



To Whom It May Concern

Premstaetten, April 24, 2018

## Product Change Notification PCN09-2018

### Filter Equipment Change for AS7000-AA

Dear Customer,

ams would like to inform you about an improvement in the supply chain security of the product AS7000-AA.

The optical filters for AS7000-AA are currently processed on a single equipment. This equipment is a single tool equipment and therefore we are going to switch this product to our standard filter tools from Q2/2018 onwards.

ams has currently 39 tools of this standard equipment installed and is running production in high volume on these machines. The single equipment will enter EOL by end of Q2/2018. We are convinced that this change will significantly increase the supply security.

The Filter material and product performance / data-sheet parameters will stay unchanged.

#### **Affected Products:**

AS7000-AA

AS7000-AA1V4EC7

AS7000-AAM

#### **Applied change:**

	Current Filter Equipment	New Filter Equipment
Filter material	no change	no change
Filter deposition method	no change	no change
Filter layout <i>See detailed explanation in Appendix 1</i>	Full Die	TSV+PD only



### **Reason for change**

- + Eliminate single equipment for filter processing.
- + Increase supply security.

### **Change Date**

The change is effective by end of Q2/2018

### **Sample Availability**

Samples are available on request.

### **Qualification**

- Qualification of new Filter equipment / done
- Stress measurement on bare wafers after filter disposition and comparison between Current and New Filter Equipment / done
- 10 Lots Safe Launch / ongoing
  - 100 % MRB
  - Full data analysis & comparison of optical and electrical parameters
  - FA Analysis of all open short fails
- FMEA / done

### **Risk Assessment**

The risk is classified as very low based on following facts:

- Only change to new equipment with better uniformity and stability.
- No change of filter material.
- Identical optical performance.



Please be advised that unless we receive your written refusal concerning this PCN within 30 days, the PCN shall be deemed accepted

If you do have further questions, please do not hesitate to contact me.

Best Regards,

A handwritten signature in blue ink, appearing to read 'R Rogy'.

Reinhard Rogy  
ams AG  
Senior Manager Operations

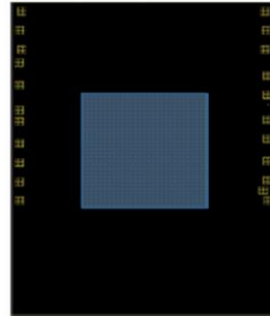
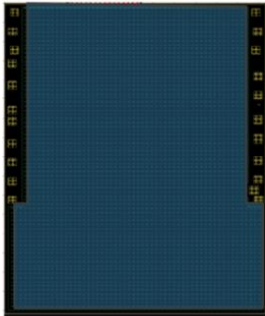
APPENDIX 1: Description of Filter Layout Change

## Equipment change for interference filter (IF) deposition

### Device AS7000 19204

- Deposition method and Filter material stays the same, just slight change of filter thickness
- IF deposition with new equipment induces more stress on the die → die area covered with IF needs to be reduced

Current IF layout:  
IF covers the whole die



IF layout for new tool  
allows same stress level  
(IF above photodiode and  
TSV membranes)