Status of On-Detector Opto-Links

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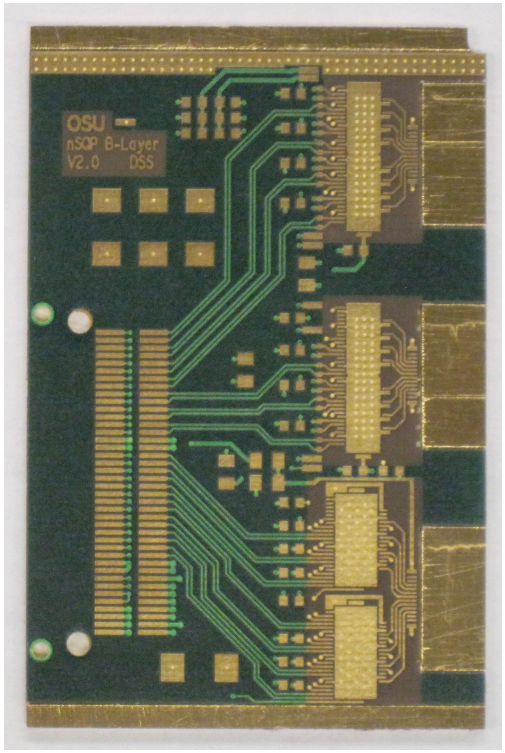
Outline

- Status of opto-board design
- Results on iFlame VCSEL optical package
- Results on iFlame PIN optical package
- Summary

Opto-Board Status

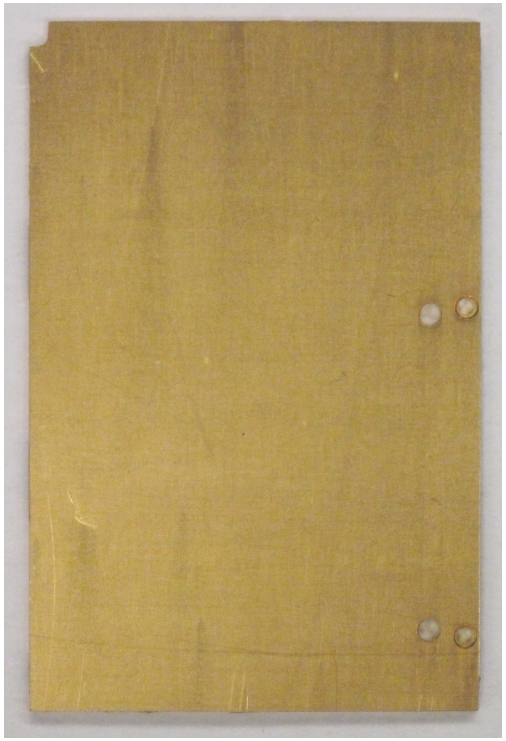
- Received nSQP B-layer prototype opto-board on Monday
  - IBL opto-board will be very similar
  - PCB glued to copper plate for heat removal
  - expect to be able to test board by next week



