

Title (en)
IRRADIATION DEVICE FOR IRRADIATING PLANTS

Title (de)
BESTRAHLUNGSVORRICHTUNG ZUR BESTRAHLUNG VON PFLANZEN

Title (fr)
DISPOSITIF D'INSOLATION DE PLANTES

Publication
EP 2931023 A1 20151021 (DE)

Application
EP 13802595 A 20131206

Priority
• DE 102012112192 A 20121212
• EP 2013075754 W 20131206

Abstract (en)
[origin: WO2014090693A1] Known irradiation devices (1) for irradiating plants (3) have a carrier element (2) for cultivating the plants, said carrier element defining a cultivation plane (E), a plurality of radiation sources (4a, 4b, 4c) for irradiating the plants with visible and/or ultraviolet radiation (5) and a plurality of infrared emitters (8) for irradiating the plants with infrared radiation (6). In order, proceeding therefrom, to specify an irradiation device for irradiating plants which ensures uniform irradiation of the plants with infrared radiation alongside irradiation of the plants with ultraviolet and/or visible radiation, and which furthermore requires a small number of infrared emitters relative to the cultivation area, the invention proposes that the infrared emitters are designed for a temperature of 800 °C to 1800 °C and each have a cylindrical emitter tube (303) having an emitter tube length in the range of 50 mm to 500 mm, and that the emitter tubes extend parallel to one another in an emitter zone (Z) located above the cultivation plane (E), wherein the infrared emitter occupation density relative to the area of the cultivation plane is in the range of between 0.2 m⁻² and 1.0 m⁻², and irradiation regions of adjacent infrared emitters on the cultivation plane overlap in such a way that the average irradiance on the cultivation plane is between 10 watt/m² and 100 watt/m² with a variation range of a maximum of 50%, and that a reflector (302) facing a structural space (B) is assigned to a top side of the emitter tube.

IPC 8 full level
A01G 7/04 (2006.01)

CPC (source: EP US)
A01G 7/045 (2013.01 - EP US); **A01G 9/249** (2019.04 - EP); **Y02P 60/14** (2015.11 - US)

Citation (search report)
See references of WO 2014090693A1

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