长纤维增强热塑性复合材料
Long fiber reinforced thermoplastic composite

LFT-G®

长纤维增强热塑性复合材料
Long fiber reinforced thermoplastic composite

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长纤(厦门)新材料科技有限公司
Xiamen LFT Composite plastic Co., ltd.

长之以久塑品质 纤之以恒塑品牌

Forever Strong with Quality Composites

长玻纤
Long glass fiber

PP-LGF
PA6-LGF
PA66-LGF
PA12-LGF
MXD6-LGF
PPA-LGF
PBT-LGF
PET-LGF
PLA-LGF
TPU-LGF
PPS-LGF
PC-LGF
LCP-LGF
PEEK-LGF

长碳纤
Long carbon fiber

PP-LCF
PA6-LCF
PA66-LCF
PA12-LCF
MXD6-LCF
PPA-LCF
PPS-LCF
PBT-LCF
PET-LCF
TPU-LCF
PEI-LCF
LCP-LCF
PEEK-LCF

目录

CONTENT



公司介绍	Company Profile	01
行业介绍	Industry Introduction	03
长玻纤增强复合材料	Long Glass Fibre Reinforced Composites	05
长碳纤增强复合材料	Long Carbon Fibre Reinforced Composites	07
汽车行业解决方案	Automotive Solutions	09
低空与机器人解决方案	Low Altitude and Robotics Solutions	11
电器与电力解决方案	Electrical & Power Solutions	13
运动行业解决方案	Sports Industry Solutions	15
其它行业解决方案	Other Industries Solutions	17
实验室介绍	Laboratory Introduction	19
荣誉资质	Certificates & Honors	21
长玻纤系列产品	Long Glass Fiber Series Products	23
长碳纤系列产品	Long Carbon Fiber Series Products	25

LFT-G®

专注于LFT





我们为您提供：

① 长玻纤与长碳纤复合材料技术参数；
② 模具前沿设计及建议；
③ 提供注塑、挤出、模压等成型工艺技术支持。

We Provide:

① Technical parameters of long glass fiber and long carbon fiber composites;
② Mold front design and recommendations;
③ Provide technical support such as injection molding, extrusion molding, and comression molding.

长纤（厦门）新材料科技有限公司是集科研、生产及自有品牌营销一体的长纤维增强热塑性材料全球化供应商之一。产品通过了ISO9001&16949体系认证，并获得了多项国家级商标和专利，应用于汽车、军工部件、航空航天、新能源、医疗设备、电力风能、运动器材等领域。

Xiamen LFT Composite Plastic Co.,Ltd. is a global supplier of long fiber-reinforced thermoplastic materials, integrating R&D, productioniand proprietary brand marketing. Our products are certified under the ISO 9001 & IATF 16949 quality management systems and holdLFT-Gmultiple national trademarks and patents. They are widely used in industries such as automotive, defense, aerospace, new energy,medical equipment, power and wind energy,and sports equipment.





江苏•常州
Changzhou, Jiangsu



广东•东莞
Dongguan, Guangdong



浙江•余姚
Yuyao, Zhejiang

行业介绍
Industry introduction

LFT长纤维增强热塑性复合材料，和普通的短纤维增强改性材料相比（纤维长度为1~2毫米），LFT工艺生产的热塑性复合材料长度可达到在5~25毫米以上，可经过专用的模具浸渍工艺得到。常规纤维有玻纤、碳纤，特殊纤维有玄武岩纤维与石英纤维等；根据不同的用途，LFT可用于注塑成型、挤出、模压等，机械性能优异，在很多领域可实现以塑代钢或带代替热固性材料。

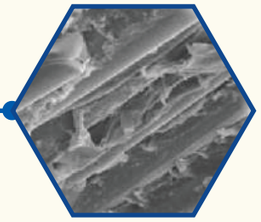
LFT长纤维 LFT®Long Fiber Reinforcements :



