

Title (en)
IRRADIATING DEVICE WITH A SINGLE-ENDED INFRARED EMITTER, FOR DIRECTING INFRARED RADIATION INTO A VACUUM PROCESS CHAMBER

Title (de)
BESTRAHLUNGSVORRICHTUNG MIT EINEM EINSEITIG GESOCKELTEN INFRAROTSTRAHLER, ZUR EINKOPPLUNG VON INFRAROT- STRAHUNG IN EINE VAKUUM-PROZESSKAMMER

Title (fr)
DISPOSITIF AVEC UN RADIATEUR INFRAROUGE MONTÉ D'UN SEUL CÔTÉ, POUR DIRIGER DE L'INFRAROUGE DANS UNE CHAMBRE DE TRAITEMENT SOUS VIDE

Publication
EP 3262672 B1 20190206 (DE)

Application
EP 15823162 A 20151223

Priority
• DE 102015102665 A 20150225
• EP 2015081155 W 20151223

Abstract (en)
[origin: WO2016134808A1] The invention relates to an irradiating device for injecting infrared radiation into a vacuum process chamber, with a single-ended infrared emitter (1), which comprises an emitter casing tube (2) in the form of a round glass tube, one closed end of which protrudes into the vacuum process chamber, and with a vacuum feedthrough (3) for holding the emitter casing tube and leading it in a gas-tight manner through an opening in the vacuum process chamber, wherein a heating conductor in the form of a heating filament (6) and a return conductor (7) in the form of a current return are arranged in the emitter casing tube, wherein the heating conductor has in the portion of the emitter casing tube that is surrounding the vacuum feedthrough a connection element (12), which is led out from the emitter casing tube. To ensure safe operation, in particular of long IR emitters, even with a high heating output and without additional components or cooling, it is proposed according to the invention that the connection element (12) of the heating conductor is led through a piece of pipe (11) and that the return conductor has in the portion of the emitter casing tube (2) that is surrounding the vacuum feedthrough (3) a means for compensating the thermal expansion (such as a spring element (14) or a sliding bearing (15)).

IPC 8 full level
H01K 1/18 (2006.01); **H01K 1/40** (2006.01); **H05B 3/44** (2006.01)

CPC (source: CN EP US)
H01K 1/18 (2013.01 - CN EP US); **H01K 1/20** (2013.01 - US); **H01K 1/40** (2013.01 - CN EP US); **H01K 7/00** (2013.01 - US); **H05B 3/0038** (2013.01 - CN EP US); **H05B 3/44** (2013.01 - CN)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
DE 102015102665 A1 20160825; CN 107210186 A 20170926; CN 107210186 B 20180914; EP 3262672 A1 20180103; EP 3262672 B1 20190206; JP 2018508100 A 20180322; US 2018054856 A1 20180222; WO 2016134808 A1 20160901

DOCDB simple family (application)
DE 102015102665 A 20150225; CN 201580075607 A 20151223; EP 15823162 A 20151223; EP 2015081155 W 20151223; JP 2017545388 A 20151223; US 201515552986 A 20151223