

Title (en)

METHOD AND SYSTEM FOR PRODUCING MICRO-STRUCTURED COMPONENTS

Title (de)

VERFAHREN UND SYSTEM ZUR HERSTELLUNG MIKROSTRUKTURIERTER KOMPONENTEN

Title (fr)

PROCÉDÉ ET SYSTÈME DE PRODUCTION DE COMPOSANTS MICROSTRUCTURÉS

Publication

EP 4360132 A1 20240501 (DE)

Application

EP 22733525 A 20220525

Priority

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- EP 2022064300 W 20220525

Abstract (en)

[origin: WO2022268431A1] In a method for producing a micro-structured component which has a plurality of functional micro-elements on a substrate, laser machining is carried out in a laser machining station under the control of a control unit in at least one method step. The method comprises the following steps: providing a first substrate, which bears a plurality of functional micro-elements, which are arranged on a first side of the first substrate in a first spatial arrangement; transferring functional micro-elements from the first substrate onto a transfer substrate in a first transfer step; and transferring functional micro-elements from the transfer substrate to a second substrate in a second transfer step, in such a way that the functional micro-elements are arranged on the second substrate in a second spatial arrangement. The method is characterized in that a dicing tape (100) clamped under strain in a clamping frame (200) is used as the transfer substrate (250), the dicing tape comprising an elastically extensible base film (102), which is under surface tension, with an adhesive layer (104) applied to the base film for temporarily fastening functional micro-units to the dicing tape (100). The method can be used to produce a micro-LED display having a substrate which bears an array of pixel-forming micro-LEDs on an electrical supply structure.

IPC 8 full level

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CPC (source: EP KR US)

B23K 26/36 (2013.01 - KR); **H01L 21/6835** (2013.01 - KR); **H01L 24/75** (2013.01 - EP KR); **H01L 24/97** (2013.01 - KR); **H01L 25/0753** (2013.01 - EP KR); **H01L 33/0093** (2020.05 - EP KR US); **H01L 33/0095** (2013.01 - EP KR US); **H01L 2221/68322** (2013.01 - EP KR); **H01L 2221/68354** (2013.01 - EP KR); **H01L 2221/68368** (2013.01 - EP KR); **H01L 2221/68381** (2013.01 - EP KR); **H01L 2224/75705** (2013.01 - EP KR); **H01L 2224/7598** (2013.01 - EP KR); **H01L 2224/95001** (2013.01 - EP KR); **H01L 2224/95092** (2013.01 - EP KR); **H01L 2224/95136** (2013.01 - EP KR); **H01L 2924/12041** (2013.01 - KR)

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