长度：5-25mm
Length: 5-25mm

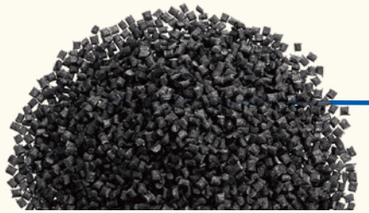


燃烧后
After combustion

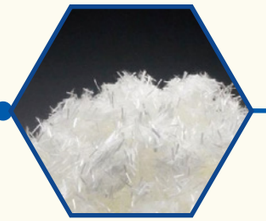


电镜图
SEM image

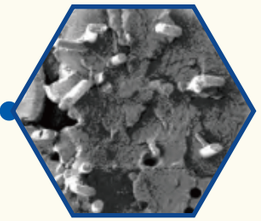
传统短纤维 Conventional Short Fiber Reinforcements :



长度：1-3mm
Length: 1-3mm



燃烧后
After combustion



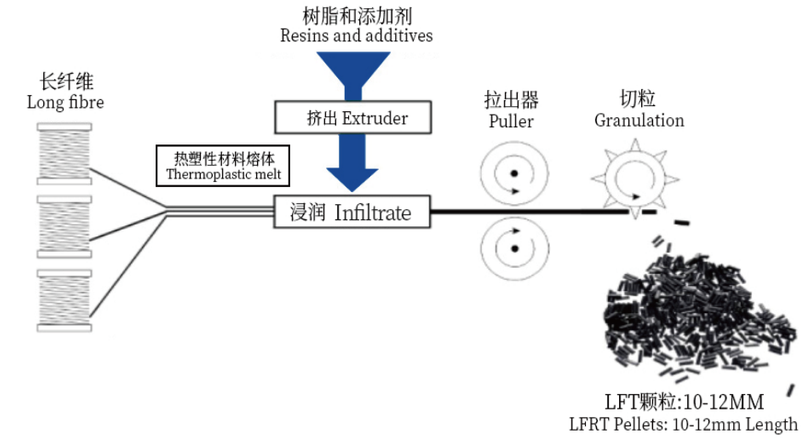
电镜图
SEM image

Unlike conventional fiber-reinforced materials(1-2mm), LFT composites feature fiber lengths of 5-25mm+, produced through a specialized impregnation process. Common reinforcements include glass fiber and carbon fiber, with basalt and quartz fiber for specialized needs. LFT supports injection molding, offering superior mechanical properties for metal replacement and thermoset alternatives across industries.

LFT的性能优势
Advantages of LFT

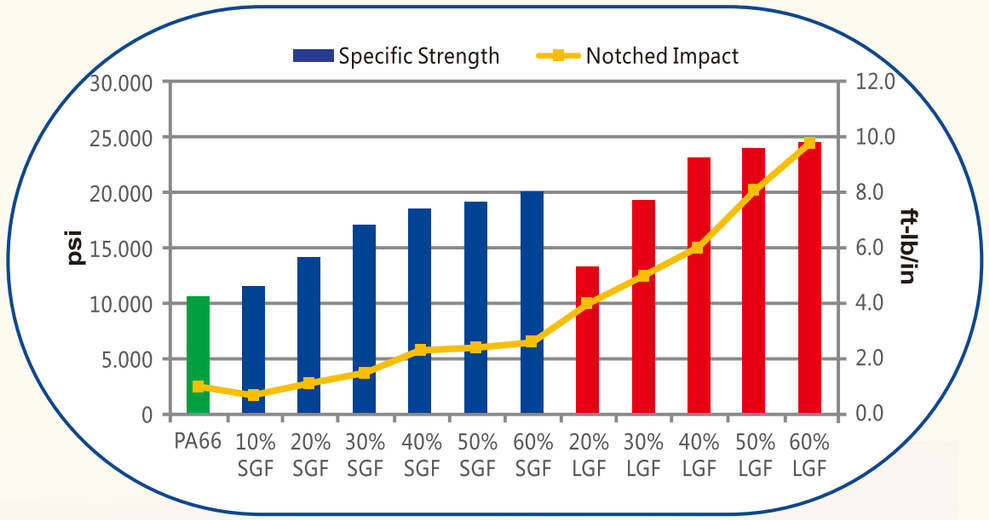
- **轻量化** Lightweighting
- **高冲击强度** High impact strength
- **低温下保持高性能** Maintains high performance at low temperature
- **耐疲劳性优** Excellent fatigue resistance
- **耐蠕变性优** Excellent creep resistance
- **尺寸稳定性优** Excellent dimensional stability

