

Optimal Design of Micromixer

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Mixing rate in the mixing zone depends on the flow distribution in the microchannels. Therefore, many researches on the uniformity of volumetric flow rates in the micro channel have been studied. Interdigital type micromixer is known as an effective type in mixing. However, most commercial interdigital type micromixers have problems of either large pressure drop or poor flow distribution in the channels. To design micromixer that uniform flow distribution with low pressure drop, six factors are considered for the design: diverging channel angle, channel depth, channel width, channel length, number of channels, inlet channel width and wall thickness between channels. The equation including six factors mentioned above enables optimal micromixer is designed.