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(19) **United States**(12) **Patent Application Publication****Inoue**(10) **Pub. No.: US 2022/0369423 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **HEATING LIGHT SOURCE DEVICE**(71) Applicant: **Ushio Denki Kabushiki Kaisha**, Tokyo (JP)(72) Inventor: **Takahiro Inoue**, Tokyo (JP)(73) Assignee: **Ushio Denki Kabushiki Kaisha**, Tokyo (JP)(21) Appl. No.: **17/687,560**(22) Filed: **Mar. 4, 2022**(30) **Foreign Application Priority Data**

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(57)

ABSTRACT

A heating light source device includes a light source section having a plurality of light-emitting element areas that contain a plurality of light-emitting elements, each of the light-emitting element areas being separated from each other; a cooling unit disposed in contact with the light source section; a plurality of cooling channels formed inside the cooling unit and disposed independently each other; a first main channel connected with one end of each of the cooling channels; and a second main channel connected with the other end of each of the cooling channels, and each of the cooling channels is formed at an internal position of the cooling unit corresponding to the light-emitting element areas.