LFT生产流程
LFT production process



长玻纤增强复合材料
About LFT-LGF reinforced composite

长玻纤与短玻纤增强尼龙的机械性能对比
Mechanical Properties: Long vs. Short Glass Fiber Reinforced Nylon





当常规改性材料无法达到您所需的机械性能或者您想要实现以塑代钢，长玻璃纤维增强复合材料是一个很好的选择。长玻纤增强复合材料能经济有效的降低商品成本和有效的提高制品的机械性能，其原理是长纤维可均匀分布在制品内部形成网络骨架。

When conventional modified materials fail to meet your required mechanical properties, or when you aim to replace metal with plastic, long glass fiber reinforced composites are an excellent choice. Our materials provide a cost-effective solution by enhancing mechanical performance while reducing overall product costs. The key lies in the long fibers, which distribute evenly throughout the product, forming a reinforced internal network structure for superior strength and durability.

高冲击 **低吸水** **高绝缘** **尺寸稳定**

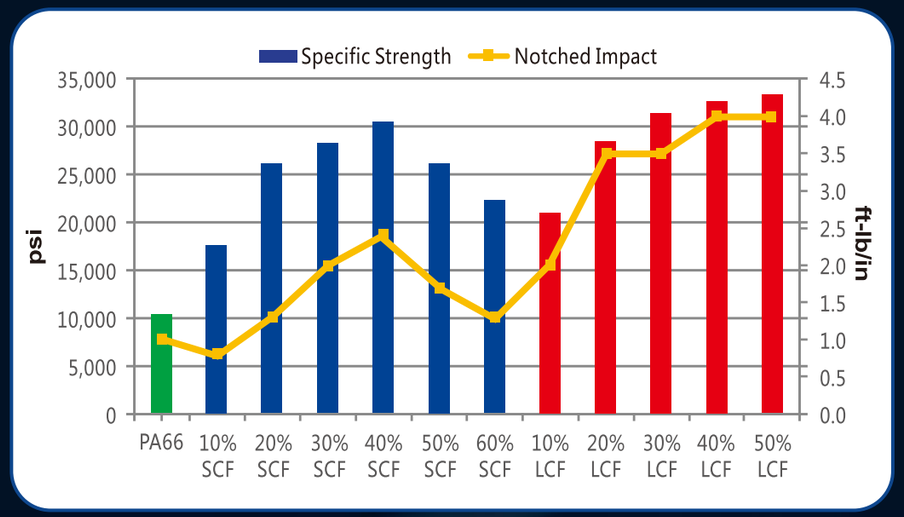
耐疲劳 **耐蠕变** **耐候性** **耐低温**

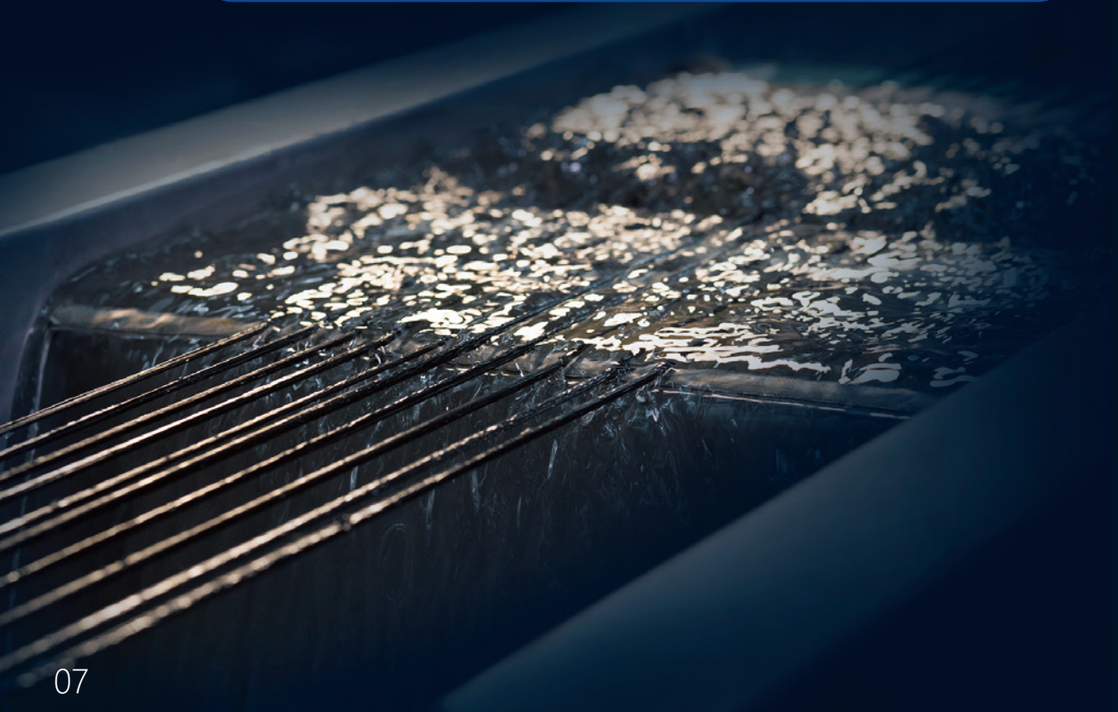
High impact resistance / Low water absorption / High insulation properties / Dimensional stability / Creep resistance / Weather resistance / Low temperature resistance / Fatigue resistance



长碳纤增强复合材料
About LFT-LCF reinforced composite

长碳纤与短碳纤增强尼龙的机械性能对比
