



Technical Documentation

# Project: mw204

**First gratings in gold and nickel**

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Version: 14/11/12

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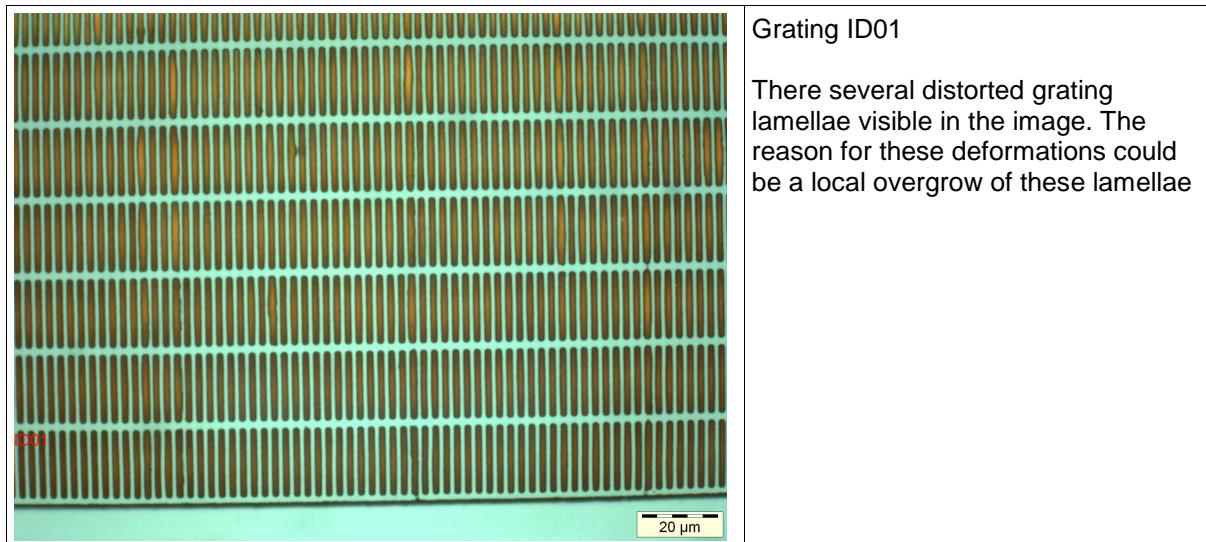
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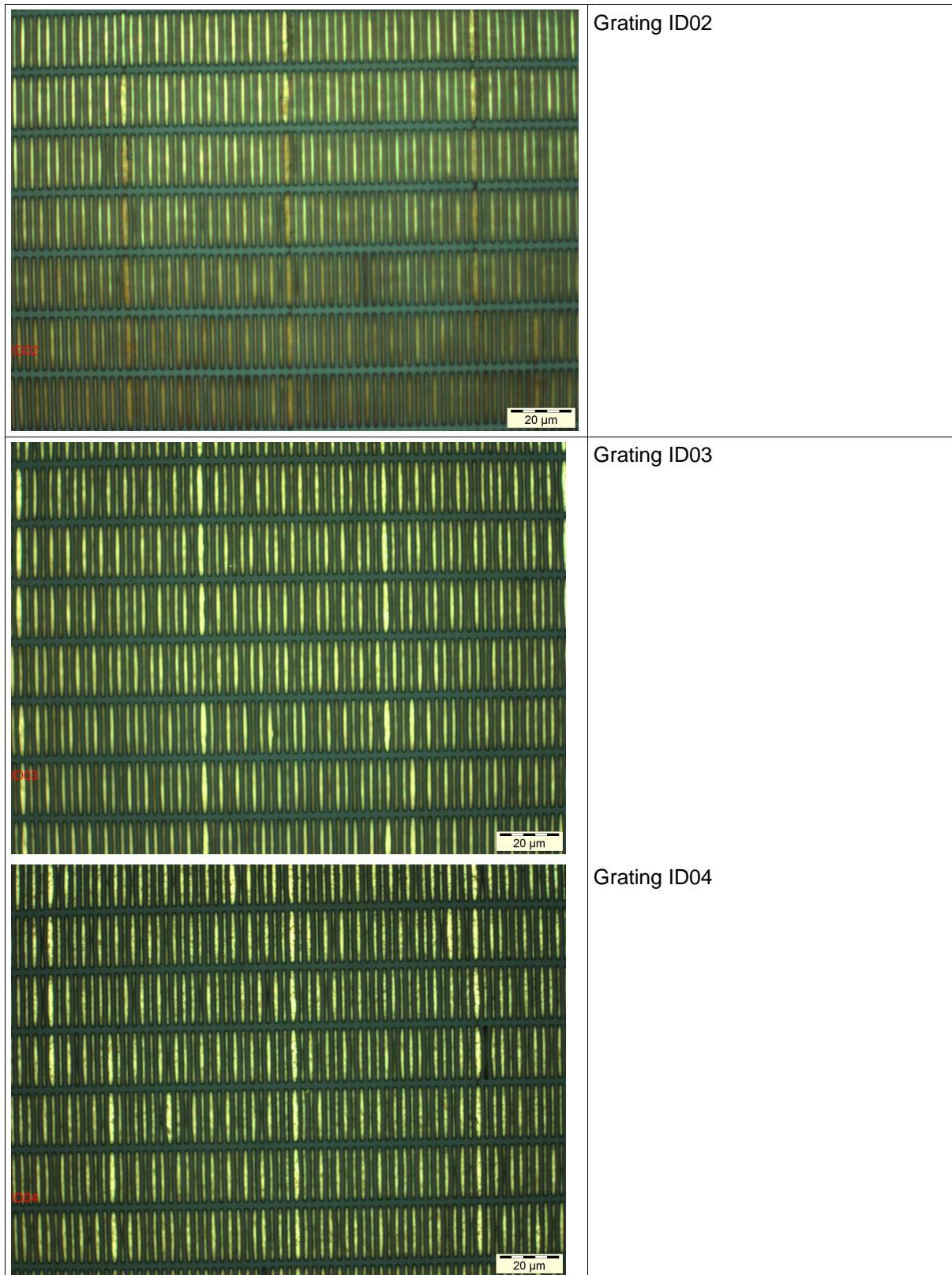
## 1. Introduction

