

## WP2 - MPW UPDATE

Roel Daamen, 23 October 2017

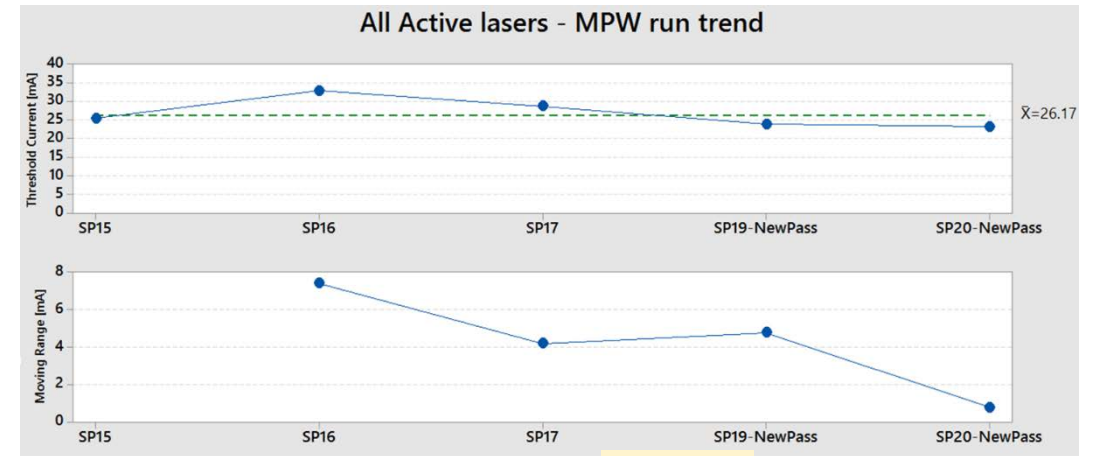
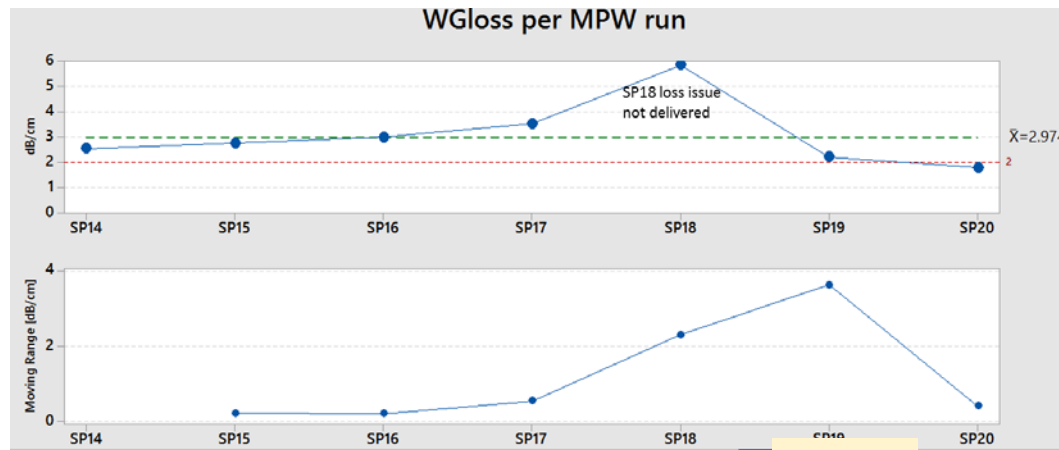
# OUTLINE

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- SP20 Basic parameters
- WP2 Outlook

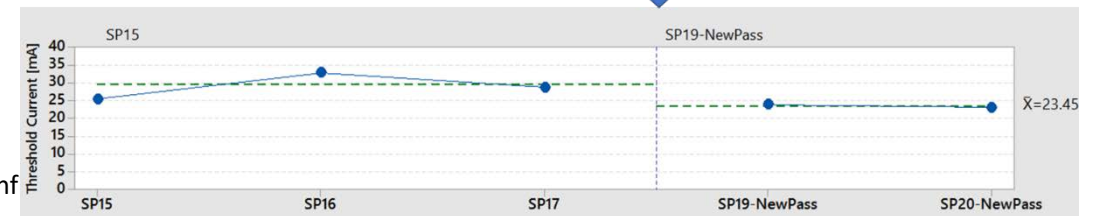
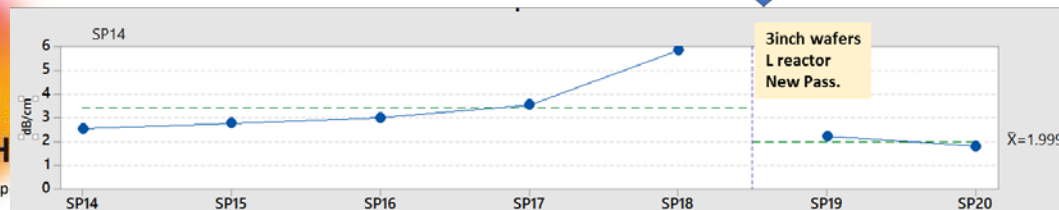
# SP20 SUMMARY

- Aside from the SP20A metal/adhesion issues, the PCM's of SP20A (and SP20B-SI) have shown very low Waveguide Loss ( $\leq 2\text{dB/cm}$ ) and stable Laser performance with low Threshold Currents similar to SP19 ( $<25\text{mA/mm}$ )
  - Delamination RCA has been started, also a SP20A re-run has been started
- It is clear that the switch to 3" processing, the use of the L-reactor and implementation of the new passivation has improved the MPW's robustness in terms of performance



**3" wafers  
L-reactor**

**L-reactor  
New Pass.**



# WP2 MILESTONES - UPDATE

WP2.2.M3.1	Polyimide Planarisation sequence on SP20	Roel	Sep-17		
WP2.3.M1.1	DBR laser	Roel	Sep-17		

- Above Milestones to be created in the next weeks
  - Actually M1.1 is WP3 work
- WP2 planning to be updated as well

- Planarisation improvements

**Previous**

- SP19 New Passivation
- SP19 => SP20 PI planarization improvement – Part 1 Mask switch

**Ongoing**

- SP20 => SP21 PI planarization Improvement – Part 2
  - Additional PI & reduced PI loss w.r.t. passivation/contact opening

**Next**

- SP21 => SP22 PI planarization improvement – Part 3
  - SP22B will feature Tiling test