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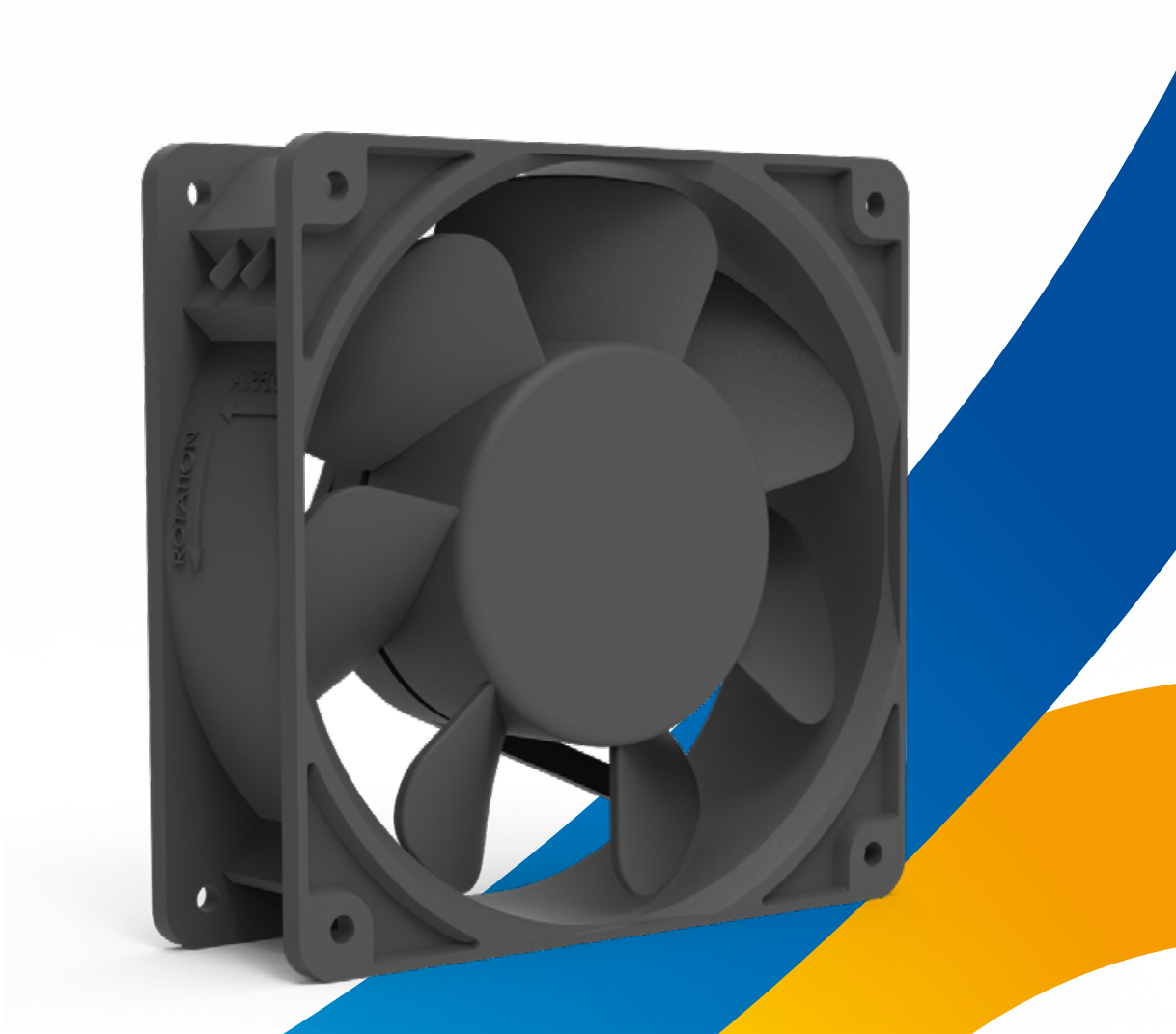
Specialties

ULTEM™ RESIN IN HIGH PERFORMANCE COOLING FANS

MORE SPEED | LESS HEAT | REDUCED NOISE



ULTEM™ RESIN
IN HIGH PERFORMANCE COOLING FANS

With the rapid development of telecom market, cloud datacenters are expanding and involving higher data density, faster deployment and greater efficiency. These facilities are facing new challenges of handling large data at high transfer speed and generating enormous amounts of heat.

