Chip analysis application description

27.07.2021/TB

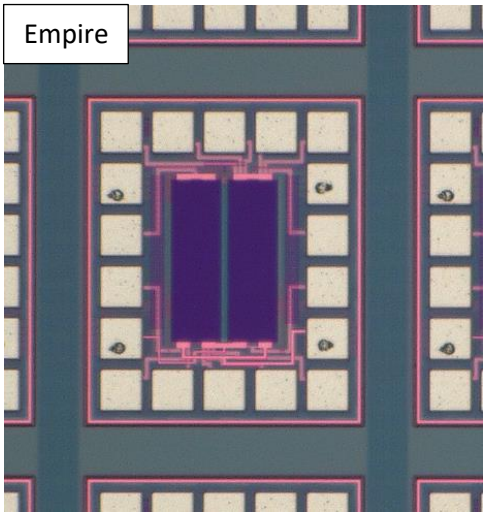
Introduction

The customer is using a Keyence digital microscope to grab images of wafers automatically. The scan software is already present. The images are all saved into a folder. The analysis process must be discussed, also how this part is going to be linked to the scan software, if at all.

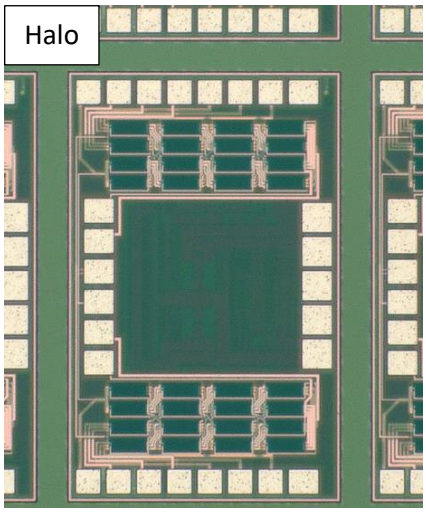
Variants of chips

For now, there are five variants of chips:

