



## Canon's nanoimprint lithography threatens ASML's monopoly – November 6, 2023

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Japanese equipment maker claims 5nm and finer resolution at a much lower cost than ASML's EUV photolithography

By **SCOTT FOSTER** NOVEMBER 7, 2023

Canon has announced a new nanoimprint lithography system that it says can transfer circuit patterns equivalent to those created by 5nm EUV photolithography. Furthermore, it claims that with the improvements it anticipates in mask technology, the transfer of 2nm-equivalent circuit patterns should be possible. If this can be done economically, it would be a direct challenge to ASML, which has a monopoly on the EUV (extreme ultraviolet) photolithography equipment used by Taiwan Semiconductor Manufacturing Company (TSMC) to make the most advanced integrated circuits (ICs) designed by Apple, Nvidia and Intel. In contrast to photolithography, in which light from a scanner passes through a photomask to transfer circuit patterns to a wafer coated with a photosensitive resist, nanoimprint lithography is a miniature mold and stamping process. In nanoimprint lithography, the mask is a mold. To continue reading, please [log in](#) to your AT+ Premium account. Not yet a member? Please sign up for [AT+ Premium monthly membership](#), [AT+ Premium yearly membership](#) or [AT+ Premium Access membership](#).

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