THERMAL INTERACTION BETWEEN
THE HP LED SOURCES INSTALLED
ON A COMMON RADIATOR

Antoni RÓŻOWICZ, Krzysztof BARAN

ABSTRACT  The article presents the mathematical model allowing to
determine the temperature of the radiator, on which there can be installed
any number of heat sources coupled with each other. Based on the model,
the temperature of the aluminium plate with installed LED light sources
(being the sources of heat) was determined by simulation. The simulation
was performed for several cases, in which the amount, power and the
distance between LED sources was different. Thus estimated distribution of
the radiator can be used to calculate the temperature of the junction, which
influences the basic parameters of LED sources.

Keywords:  LED, heat source, thermal coupling, junction temperature,
mathematical model