMAT Series
3D Printer



2nd Round VC



VISION

Create infinite possibilities, Customize future life

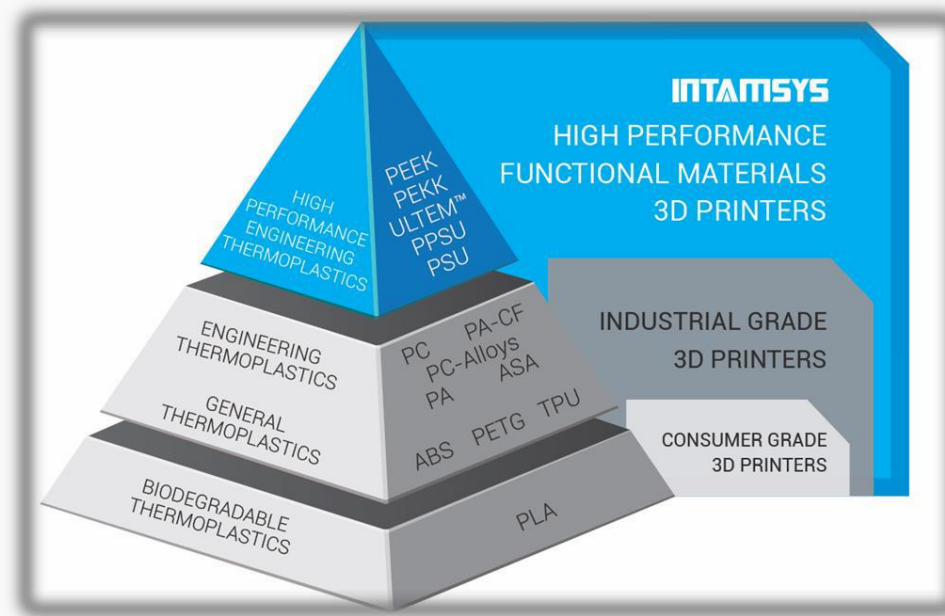
MISSION

Deliver intelligent additive manufacturing solutions to help customer realize smart manufacturing, thus enable people benefit from flexible mass customization



PRODUCT PORTFOLIO

- ✓ High Performance Material 3D Printing for Functional Parts Production
- ✓ Open Material System to Empower Customer Infinite Design Freedom and Possibilities



“High Performance Functional Material 3D Printer”



Heated & Constant Temperature Chamber
Chamber temperature over 90 °C



High Temperature All Metal Nozzle
All metal hotend up to 450 °C



Functional Material Capability
Able to print PEEK, ULTEM, PPSU, Full-size PC, PA, ABS and many more without warping and cracking



“High Build Volume Industrial 3D Printer”



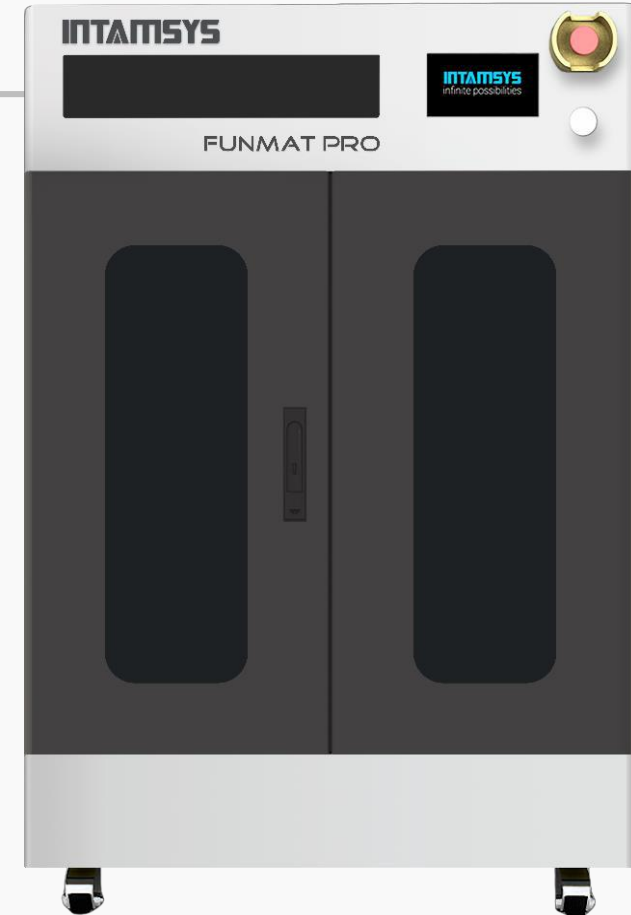
High Build Volume 3D Printer
High build volume of 450mm*450mm*600mm



Heated Build Plate and Chamber
To avoid warping and cracking for printing big size engineering materials like PC, ABS, PA, etc..