VCSEL →

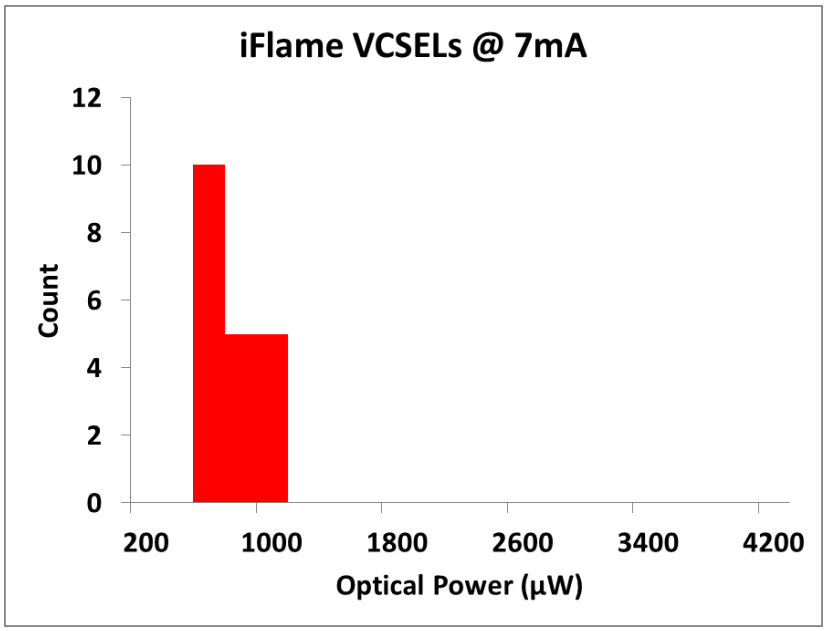
VCSEL →

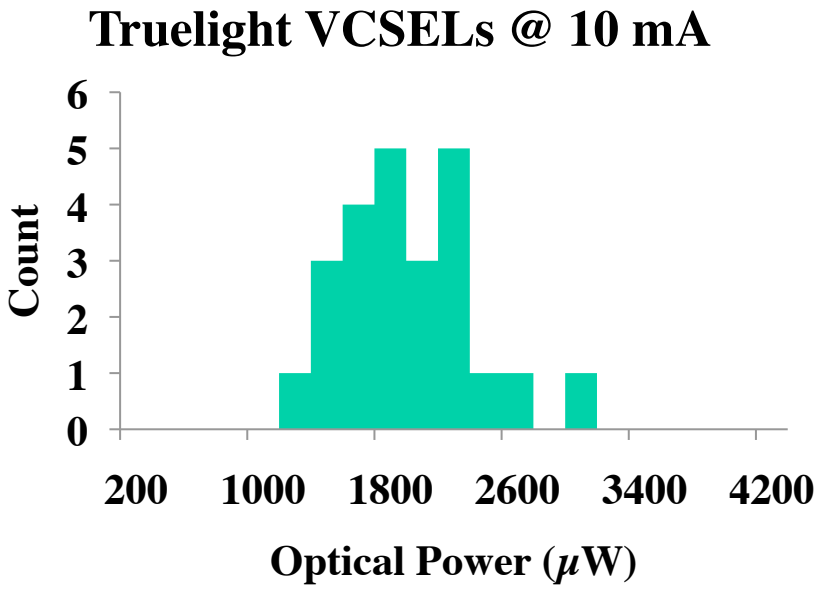
PIN ←



Result on iFlame VCSEL Opto-packs

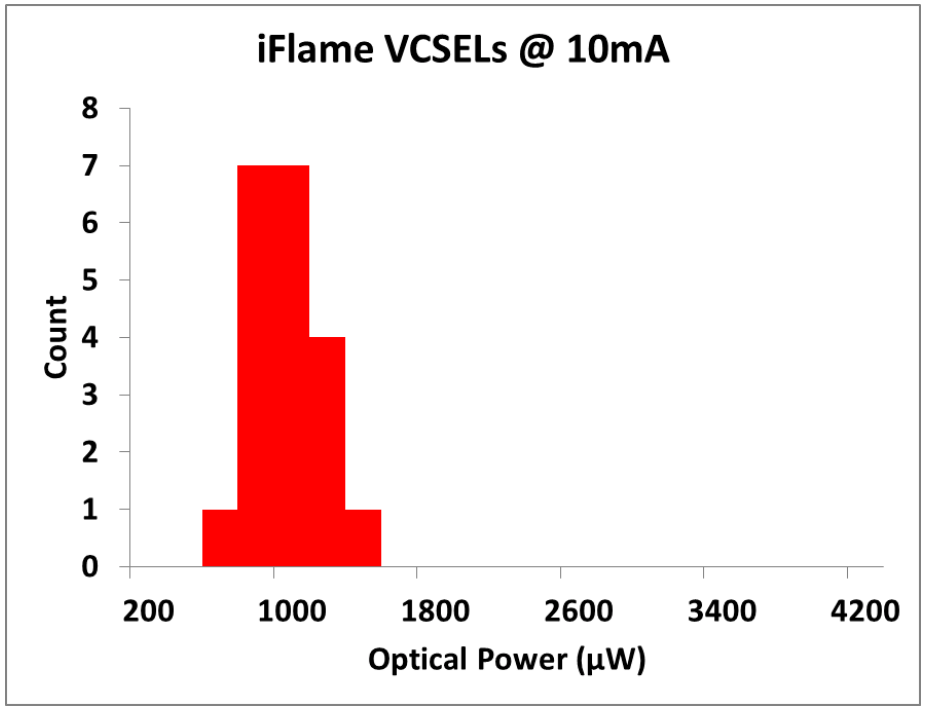
- Received 6 opto-packs with 4-channel VCSEL and PIN arrays
  - delivery of 12-channel opto-packs expected soon
- Optical power at nominal current is somewhat low