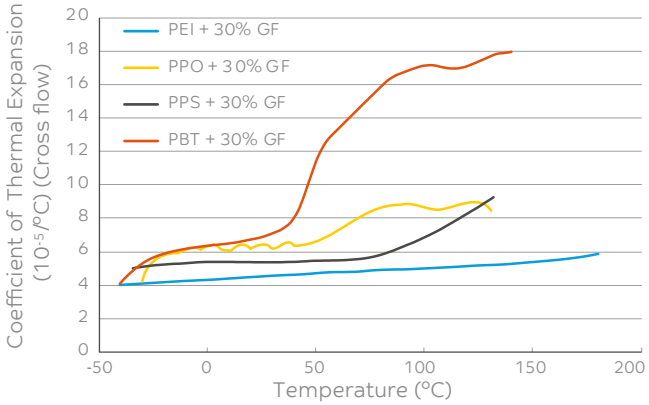
The evolution of cooling fans with speed over 20,000rpm are looking for high-performance heat dissipation solutions. Especially when the facilities operate under harsh environment temperatures from -40°C to 120°C, it is critical to solve excess heat effectively and to prevent risks from blade distortion, noise, or even datacenter malfunctioning.

When high performance matters to you, consider to choose ULTEM resin! The polyetherimide (PEI) resin is well suited to design cooling fans with improved precision and tolerances to create a more efficient airflow and heat dissipation.

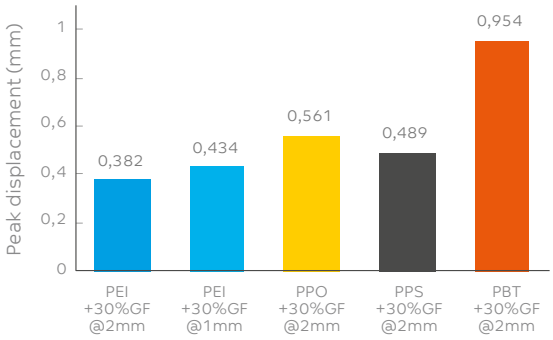
ULTEM RESIN POTENTIAL KEY BENEFITS:

- Dimensional stability over broad temperature range to reduce blade deformation from strong centrifugal force to avoid cracking, risk of scratching and noise.
- Good durability, creep resistance and high temperature resistance to design for higher blade rotation speed, helping to improve heat dissipation and power consumption.
- Design flexibility for thin-wall and lightweight fan designs that help to reduce noise.

