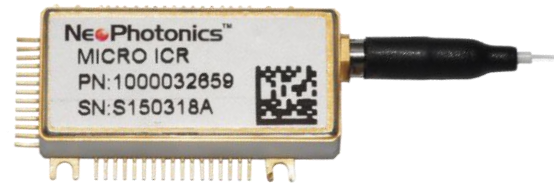


μICR – Class 40

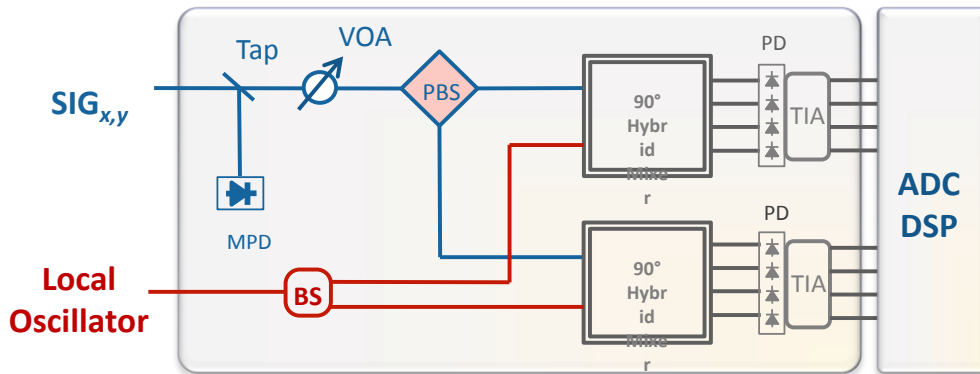
Features

- Compliant with OIF-DPC-MRX-01.0 "Implementation Agreement for Integrated Dual Polarization Micro-Intradyne Coherent Receivers"
- Small form factor: 25 x 16 x 5 mm
- 3 dB Bandwidth = 40 GHz (nom.) (64 GBaud)
- Integrated Monitor/VOA
- Power Consumption: 1.5 W (max. EOL)
- GR468 & 1221 compliant



Applications

- 600 GBps CFP2 ACO/DCO transceivers.
- Long haul & metro/regional transport line cards.



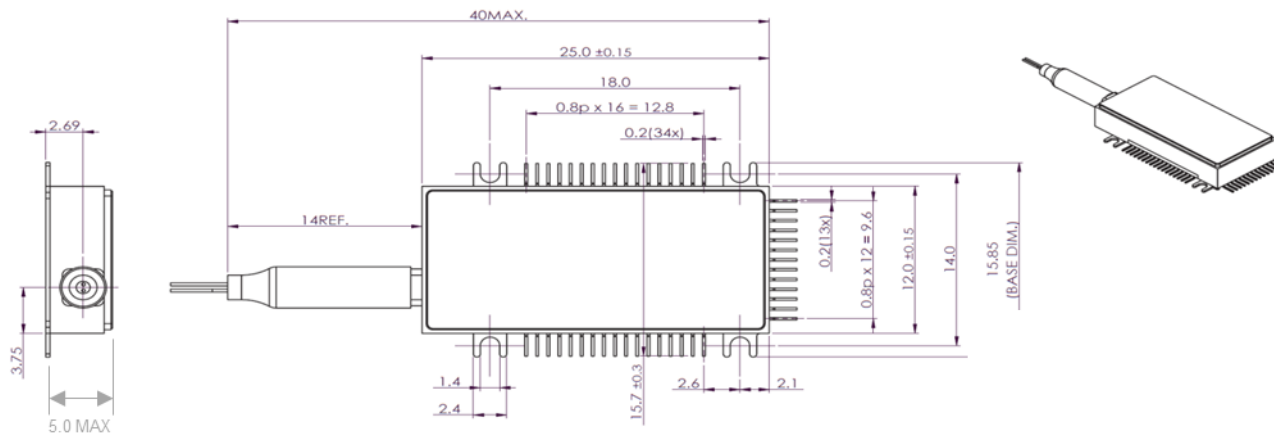
General

Designed for high-density linecards and CFP2 pluggable transceivers, the NeoPhotonics Micro-Coherent Receiver provides advanced demodulation to analyze the state-of-polarization and optical phase of a phase-modulated signal relative to an externally-supplied optical reference. This enables the recovery of the phase-polarization constellation of 200 G/s Dual Polarization Quadrature Phase Shift Keyed (DP-DQPSK) format signals as well as 8-QAM (Quadrature Amplitude Modulation) and 400 G/s 16-QAM format signals. This ICR is also suitable for 64-QAM signals. The ICR incorporates four sets of high-sensitivity balanced photodiodes with four differential linear amplifiers to provide four output channels at 32 GBaud and above. Coherent receiver is compliant with Optical Internetworking Forum standard "Implementation Agreement for Integrated Dual Polarization Micro-Intradyne Coherent Receivers" OIF-DPC-MRX-01.0.

Generic part numbers.

Part Number	Description
1000037128	OIF Class 40 (64 GBaud) μICR with MPD VOA

Mechanical Form Factor



E/O Specifications

Parameter	Symbol	Comments	min	typ	max	unit
Responsivity of Individual Tributaries	R_{SIG}	Dual Polarization	0.035	-	-	AW
	R_{LO}		0.040	-	-	
Monitoring PD Responsivity	R_{MPD}		0.03	-	0.10	AW
Monitoring Photodiode LO Crosstalk		$10 \cdot \log(R_{SI}/R_{LO})$, with R the MPD responsivities detected.	40	-	-	dB
Attenuation Range	$Att.$		10	-	-	dB
VOA Current		Between Ctrl and COM pin	0	-	40	mA
Optical Return Loss	ORL	Each input	27	-	-	dB
Polarization Extinction Ratio	PER		17	-	-	dB
DC Common Mode Rejection Ratio	$CMRR_{DC}$	Signal and L.O., DC	-	-	-20	dBe
Differential Output Voltage Range	$V_{out, pp}$	$P_{LO} = +13dBm$ Min. Gain	-	-	300	mVpp
		Max. Gain	500	-	-	
Total Harmonic Distortion	THD_{diff}	$f=1GHz$	-	-	5.0	%
Small Signal Bandwidth	f_{-3dB}	At max gain setting		40	-	GHz
Input Referred Noise Current Density	I_{noise}	Differential, no optical input, at maximum gain setting.	-	17	-	pA/\sqrt{Hz}
Phase Angle Error	θ_m	Deviation from 90° angle between I and Q	-5	-	+5	degrees
ICR Total Power Dissipation	P_{dis}		-	-	1.5	W