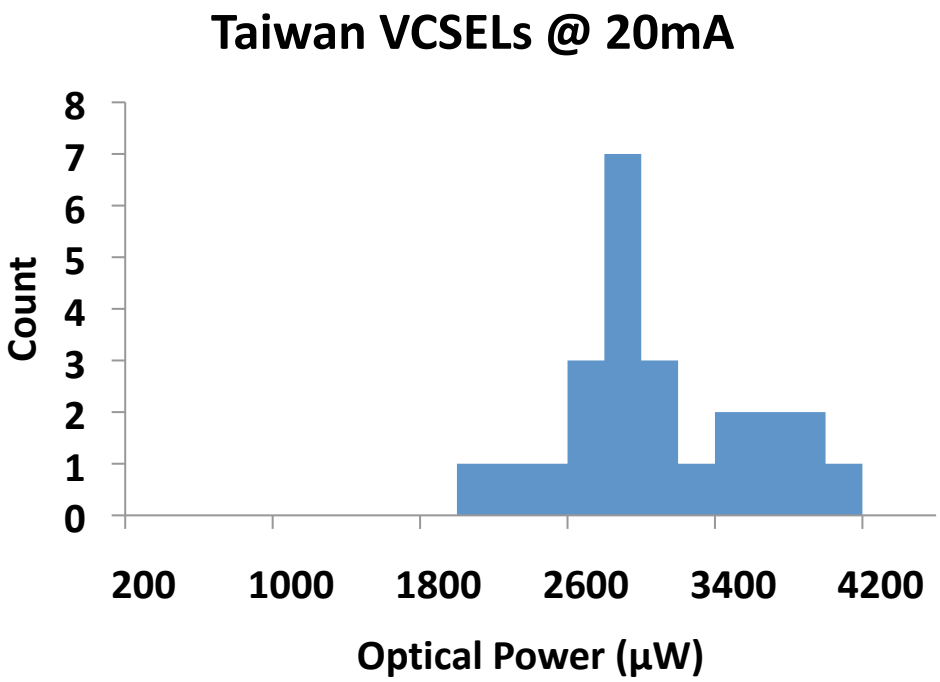




Result on iFlame VCSEL Opto-packs

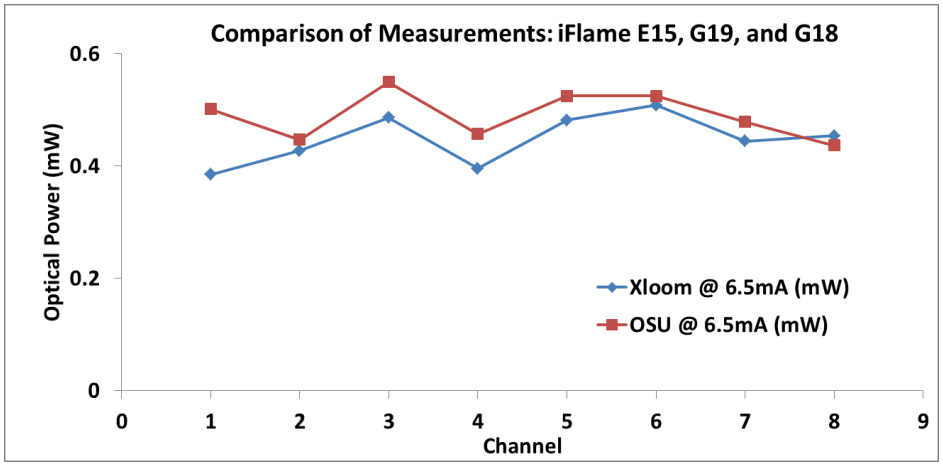
- Optical power at maximum current is somewhat low