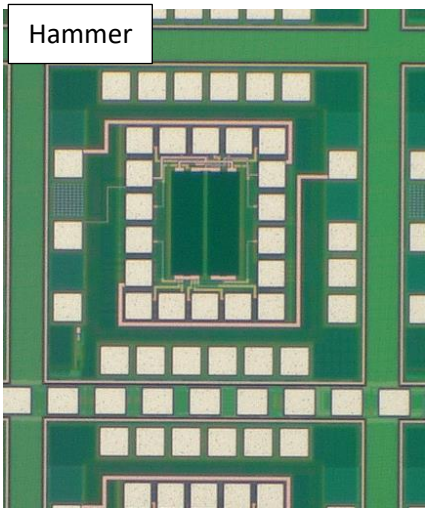
Empire



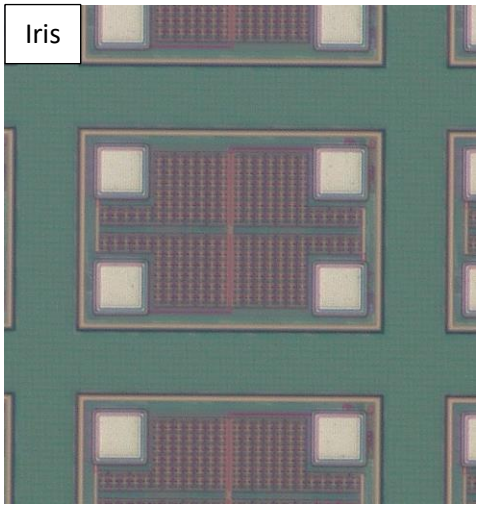
Halo



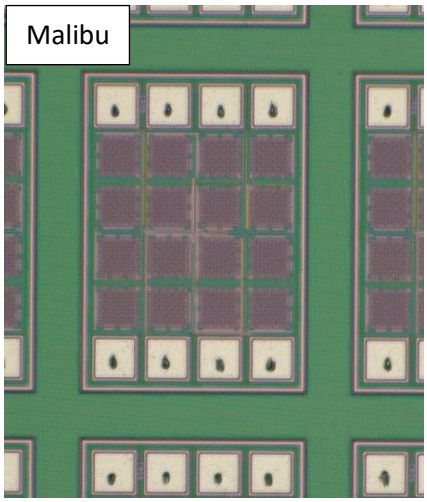
Hammer



Iris

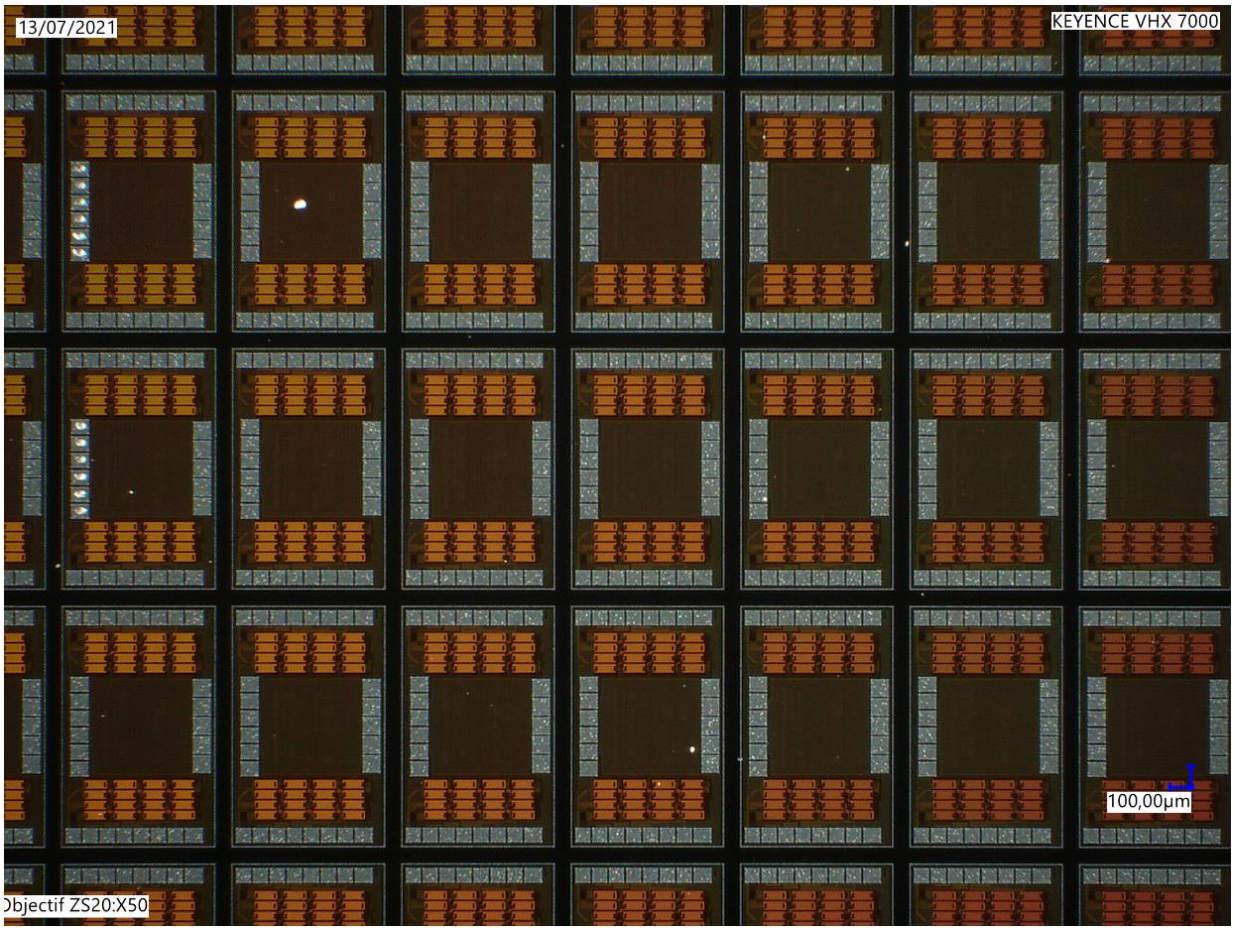


Malibu



For each variant, a recipe must be prepared to define the AOI (area of interest), ignorance area and so one.