Mechanical Properties: Long vs. Short Carbon Fiber Reinforced Nylon







高刚性 **高模量** **低翘曲** **导电/静电**
高冲击 **轻量化** **电磁屏蔽** **金属复合**

High Rigidity / High Modulus / Low Warpage / Conductive / Electrostatic / High Impact Resistance / Lightweight / Electromagnetic Shielding / Good Metal-Plastic Compatibility

长碳纤维增强复合材料凭借其优异的机械性能，已成为金属的理想替代品，能够显著减轻重量，并在增强型热塑性塑料中提供最佳的强度和刚度性能。此外，长碳纤维复合材料结合了注塑热塑性塑料的设计与制造优势，简化了对具有苛刻性能要求的组件和设备的材料选择，使其成为理想材料。在航空航天和其他先进行业中，长碳纤维复合材料的广泛应用不仅强化了产品的“高科技”感知，还能够帮助企业提升产品竞争力，创造与竞争对手的差异化优势。

Long carbon fiber reinforced composites significantly reduce weight while providing optimal strength and stiffness in reinforced thermoplastics. Their outstanding mechanical properties make them an ideal alternative to metals. Combining the design and manufacturing advantages of injection-molded thermoplastics, long carbon fiber composites simplify the development of components and equipment with demanding performance requirements. Widely used in aerospace and other advanced industries, these materials carry a “high-tech" perception among consumers ——an advantage you can leverage to market your products and differentiate them from competitors.

