

Q1 2018 PROGRESS SMART PHOTONICS FOR OPENPICS

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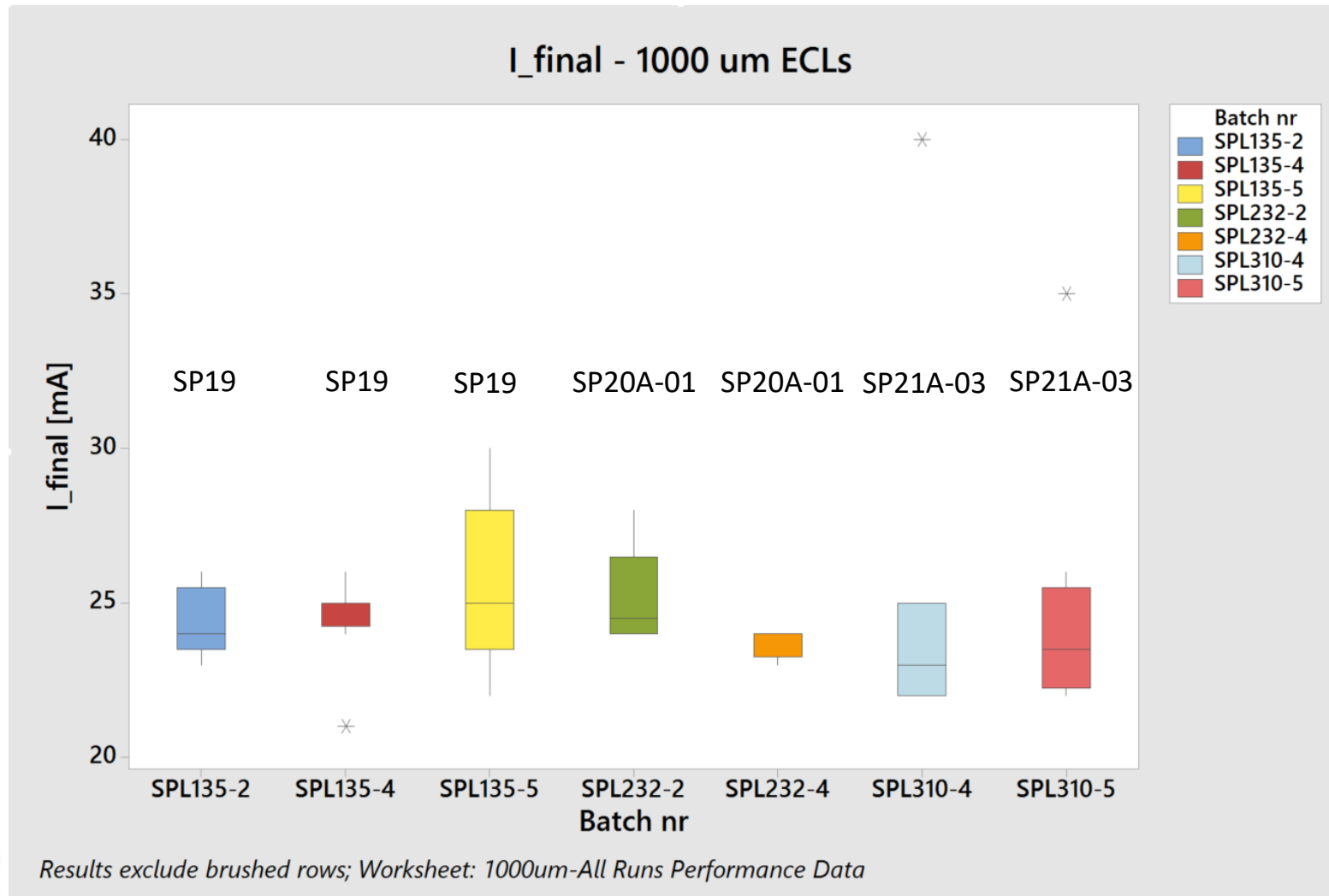
April 4th, 2018