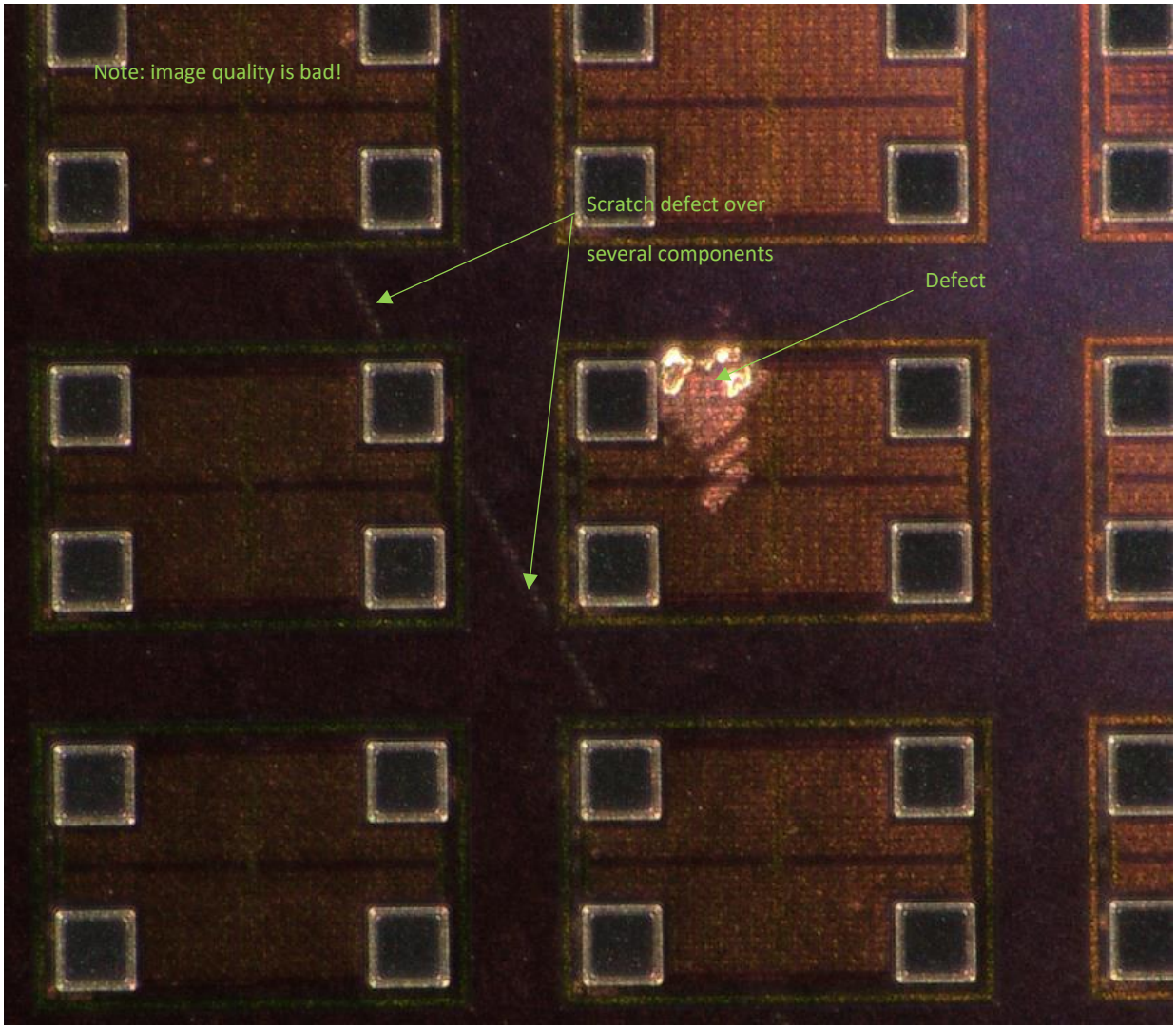
NOTE! All images are analyzed in dark field mode like this example:



Each wafer contains about 10’000 chips which must be inspected in 60 min. To save time, we plan to grab images with at least 6 chips within the FOV. Each chip must be cut and analyzed separately but with a parallel task while scanning.

IMPORTANT notice! For the failure report, each chip (cut image) must be named according to the image name and an index which defines the correct position within the image. Must be discussed in Detail.

Examples of recipes


Note: image quality is bad!
Scratch defect over
several components
Defect