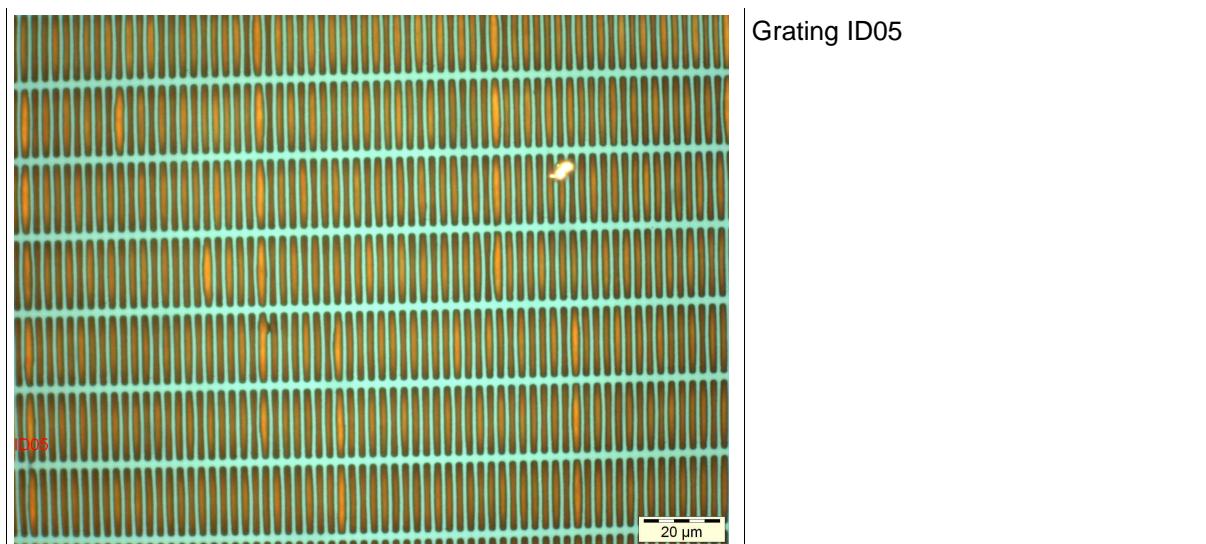
So far, two substrates could be patterned and electroplated. Due to some problems during electroplating the metal layers have partially or completely overgrown the resist structures. While this has not an immediate effect on the feasibility of the grating structures for the intended application, the overgrowth makes it hard or impossible to determine the actual grating quality with a top-viewing microscope. This document gives an overview of the obtained gratings.