汽车行业解决方案
Automotive Industry Solutions



座椅骨架
Seat Frame

•PA66-LGF40



天窗支架
Sunroof bracket

•PP-LGF40



仪表板骨架
Car Dashboard Frame

•PP-LGF20



尾门板
Tailgate Panel

•PP-LGF40





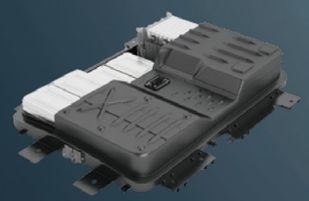
散热风扇
Cooling Fan

•PP-LGF30



换挡器
Gear Shifter

•PP-LGF40



•CPP-FR-LCF30

新能源电池包
New Energy Battery Pack



•PA66-LGF40

油门踏板
Accelerator Pedal

•PP-LGF30

水箱框架
Radiator Frame





•PP-LGF20

底护板
Underbody Shield

我们的长纤维增强热塑性复合材料在汽车内外饰和结构件的轻量化方面得到了广泛应用。
Our long fiber-reinforced thermoplastic composites are widely used in the lightweight design of automotive interior, exterior, and structural components.

低空与机器人解决方案
Low Altitude and Robotics Solutions

设备外壳
Equipment enclosures

机器人部件
Robot components

无人机起落架
Drone Landing Gear

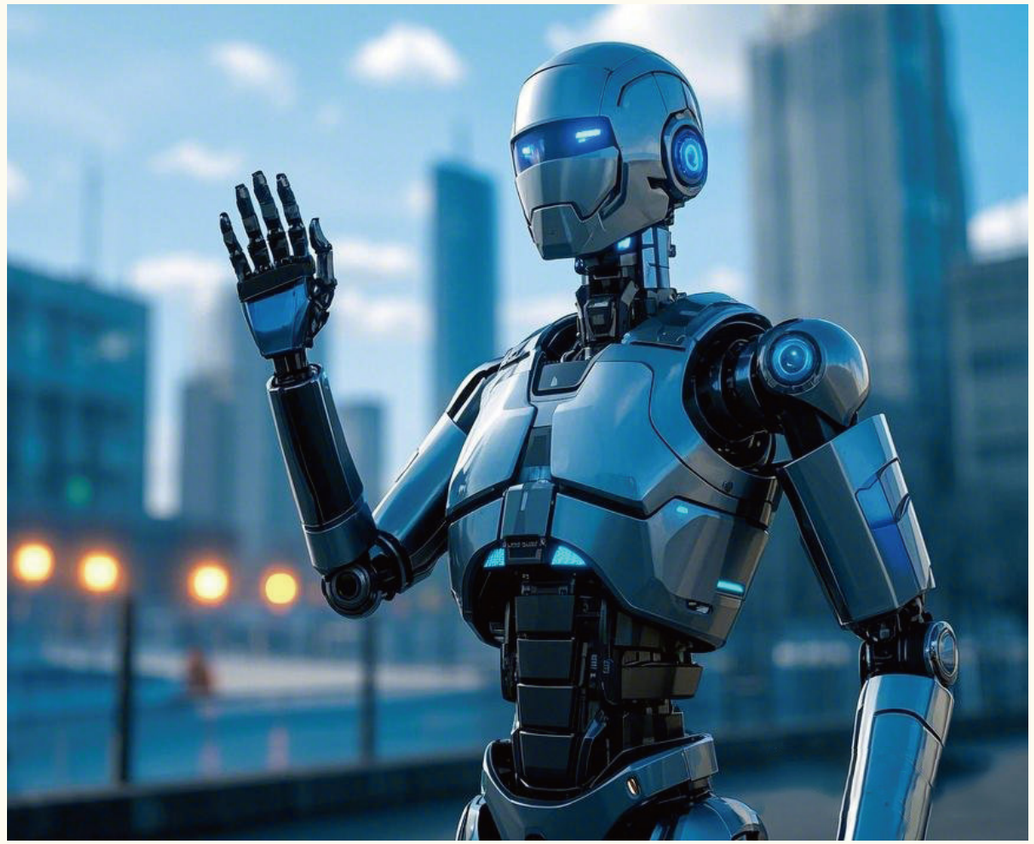
天线面板
Antenna panel

机身结构件
Fuselage structural parts

外骨骼机器人
Powered exoskeleton

无人机桨叶
Drone propeller blade

雷达天线罩
Radar radome











我们的长纤维增强热塑性复合材料是低空与机器人领域的理想材料，兼具轻量化、超高强度、阻燃和耐候等优异特性，能够有效实现设备的减重和成本降低目标。
Our long fiber reinforced thermoplastic composites are an ideal choice for low altitude and robotics, offering a combination of lightweight properties, ultra-high strength, flame resistance, and weather resistance. These characteristics effectively contribute to weight reduction and cost savings.

电器与电力行业
Electrical & Power Solutions





光伏电池板框架
Solar Panel Frame

