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# **Compromise proposal for power budget**

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**It's time to reach consensus today!!**

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**NEC**

# Compromise power budget

## Every feature in this proposal

- PX20 and PX30 can be selected as required on video overlay
- PX30 OLT transmitter can be shared with PX10

	PX10	PX20	PX30
ONU Sensitivity (*)	-20	-20	-28
OLT Launch (min)	+1	+5	+2
OLT Launch (max)	+4	+8	+5
ONU Overload	-1	-2	-10
Devices	High power EML+PIN	Normal EML/EDFA (SOA) +PIN	High power EML+APD
Feature		Low cost PIN (Extender in future)	Video overlay
Status	Motion passed (9/11)		Motion (Y:30, N:11 in July) Motion ( Y:26, N:18 in July)

(\*) sensitivity BER<10<sup>-3</sup> (w/FEC)

(\*\*) Parameters from Takizawa's proposal

# Summary

## Everything in it!!

- APD and PIN can be used in IEEE802.3av
- Video overlay can be also achieved in IEEE 802.3av
- Big compromise (66% for PIN, 33% for APD)

**It's time to reach consensus!!**

# Ref: controversial proposal

## High-Power vs Low-Power (D/S)

	PX10	PX20	B++	$\lambda$ : 157x nm
CH IL (dB)	20	24	29	
Path Penalty (dB)	1	1	1	EML-Tx, <20km
ER (dB)	9	9	9	

### PIN@ONU

ONU Sensitivity	-20	-20	-20	BER<10 <sup>-3</sup> w/ E-FEC
OLT Launch (min)	+1	+5	+10	
OLT Launch (max)	+4	+8	+13	
ONU Overload	-1	-2	-2	

### APD@ONU

ONU Sensitivity	-26	-26	-28	BER<10 <sup>-3</sup> w/ E-FEC
OLT Launch (min)	-5	-1	+2	
OLT Launch (max)	-2	+2	+5	
ONU Overload	-7	-8	-10	

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