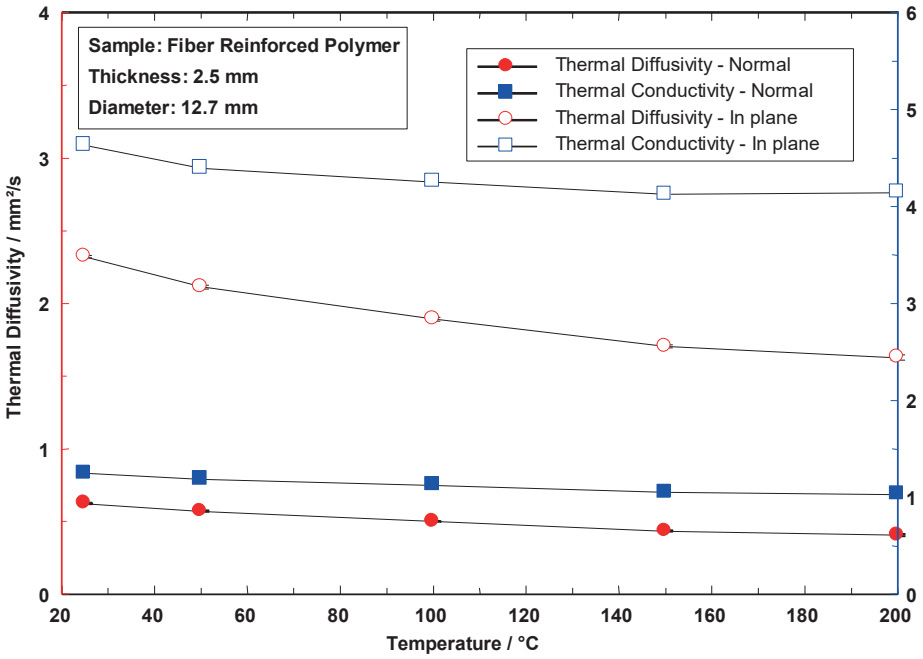
APPLICATION**SHEET**

Polymers · Electronics
LFA 467 *HyperFlash*®

Copper-Fiber Reinforced Polymers (PA)

Introduction

Fiber-reinforced polymers are being increasingly utilized in modern industrial applications. Low specific weight and high E-modulus are only some of the features of this group of materials. However, if metal or carbon fibers are used as reinforcement, a significant anisotropy in the thermophysical properties can be induced into a part. If the properties are not known, problems can arise for applications where heat transfer plays an important role. Due to the fact that the flash technique works in an orientated fashion, the LFA 467 *HyperFlash*®, along with in-plane or laminate sample holders, can measure the thermal diffusivity and thermal conductivity in the different directions with unmatched reproducibility and accuracy.



Test Conditions

Temperature range:	RT ... 200°C
Sample holder:	12.7 mm diameter
Sample surface preparation:	Graphite coating

Test Results

The measurement result for the copper-fiber reinforced polymer clearly shows that in the fiber orientation (in-plane), a significantly higher thermal diffusivity and thermal conductivity were obtained than for the results normal to the fiber orientation. The results are in perfect agreement with the user's expectations based on their experiences in the real application of the material.

NGB · Application Sheet 087 · E · 0621 · Technical specifications are subject to change.

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