•PP/PET-LGF40



安防设备外壳
Camera Enclosure

•PA66-FR-LGF50



电力部件
Electrical components

•PPS-LGF40



•PA66-LGF40

我们的长纤维增强热塑性复合材料LGF具有低吸水、高绝缘、尺寸稳定等特性，LCF具有轻量化、高强度、电磁屏蔽、防静电、金属复合等特性，在电力设备零部件、电子设备、通讯设备的电机、外壳等方面得到了广泛的应用。
Our long glass fiber reinforced thermoplastic composite materials (LGF) feature low moisture absorption, high insulation, dimensional stability. The long carbon fiber (LCF) materials offer lightweight, high strength, electromagnetic shielding, anti-static, and metal composite properties. These materials are widely used in components for electrical equipment, electronic devices, communication equipment, motors, housings, and more.



运动行业解决方案
Sports Industry Solutions





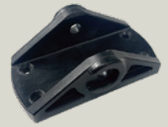
自行车手变
Bicycle shifter

•PA66-LCF40



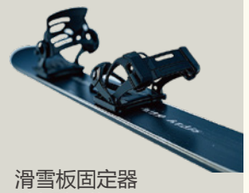
乒乓球拍
Table tennis racket

•PP-LCF30



运动器械连接件
Sports equipment connector

•PA6-LCF40



滑雪板固定器
Ski Bindings

•PA6-LCF20



滑板车
Scooter

•PP-LGF50



防撞条
Impact protection strip

•PA6-LGF50





自行车杯架
Bike Cap Holder

•PA12-LCF20



钓鱼竿渔轮
Fishing reels

•PA6-LCF40

其它行业 Other Industries

我们的长纤维增强热塑性复合材料在各类鞋材、智能家电、家具、电动工具、隔膜泵、船桨、安全头盔等方面得到了广泛的应用。

Our long fiber reinforced thermoplastic composites are widely used in various applications, including footwear materials, smart home appliances, furniture, power tools, diaphragm pumps, boat propellers, safety helmets, and more.