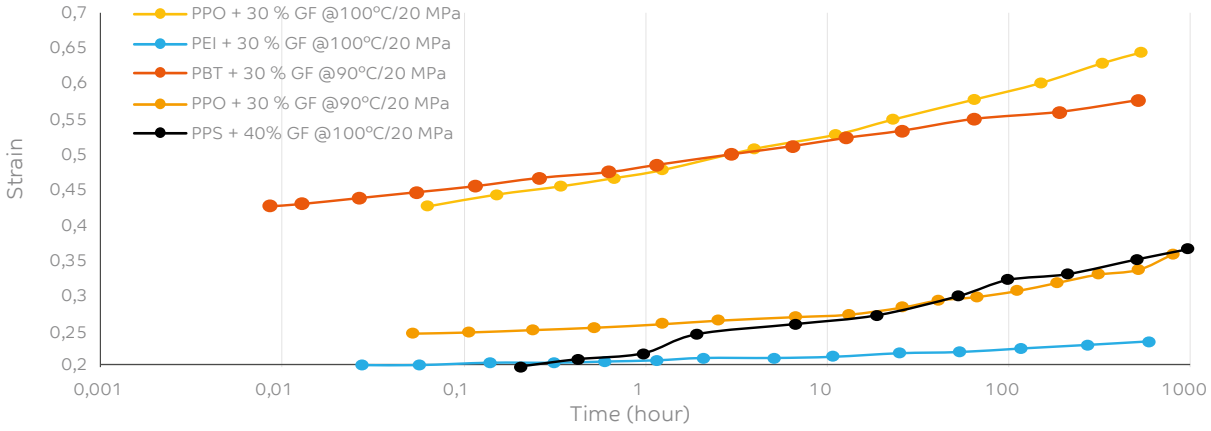
make it COOL | make it ULTEM resin



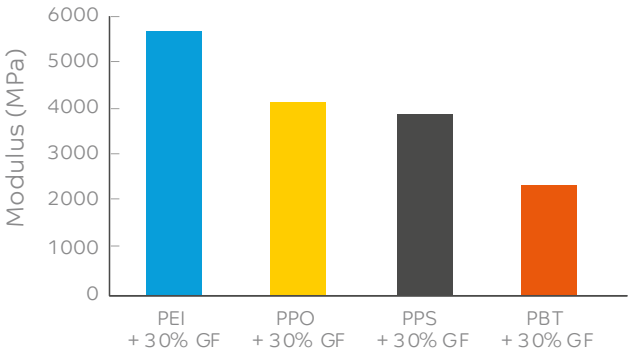
Glass-filled ULTEM resin keeps a low and stable CTE between -40°C to 200°C and maintain **better dimensional stability over a wide temperature range.**

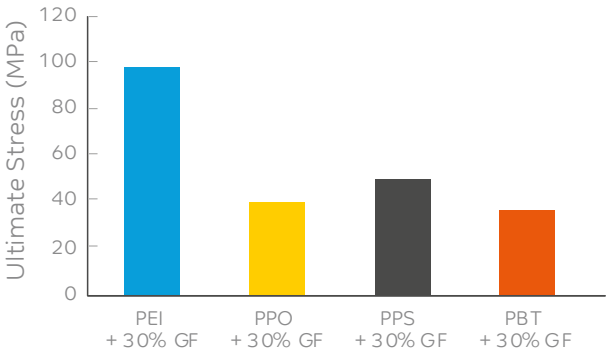


Glass-filled ULTEM resin can be used to further optimize thickness of the fan leading to **lower weight.**



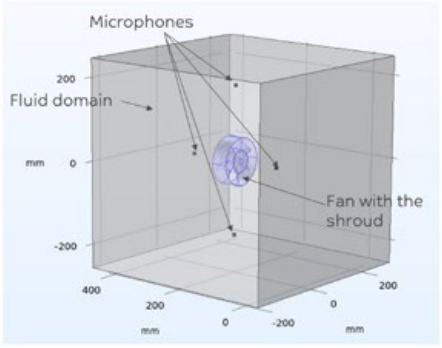
Glass-filled ULTEM resin can sustain performance over long time under load, so your fan may last longer.

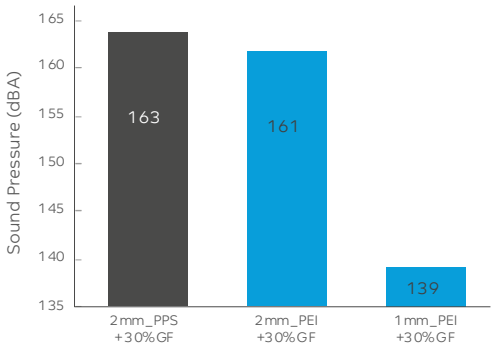




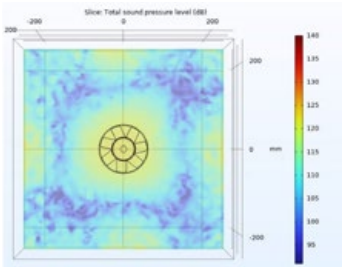
Glass-filled ULTEM resin maintains high modulus and strength at 110°C, giving **less blade distortion, less noise and an overall better cooling fan performance.**

Simulations show an improved acoustic performance of cooling fans when ULTEM resin is used for the design, compared to PPS.

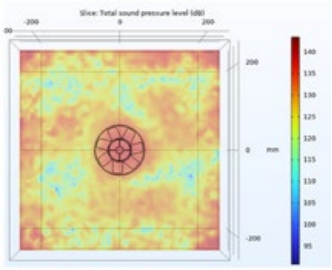




Sound Pressure distribution



1 mm blade (ULTEM resin) at 110°C



2 mm blade (PPS) at 110°C

ULTEM resin is well suited to create thin-wall designs that can help reduce cooling fan noise and create a more pleasant work environment.

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