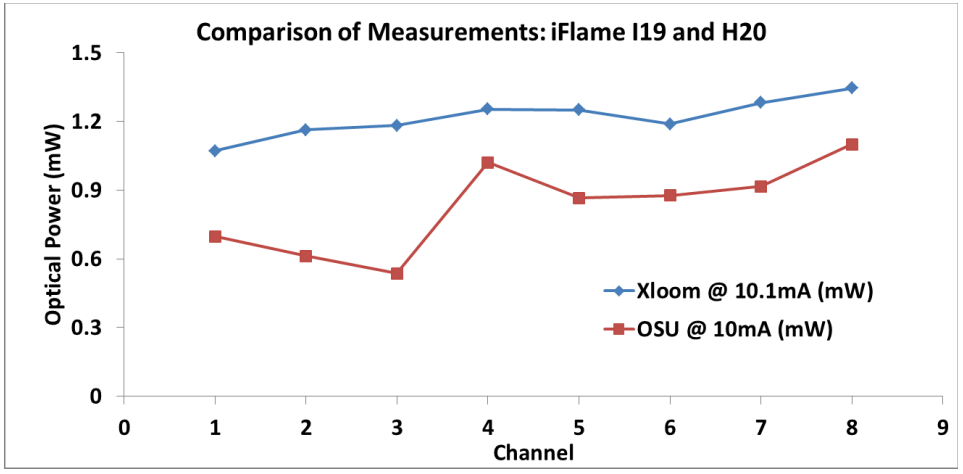




iFlame/OSU VCSEL Measurements

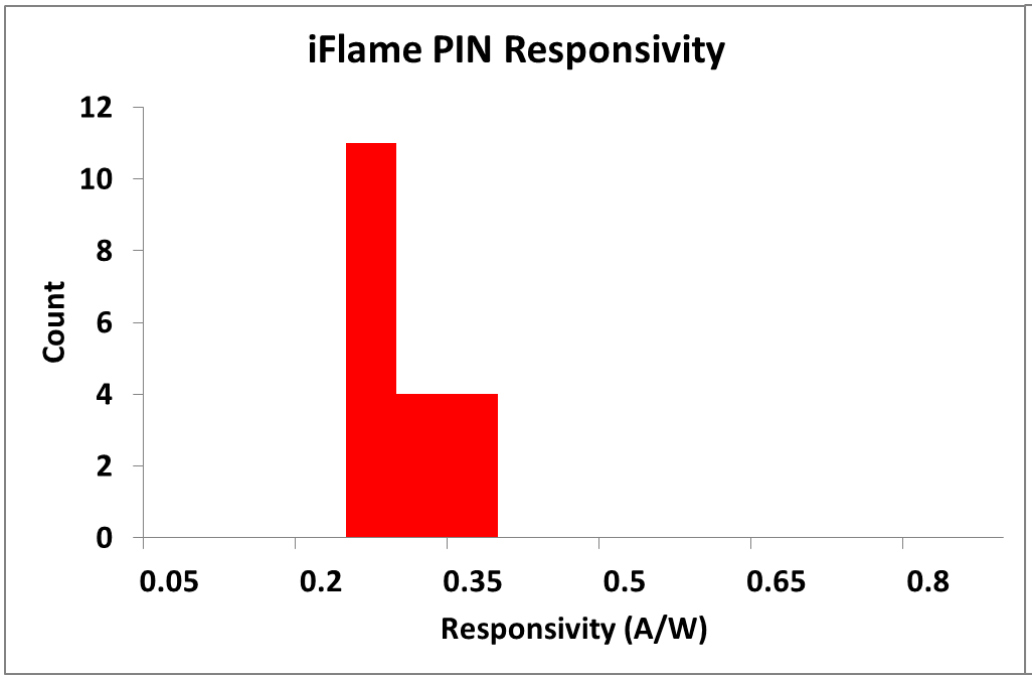
- Optical power measurements of 1st batch are similar
- OSU measured lower optical power in 2nd batch
  - Need to investigate the discrepancy

