

THE APPLICATION OF LED LAMPS  
AS ILLUMINATORS FOR SELECTED  
PLANT SEEDLINGS

Andrzej PUTERNICKI, Edmund LISAK, Waldemar TREDER  
Jadwiga TREDER, Krzysztof KLAMKOWSKI

**ABSTRACT** *The article analyzes the applicability of semiconductor light sources (LED) for illumination of selected plant seedlings. Few chosen problems of supplementary artificial light illumination of greenhouse spices including photosynthetic and photomorphogenetic aspects were presented. The studies were performed in Electrotechnical Institute and Horticulture Institute. They were based on the application of LED lamp model of blue, red as well as infrared spectrum. The basic photometric and electrical data of the lamp were stated. The four weeks research experiment proved the measurable reduction of operating costs of proposed LED application in comparison with currently used for this purposes HPS lamps.*

**Keywords:** *daylight and artificial light, plant illumination, photosynthesis, photomorphogenesis, LED lamp*