THERMAL CONDUCTIVITY OF LITHIUM TETRABORATE IN THE TEMPERATURE RANGE 5 – 300 K

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S u m m a r y

The results of studying the temperature behaviour of thermal conductivity of both a $Li_2B_4O_7$ single crystal and glass in the temperature range 5 – 300 K are reported. The maximum of the single-crystal thermal conductivity is revealed at $T = 19$ K. The experimental results are analyzed in the τ-approximation where the processes of phonon scattering due to the lattice anharmonicity, defects, and the sample boundaries are taken into account. At the transition from low to high temperatures, the change of the heat transfer mechanism in the crystal under investigation is observed.