椅子
Chair

•PP-LGF40



安全头盔
Safety Helmet

•PA12-LCF30



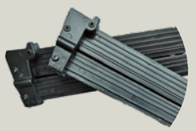
工具外壳
Tool housing

•TPU-LGF40



船桨
paddle

•PP-LGF30



导轨
Guide

•TPU-LGF50



鞋底碳板
Plate for shoe sole

•TPU-LCF40



洗衣机滚筒
Washing machine drum

•PP-LGF30



安全鞋头、鞋垫碳板
Safety toe cap、carbon plate

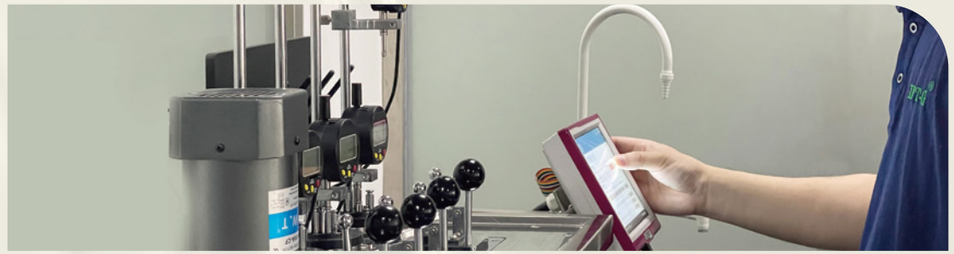
•TPU-LGF40

实验室研发+检测能力 Laboratory R&D + Testing



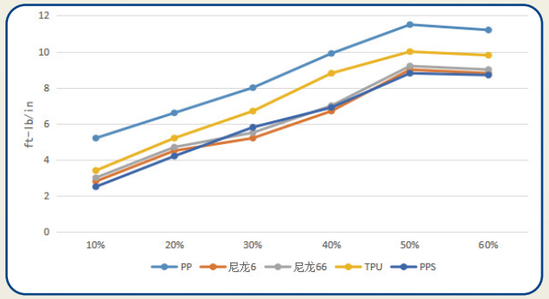


技术指导服务
Technical advisory services

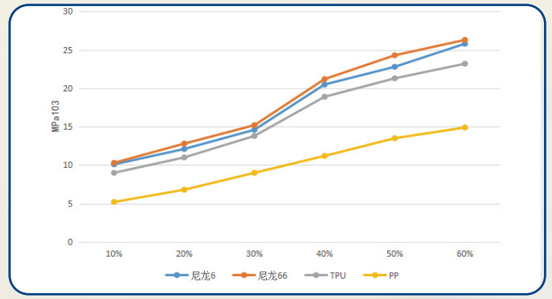




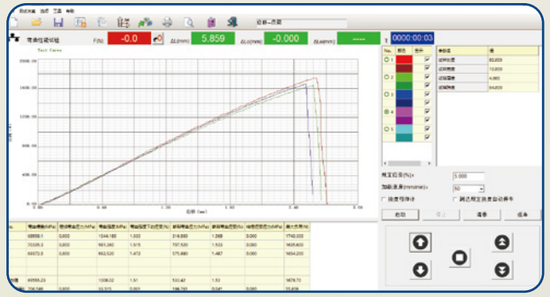
典型测试数据
Typical test data



长玻纤增强多种塑料基材冲击性能对比
Comparison of impact property of various plastic substrates with long glass fiber



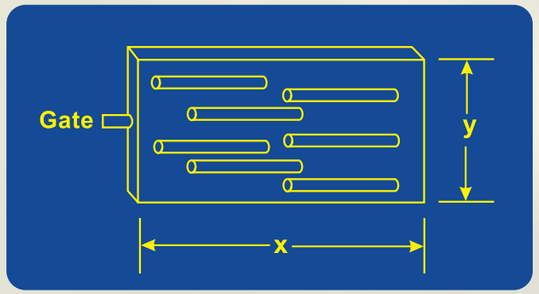
长碳纤增强多种塑料基材弯曲模量对比
Comparison of flexural modulus of various plastic substrates with long carbon fiber