Industrial Grade Configuration
For high precision and high quality 3D printing



“High Build Volume Functional Material 3D Printer”



High Build Volume 3D Printer
High build volume of 450mm*450mm*600mm



Heated & Constant Temperature Chamber to 120°C
To avoid warping & cracking for large size printing



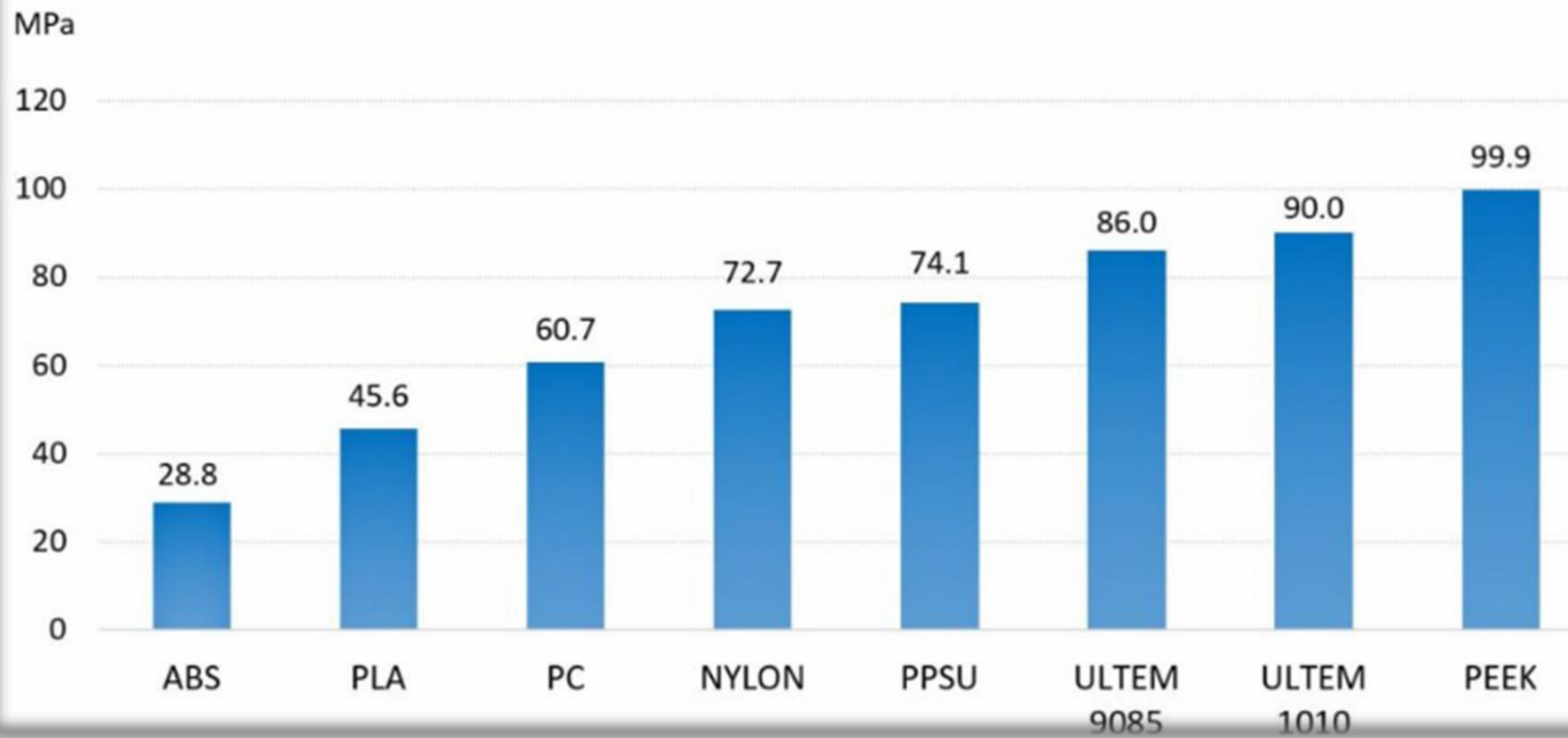
High Temperature All Metal Nozzle to 500°C with Water Cooling
For printing functional materials like PEEK, ULTEM, PPSU etc..



