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(54) **OPTICAL HEATING DEVICE**

(71) Applicant: **Ushio Denki Kabushiki Kaisha**, Tokyo (JP)

(72) Inventor: **Shinji Taniguchi**, Tokyo (JP)

(73) Assignee: **Ushio Denki Kabushiki Kaisha**, Tokyo (JP)

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(57) **ABSTRACT**

An optical heating device includes: a chamber that accommodates a workpiece; a supporter that supports the workpiece in the chamber; a plurality of solid-state light sources emitting heating light toward a main surface of the workpiece; a plurality of reference light sources that emit reference light toward the main surface of the workpiece when power of the same power value is supplied to each of the reference light sources; a plurality of photodetectors that corresponds to the respective reference light sources, and that output signals in response to the intensity of the reference light that has been received; and a controller that executes a reference mode and a heating mode, the reference light sources and the corresponding photodetectors are arranged to face each other through the workpiece, and the photodetectors are configured to receive the reference light emitted from the reference light sources and transmitted through the workpiece.