PROGRESS ON MPW DELIVERY, STATUS Q1 2018

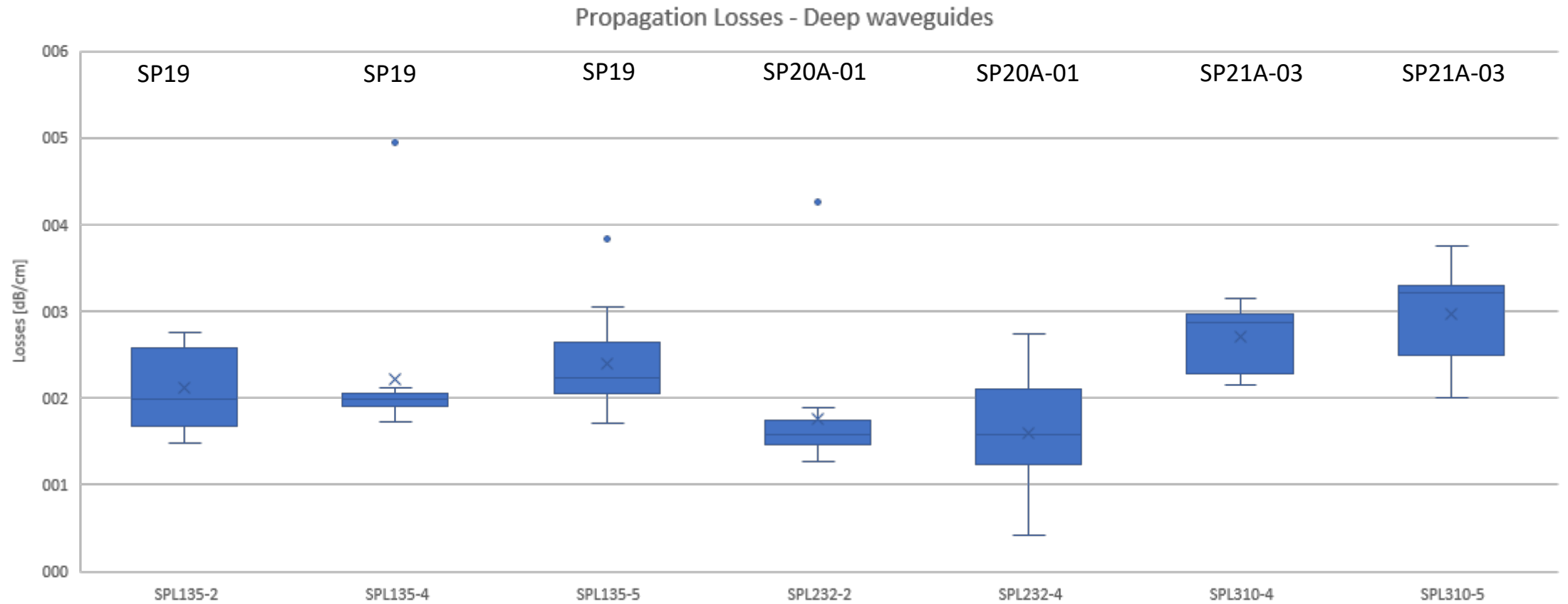
MPW	STATUS*	MEASURED
SP20A	Delivered	WG-loss & LIV
SP20B	Delivered	WG-loss & LIV
SP21A	Delivered	WG-loss & LIV
SP21B	Delivered	WG-loss & LIV
SP22A-02	In progress, expected 31/05	
SP22B	Delivered	WG-loss & LIV
SP23A	In Progress, expected 31/05	
SP23B	To be started, expected delivery June '18	

* Expected dates, can shift due to production issues

MPW CHART ITH



Wg loss MPW Batches



OVERVIEW WP2 MILESTONES

MPW run #					SP18	SP19	SP20	SP21	SP22	SP23	SP24	STATUS
Month					9 10 11	12 1 2	3 4 5 6 7 8	9 10 11 12	1 2 3 4 5			
ID	Title	Responsible	Contrib. partner	Due Times	2016	2017						
WP2.2.M2.3	Threshold Current & Passivation - Passivation Integrity/Integration Improvements update	Roel		● Dec-17								Done & reported
<i>Planarisation</i>												
WP2.2.M3.1	Polyimide Planarisation sequence on SP20	Roel		● Sep-17								Done & reported
WP2.2.M3.2	Dummy Structures/Tiling (on SP22)	Roel		● Dec-17								Shifted to SP23B, Design ongoing
WP2.2.M3.?	T.B.D.	Roel										
<i>Waveguide Loss improvements</i>												
WP2.2.M4.1	T.B.D.	Roel										
WP 2.3	<i>New Building Blocks (from WP3) Commercially Available on MPW</i>											
WP2.3.M1.1	DBR laser	Roel		● Sep-17								Done & reported
WP2.3.M1.2	SI substrate	Roel										Shifted to SP23B, Design ongoing
WP2.3.M1.3	Effect MQW	Roel										Available B-batch internal
WP2.3.M1.4	Spotsize Converter	Roel										New test run in SP23B
WP2.3.M1.5	Al MQW	Roel										2019

WP3 Deliverable + 1 MPW run

PROGRESS SMART PHOTONICS Q1 2018

	Planning BB's	MPW Validation			MPW commercial			PROGRESS SMART PHOTONICS Q1 2018
		SP19	SP20	SP21	SP22	SP23	SP24	
		dec-16	mrt-17	jun-17	sep-17	dec-17	mrt-18	
			1st	copy				
	SI-substrate		x					Used in MPW B-batch, no issues
	Plating	x						Thick metal, available, Delivered. TU/e measurements?
	EFFECT MQW			x				Available for internal use in B-batch
	Al-MQW							First EPI- runs done
	CL-TWE							Capacitively loaded-Travelling Wave Electrode
RF-Line	Conventional				1st			First in SP19B, ongoing. Results TU/e?
	New Planarization				tbd			Ongoing
SSC					x			SP22B, problem with actives, process error. New test run in SP23B
Prec.Filter	(Ring, AWG, MZI)			1st			2nd	Cooperation with Bright
DUV Grating	DBR	EBL	x EBL	DUV	DUV			As described: EBL, EBL(good), DUV(to be tested)
DUV waveguide	DUV		x	x	x			Implemented in SP22B, to be tested
Low LW LD								
	DBR Laser		1st			2nd		
	Triplex Hybrid				tbd			
	High Q Cavity Laser							
WP4-Items	Zn Diffusion				x			Supported, 1 wafer batch grown & delivered
	Thick insulation + RF				x			Ongoing
	Improved Etching						x	Optimized CH4/H2 and Chlorine process under validation
Demo	Both chips							