	FUNMAT HT	FUMAT PRO	FUNMAT PRO HT
Build Volume	260*260*260 mm	450*450*600 mm	450*450*600 mm
Extruder Temp.	450°C	280°C	500°C
Build Plate Temp.	160°C	120°C	160°C
Chamber Temp.	90°C	60°C	120°C
Nozzles	Single	Single	Single
Nozzle Diameter	0.4mm	0.4mm	0.4mm
Filament Diameter	1.75mm	1.75mm	1.75mm
Supported Filaments	PEEK, ULTEM, PPSU, PC, PA, CF, TPU, ABS, PLA etc..	PC, PA, CF, TPU, ABS, PLA etc..	PEEK, ULTEM, PPSU, PC, PA, CF, TPU, ABS, PLA etc..

	FUNMAT HT	FUNMAT PRO	FUNMAT PRO HT
PEEK	✓		✓
ULTEM	✓		✓
PPSU	✓		✓
PC	✓	✓	✓
PA	✓	✓	✓
TPU	✓	✓	✓
ABS	✓	✓	✓
CF	✓	✓	✓
PLA	✓	✓	✓

Tensile Strength of Materials Printed on INTAMSYS 3D Printers



PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ISO 1183, Crystalline	g/cm ³	1.30
Glass transition temperature	ISO 11357	°C	143
Melting Point	ISO 11357	°C	343
Heat Deflection Temperature	ISO 75-f, 1.8 Mpa	°C	152
Thermal Conductivity	ISO 22007-4, 23°C	W m ⁻¹ K ⁻¹	0.29
Melt index	ISO 1133, 380°C, 5kg	g/10min	10
Shore D Hardness	ISO 868, 23°C	-	85
Water Absorption by immersion (3.2mm thick tensile Bar)	ISO 62-1, 24H, 23°C	%	0.07
	Equilibrium, 23°C	%	0.4
Odor	-	-	Almost odorless
MECHANICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ISO 527	Mpa	99.9
Young's modulus	ISO 527	Mpa	3738
Elongation at break	ISO 527	%	9.1
Bending strength	ISO 178	Mpa	147.0
Bending modulus	ISO 178	Mpa	3612
Impact strength	ISO 179	kJ/m ²	7.1

PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ASTM D 792	g/cm ³	1.34
Glass transition temperature	DSC, 10°C/min	°C	186
Heat Deflection Temperature	ASTM D648, 1.82Mpa, 3.2mm	°C	153

MECHANICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ASTM D638	Mpa	86
Young's modulus	ASTM D638	Mpa	2230
Elongation at break	ASTM D638	%	4.5
Bending strength	ASTM D790	Mpa	116
Bending modulus	ASTM D790	Mpa	2340
Impact strength	ASTM D256, notched	J/m	115

PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ASTM D 792	g/cm ³	1.27
Glass transition temperature	DSC, 10°C/min	°C	215
Heat Deflection Temperature	ASTM D 648, 0.45Mpa, 6.4mm	°C	207
Flame classification	UL 94	-	V0(1.5mm) , V0, 5VA(3mm)
Water absorption	ASTM D 570, 24hours	%	0.25
	ASTM D 570, Equilibrium, 23°C	%	1.25
Hardness	Rockwell M	-	109

MECHANICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ASTM D638	Mpa	90
Young's modulus	ASTM D638	Mpa	3427
Elongation at break	ASTM D638	%	3.3
Bending strength	ASTM D790	Mpa	126
Bending modulus	ASTM D790	Mpa	3197
Impact strength	ASTM D256, notched	J/m	32

PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ISO 1183	g/cm ³	1.29
Glass transition temperature	DSC, 10°C/min	°C	220
Heat Deflection Temperature	ISO 75	°C	198
Moisture content	ISO 62, saturation	%	1.2
Odor	-	-	Almost odorless
solubility	-	-	Insoluble in water

MECHANICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ASTM D527	Mpa	74.1
Elongation at break	ASTM D527	%	8.0

PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ISO 1183	g/cm ³	1.18-1.20
Glass transition temperature	DSC, 10°C/min	°C	113
Softening temperature of filament	Custom method	°C	127-130
Melt index	300°C , 1.2kg	g/10min	23-26
Moisture content	Thermogravimetric	%	≤0.1
Odor	-	-	Almost odorless
Solubility	-	-	Insoluble in water

MECHANICAL PROPERTIES ¹	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ISO 527	Mpa	60.7
Young's modulus	ISO 527	Mpa	2480
Elongation at break	ISO 527	%	5.6
Bending strength	ISO 178	Mpa	84.3
Bending modulus	ISO 178	Mpa	1685
Impact strength	ISO 179	KJ/m ²	15.6

PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ISO 1183	g/cm ³	1.24
Glass transition temperature	DSC, 10°C/min	°C	67
Melting temperature	DSC, 10°C/min	°C	190
Crystallization temperature	DSC, 10°C/min	°C	128
Vicat softening temperature	ISO 306	°C	181
Melt index	260°C , 2.16kg	g/10min	6.2
Decomposition temperature	TGA, 20°C/min	°C	370

MECHANICAL PROPERTIES ¹	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ISO 527	Mpa	72.7
Young's modulus	ISO 527	Mpa	2595
Elongation at break	ISO 527	%	4.6
Bending strength	ISO 178	Mpa	123.1
Bending modulus	ISO 178	Mpa	1681
Impact strength	ISO 179	KJ/m ²	8.1

PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ISO 1183	g/cm ³	1.10-1.15
Glass transition temperature	DSC, 10°C/min	°C	-
Softening temperature of filament	Custom method	°C	100-110
Melt index	220°C, 10kg	g/10min	9-14
Moisture content	Thermogravimetric	%	≤0.1%
Odor	-	-	Almost odorless
Solubility	-	-	Insoluble in water

MECHANICAL PROPERTIES ¹	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ISO 527	Mpa	28.8
Young's modulus	ISO 527	Mpa	1847
Elongation at break	ISO 527	%	3.8
Bending strength	ISO 178	Mpa	65.5
Bending modulus	ISO 178	Mpa	1530
Impact strength	ISO 179	KJ/m ²	16.4

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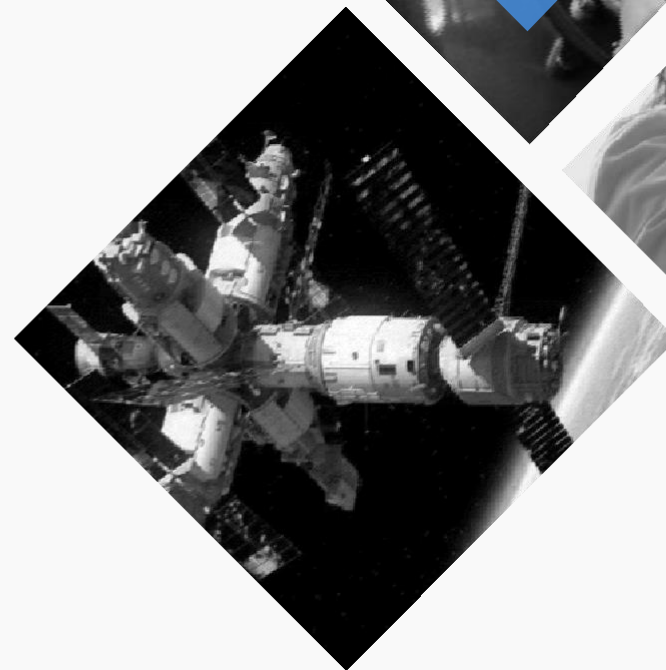
PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ISO 1183	g/cm3	1.17-1.24
Shore A hardness	ASTM D2240	-	~ 95A
Melt index	210°C, 1.2kg	g/10min	10-12
Moisture content	Thermogravimetric	%	≤0.1%
Odor	-	-	Almost odorless
Solubility	-	-	Insoluble in water

MECHANICAL PROPERTIES ¹	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ISO 527	MPa	25.3
Elongation at break	ISO 527	%	379

More Materials Coming up soon...