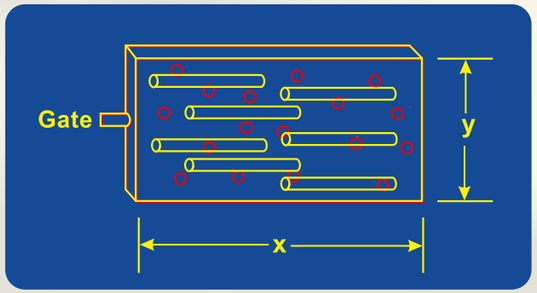
弯曲性能测试
Bending performance test



拉伸性能测试
Tensile performance test



翘曲控制
Warp Control



强度及翘曲控制
Strength&Warp Control

SYSTEM CERTIFICATION

资质证书



★高新技术企业

★多项专利技术持有者

★每一颗塑料颗粒都是品质的见证

★High-tech Enterprise

★Holder of multiple patented technologies

★Every Plastic Pellet is a Testament to Quality

体系认证

体系认证 IATF 16949、ISO 9001



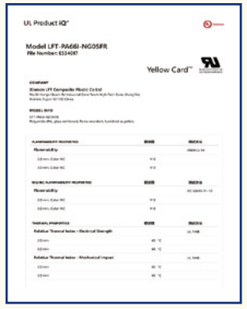


环境管理体系认证 ISO14001





UL黄卡认证 UL Solutions Yellow Card





LGF

长玻纤系列产品
Long Glass Fiber Reinforcements

等级 Grades	关键性能提升 Key Points	应用 Applications
通用级 General Grade	高机械强度、高刚性和耐腐蚀性 High mechanical strength, high rigidity, and corrosion resistance	汽车零部件、结构件、家电、 机械部件、水泵部件、运动器材、 电子电器、电动工具、建筑等 Automotive Parts, Structural Components, Home Appliances, Mechanical Components, Water Pump Parts, Sporting Goods, Electronics & Electricals, Power Tools, Construction, and More.
耐候级 Weather Resistant Grade	抗湿热老化能力，在高温高湿环境下仍能保持较高的力学性能 Maintaining high mechanical performance even in high-temperature and high-humidity environments.	
增韧级 Toughened Grade	高冲击性，缺口冲击强度可达短玻纤的3-5倍 High impact resistance, with notch impact strength 3 - 5 times that of short glass fiber filled compounds	
阻燃级 Flame Retardant Grade	满足UL94 V-0标准，兼顾力学性能 Meets UL94 V - 0 standard while maintaining mechanical properties	
抗UV老化级 UV Resistant Grade	表面耐黄变性和抗粉化性提升，拉伸强度保持率较高 Enhanced surface resistance to yellowing and chalking, with a high retention rate of tensile strength.	

各等级通过针对性改性满足不同场景需求，选型时需综合成本、工艺适配性和终端环境要求。更多技术细节可咨询我们的销售工程师。
Our materials are specifically modified to meet the demands of various applications. When selecting a material, it is important to consider cost, process compatibility, and end-use environment. For more technical details, please contact our sales engineers.

LCF

长碳纤系列产品

Long Carbon Fiber Reinforcements

等级 Grades	关键性能提升 Key Points	应用 Applications
通用级 General Grade	轻量化、高强度 Lightweight and ultra-high strength	航空航天、运动器械、 自行车、高端汽车零部件、海洋工程设备、 无人机、机器人零部件、卫星天线、光伏等 Aerospace, sporting equipment, bicycles, high-end automotive parts, marine engineering equipment, drones, robotic components, satellite antennas, photovoltaics, and more
耐候级 Weather Resistant Grade	增强耐湿热性，在高温高湿环境下仍能保持较高的力学性能 Improved moisture and heat resistance, maintaining high mechanical performance even in high temperature and high humidity environments	
增韧级 Toughened Grade	高缺口冲击强度、高刚性 High notch impact strength and high rigidity	
阻燃级 Flame Retardant Grade	兼顾力学性能，阻燃结合碳纤维导电性 Combining mechanical performance, flame resistance, and the conductivity of carbon fibers	
抗UV老化级 UV Resistant Grade	抗紫外线辐射能力提升，适用于长期户外暴露 The enhanced UV radiation resistance makes it ideal for prolonged outdoor exposure	

各等级通过针对性改性满足不同场景需求，建议根据具体情况（如载荷、环境、成本）选择材料类型及改性级别。更多技术细节可咨询我们的销售工程师。

Each grade is specifically modified to meet the requirements of different applications. We recommend selecting the appropriate material type and modification level based on specific factors such as load, environment, and cost. For more technical details, please contact our sales engineers.

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