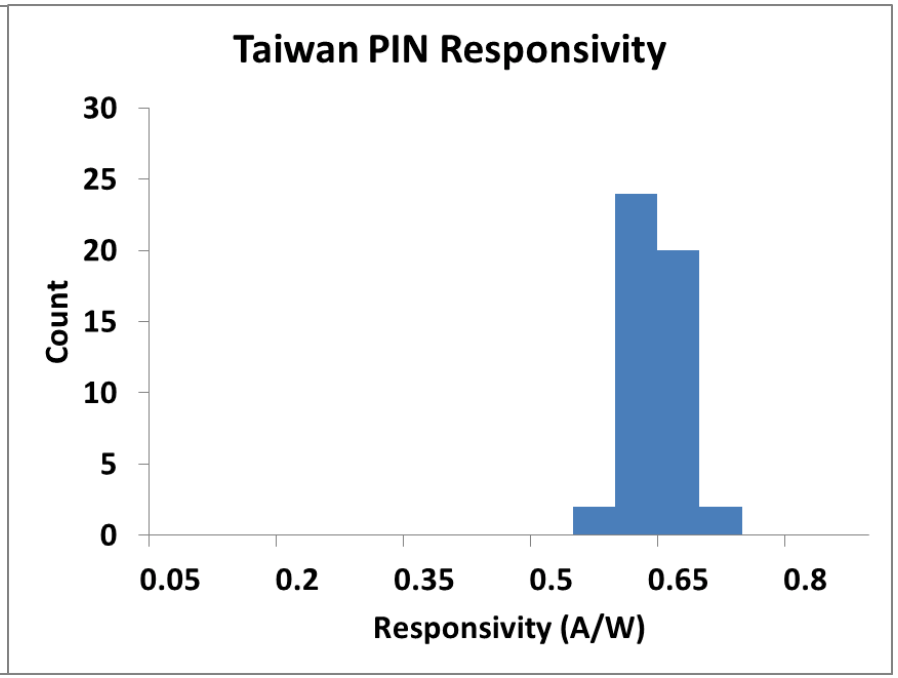




Result on iFlame PIN Opto-packs

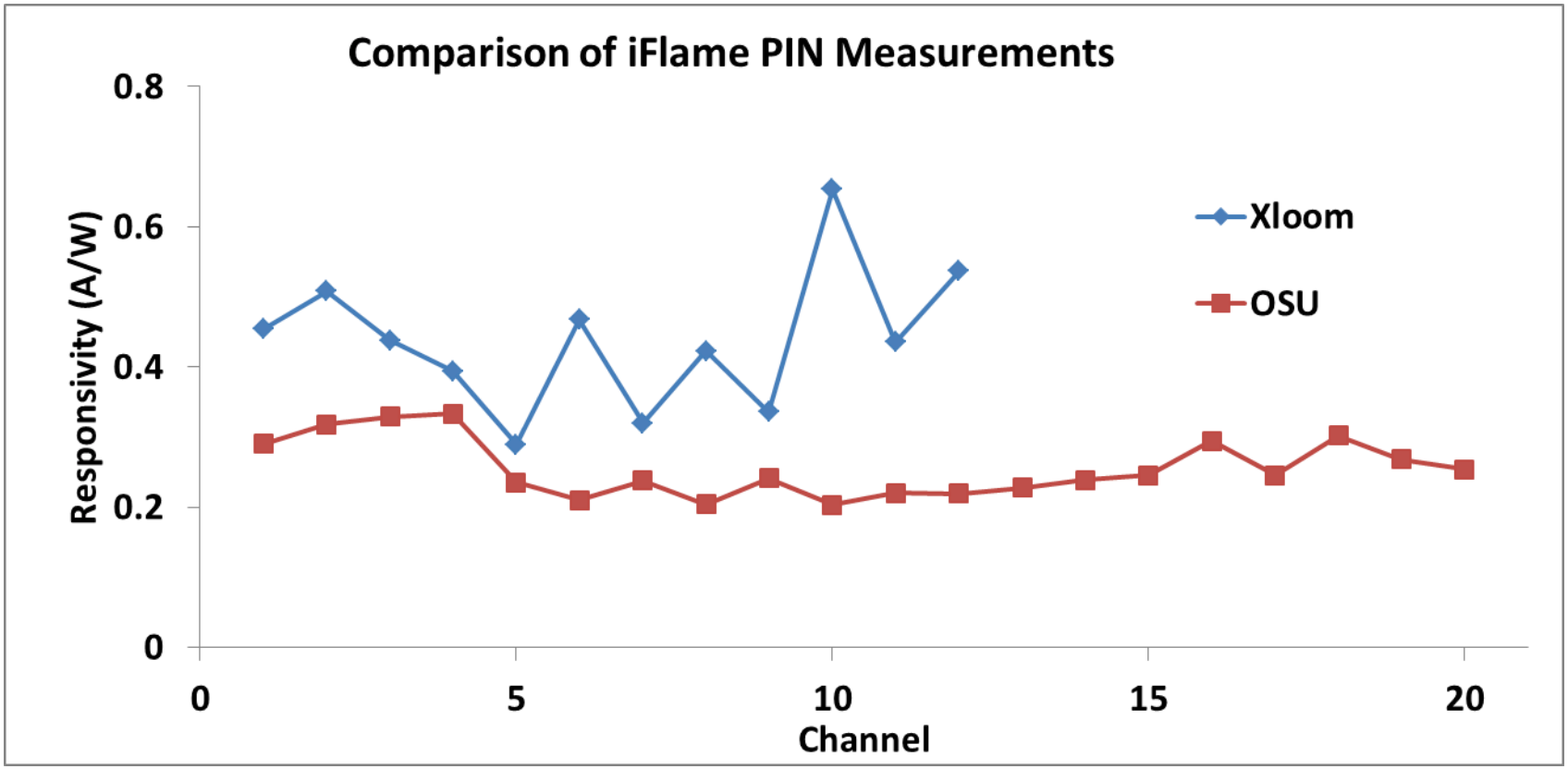
- PIN responsivity is somewhat low





iFlame/OSU PIN Measurements

- Fiber diameters used might explain the discrepancy



Summary

- new SQP prototype opto-board received
- optical power of iFlame VCSEL opto-packs is somewhat low
- responsivity of iFlame PIN opto-packs is somewhat low