03

APPLICATIONS



More Application Because of More Materials Capability

PEEK

PEI

PPSU

PC

NYLON

TPU

Aerospace

Low Volume Production

Automotive

Jigs, Fixtures

Medical

Implant, Guides,
Prosthetics



Oil&Gas

Chemical Resistance Parts

Research

Medical, New Polymers

Accessories

Custom Fit Shoes

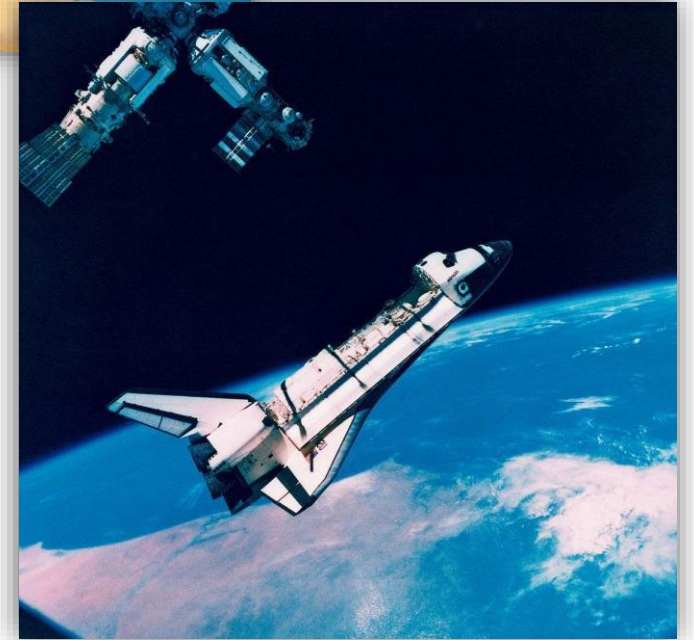
Satellite

- 3D printed microsattellites are commercially applied and equipped with internal electrical circuits
- The instruments, PCB and solar panels need to be inserted. PEEK is a thermoplastic that has excellent inherent properties in strength, stability and temperature resistance
- The melting point is about 370 degrees
- Replace some of the metal parts to reduce weight
- Excellent radiation resistance



Aviation Parts

- Far below the density of metal
- High stability under high temperature
- Low temperature environment
- Higher mechanical strength
- Flame retardancy
- Radiation resistance



Aircraft Landing Gear Hubcaps

- Withstanding impacts of flying debris
- Excellent environmental resistance in harsh conditions



- Rapid growth of PEEK resin in the European automotive parts market
- Especially the parts around the engine, variable transmission parts, and turning parts and so on
- PEEK plastic is used instead of some traditional high price metal as the manufacturing material. As the automotive industry adapts to the requirements of miniaturization, light weight and cost reduction
- The automotive industry is facing increasing pressure to maximize product performance and minimize vehicle type and cost
- The pursuit of comfort stability means increased equipment, power windows, airbags, ABS brake systems, and weight
- PEEK auto parts can reduce the weight by 90% and ensure long life span

