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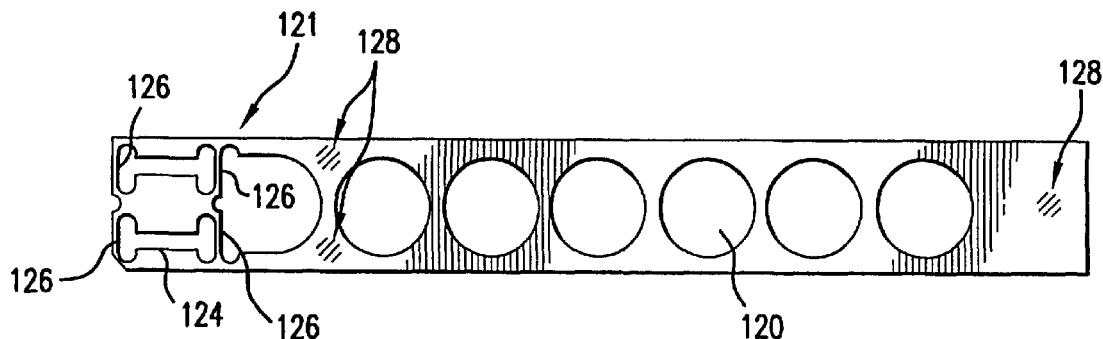
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(54) Title: LINE NARROWING UNIT WITH FLEXURAL GRATING MOUNT



(57) Abstract: A grating based line narrowing device for line narrowing lasers producing high energy laser beams. A flexure grating mount is provided which virtually eliminates stress on the grating caused by differential thermal expansion between the grating and the housing structure. The grating which is comprised of a very thin aluminum surface on a thick ultra low expansion glass substrate is attached to an aluminum housing structure using a flexure grating mount. At least one flexure joint is provided in the grating mount which permits thermal expansion and contraction of the substrate. In some embodiments the mount comprises a metal plate and the flexure joint is a H-Flex joint (124) with four legs (126) which is machined into the metal plate. In another embodiment two H-Flex joints are provided. In other embodiments, the flexure joint is a dovetail joint permitting one end of the mount to slip relative to the other.



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