## 2. Absorption gratings

All images are obtained from substrate sub0453

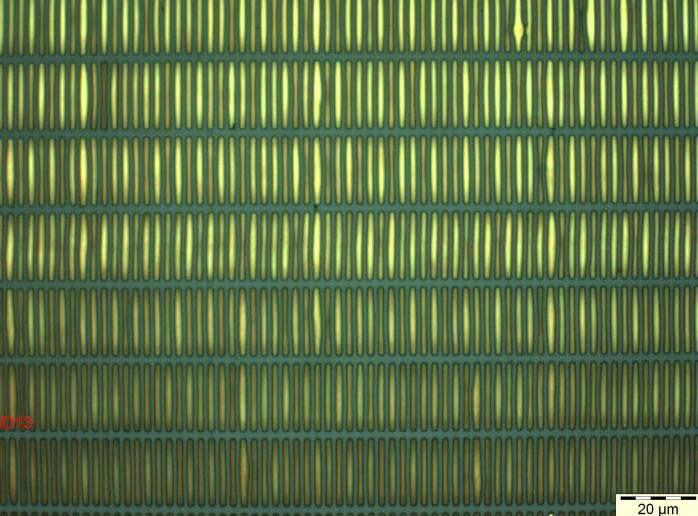
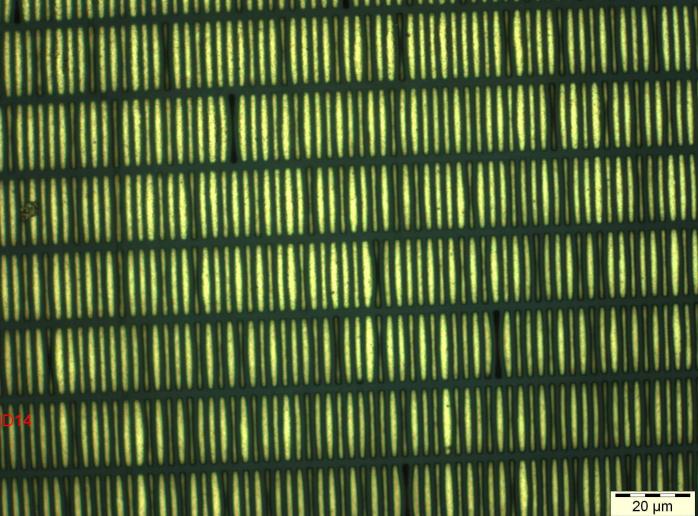
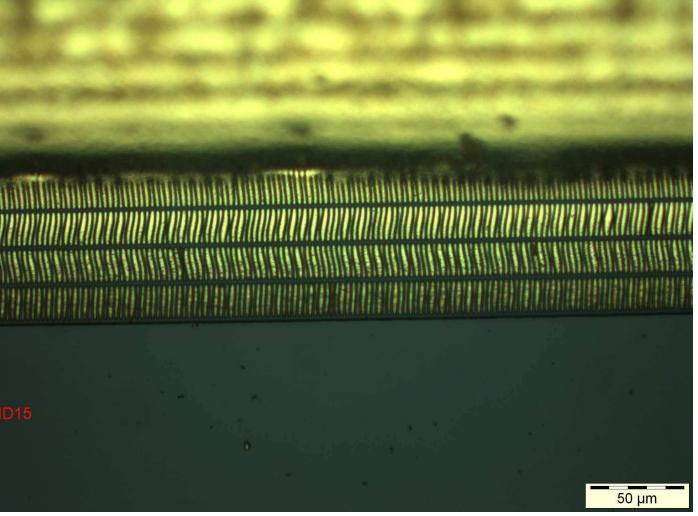


