

**Opto ASICs: where in the  
experiments can we safely use  
COTS?**

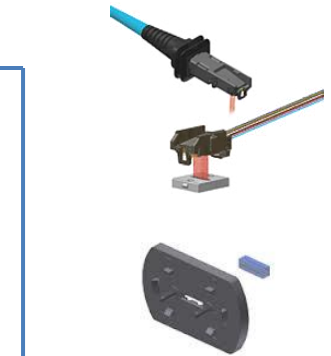
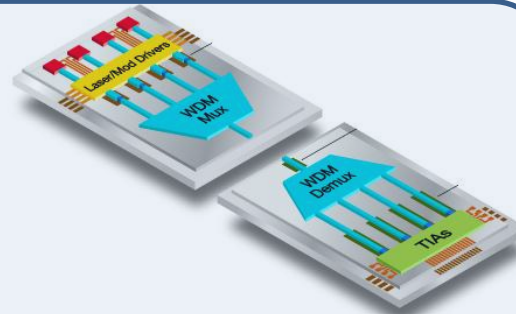
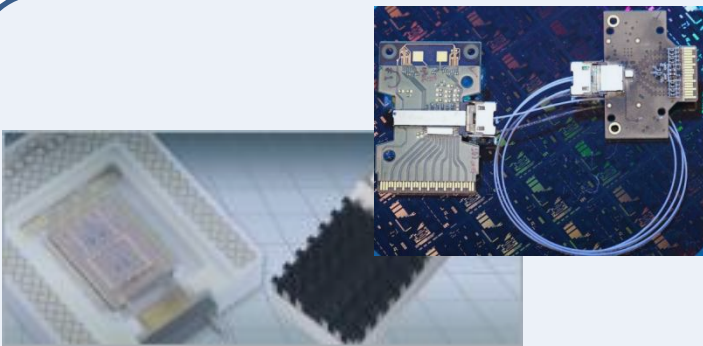
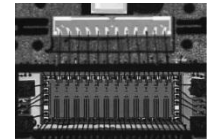
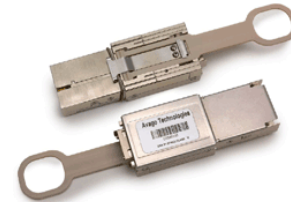
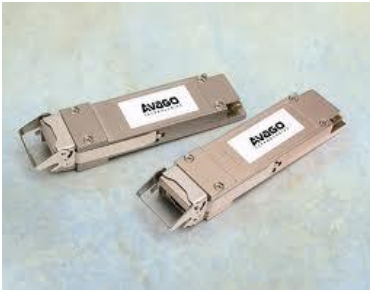
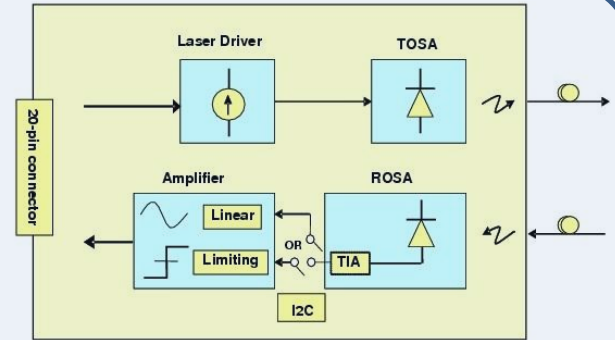
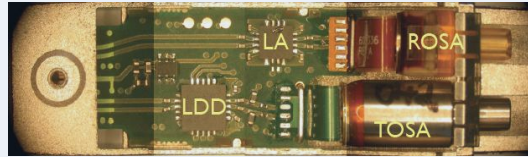
OptoWG

19 Sept, 2012

# To build or to buy

- Many years of established research and development on radiation tolerance ASICs
- Industry races to commercialize high bandwidth, high density optolink modules

# Optical Module Components



# CDRD 120G Project Map

	Tracker (1MGy)		Calorimeter (25kGy)	
SM	TOSA	COTS_FP	TOSA	COTS_FP
		GBLD (@5Gbps)		ONET1101L
	Integrated Photonics	COTS PIC	Integrated Photonics	COTS PIC
		BSTO MZI		BSTO MZI
MM	TOSA	COTS_VCSEL	TOSA	COTS_VCSEL
		SOS/65nm		ONET8501V
	Array	COTS_VCSEL_array	Array	COTS_VCSEL_array
		custom_driver_array		custom_driver_array
		Custom array module		Custom array module