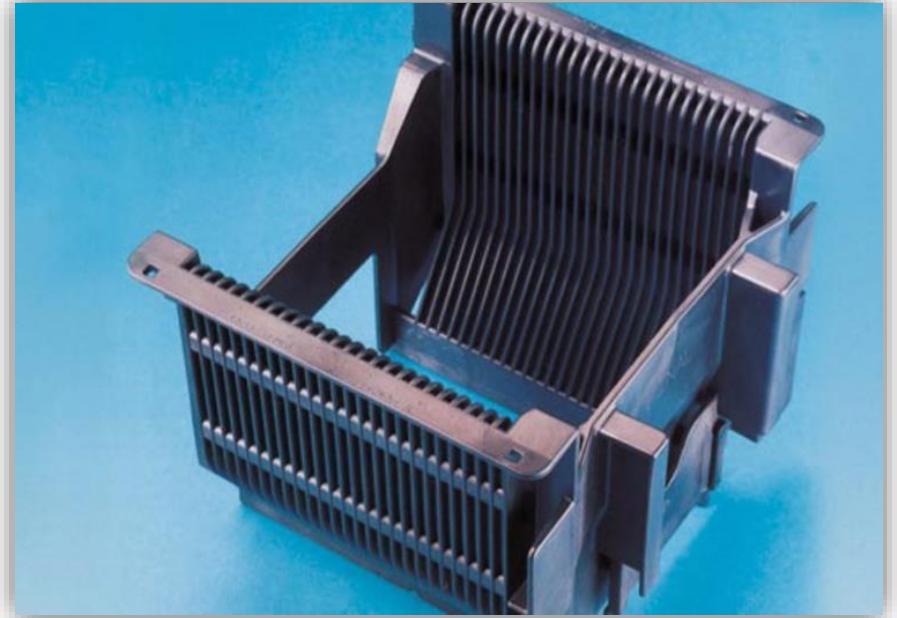


- Available components: Engines - gear, bearings, gaskets, impellers
- Transmission: seal ring, shift pad block
- Brake system: piston, seal
- Vacuum pump: suction head, blade
- Electronic / sensor: inductor, wiring
- Lighting: lamp holder
- Clutch: gasket, friction ring
- Car door module: door hinge, gear



And Dissipate

- The retention of a static charge on the surface of a material and the subsequent surface potentials are a concern in many electronic applications
- Polymer dissipate static charges in a controlled way, preventing damage to the wafer and preventing wafer contamination due to electrostatic attraction by reducing and preventing electrostatic accumulation



- Reduced weight
- Easy to manufacture
- Chemical resistant
- Stable in size in wide temperature range
- Low moisture absorption rate
- Low expansion coefficient



- PEEK in the manufacture of connectors and sensors allows for excellent dielectric properties over a wide range of temperatures and frequencies in combination with dimensional stability through the lead-free soldering process, mechanical strength, wear resistance and compliance to RoHS
- PEEK enabling Back-End Test OEMs to enhance their performance with improved machinability to extremely fine pitches with low burr
- Excellent electrical properties including maintained dielectric properties over multiple cycles
- PEEK provides the chemical and insulating properties required to protect the signal at this high temperature, provides the ability to create a seamless connector, and completely insulate the conductive pin, thus ensuring its performance under the most harsh conditions



PEEK polymer has a unique comprehensive performance.

- wear resistance
- chemical corrosion resistance
- mechanical strength
- stable electrical properties

Throughout its working temperature range, which helps to maintain the integrity of data acquisition and lower electrical interference

- Wear resistance
- Fatigue resistance
- Creep resistance
- Excellent mechanical strength



Medical Care

Suture Rivet



Craniofacial Surgery



Oral Cavity



Spinal Fusion



Implant Bone Nail



Case Study-PC

Industry: Automotive

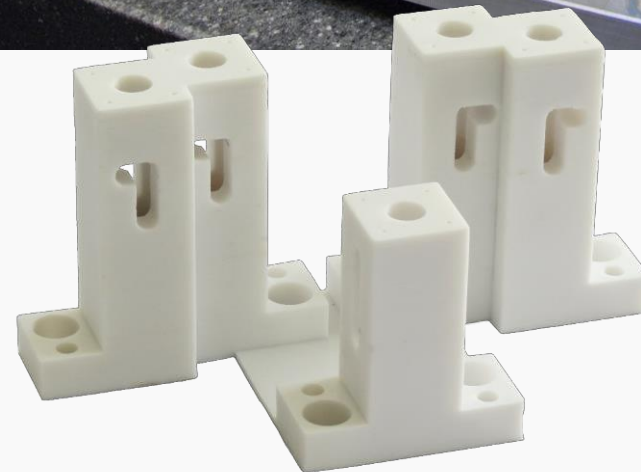
Application: Quality Control Gauge

Why Choose INTAMSYS Solutions:

- Costs of traditional machining processes is high
- High-level customization and low-volume production

INTAMSYS Advantages:

- 76% reduction in cost per part
- Faster Customization & Production Turnaround Time



Case Study-PEEK

Industry: Healthcare

Application: Bionic Knee Brace

Why Choose INTAMSYS Solutions:

- High complexity of part structure design
- Strong durability for protection

INTAMSYS Advantages:

- High tensile strength requirement
- Smooth surface finishing



THANK YOU