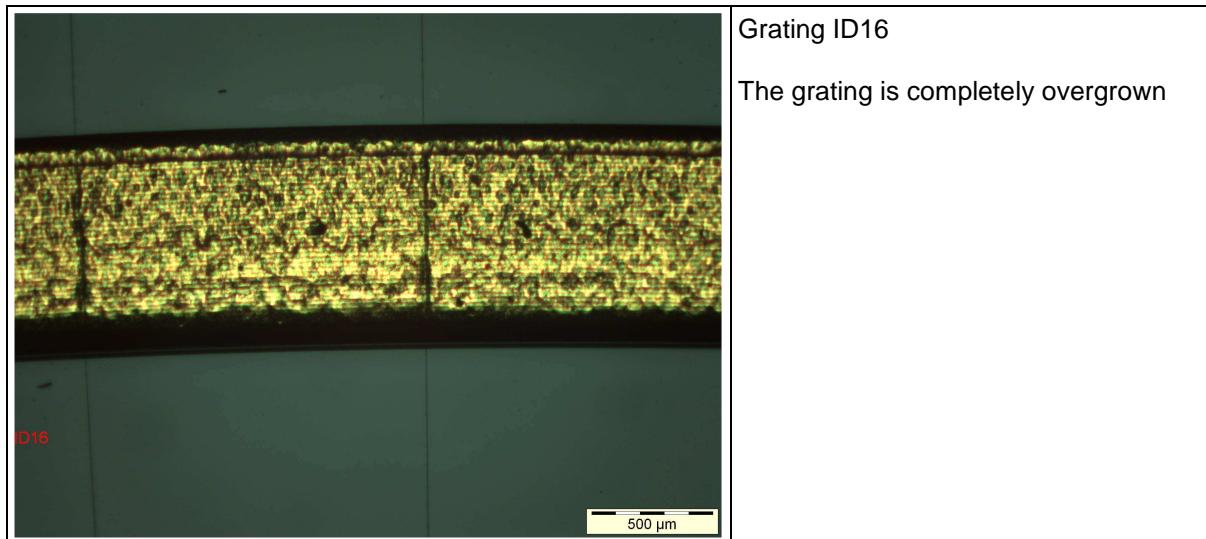




### 3. Source gratings

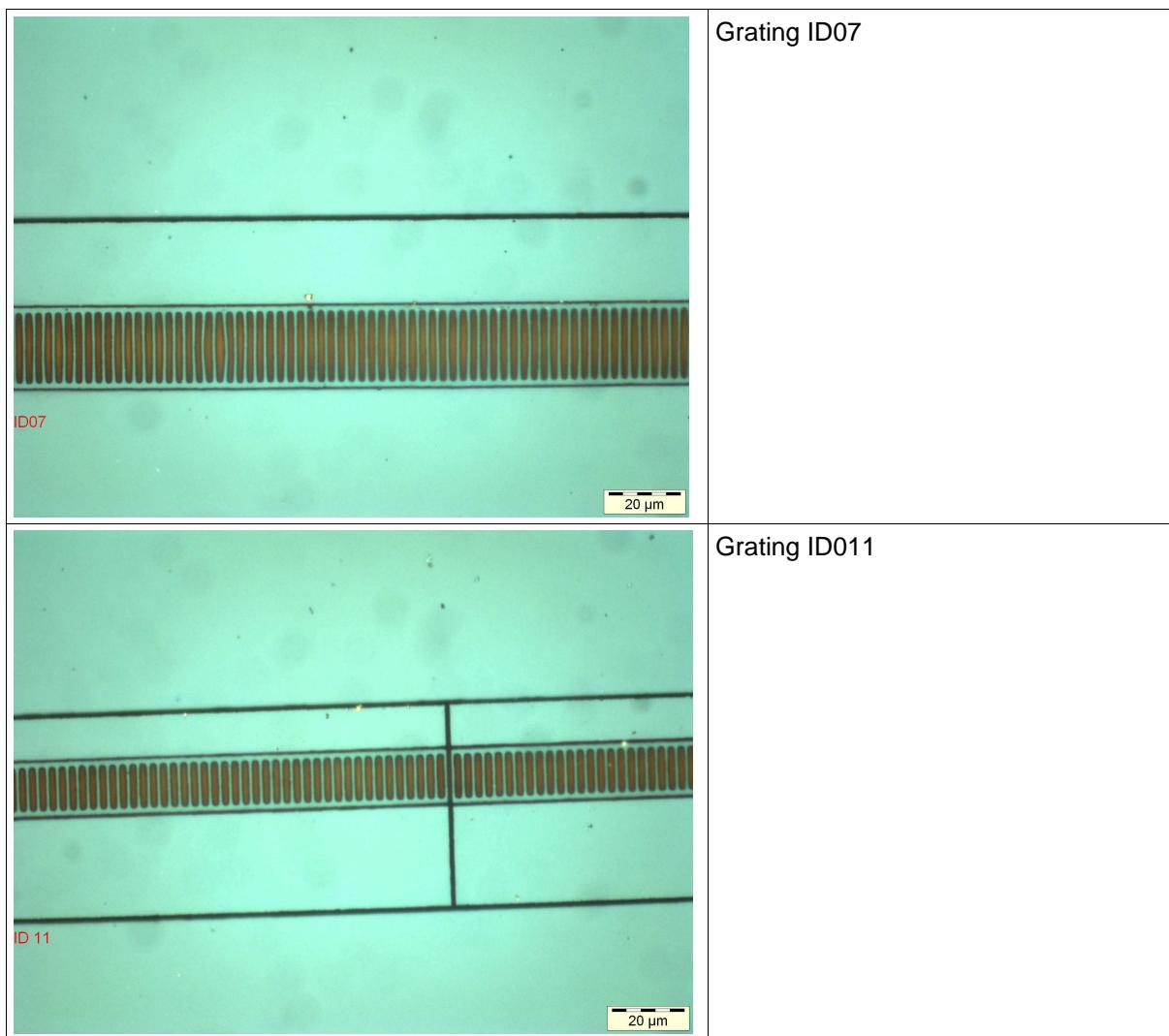
All images are obtained from substrate sub0453

 ID13	Grating ID13
 ID14	Grating ID14
 ID15	Grating ID15  The grating is mostly overgrown. However, close to the boundary of the grating strong deformations of the grating lamellae are visible.



## 4. Gold phase gratings

All images are obtained from substrate sub0453.



## 5. Nickel phase gratings

All images were obtained from sub0322. All gratings show a massive overgrow of nickel, however, from the quality of the gold phase gratings ID11 and ID07 we have reason to believe that the quality of the phase gratings under the nickel overgrow is good.

