



CL-QOH-90 Quadrature Optical Hybrid

Key Features

- X-cut Ti:LiNbO₃
- Wide optical bandwidth (C-band)
- Six independent external DC bias controls for optical amplitude and phase adjustment
- Two optical inputs. Four Optical outputs
- Design optimized for use with CeLight Quadrature Modulator

Applications

- Coherent optical communications
- Test and measurement equipment
- Coherent LADAR
- Electronic warfare
- Signal intelligence

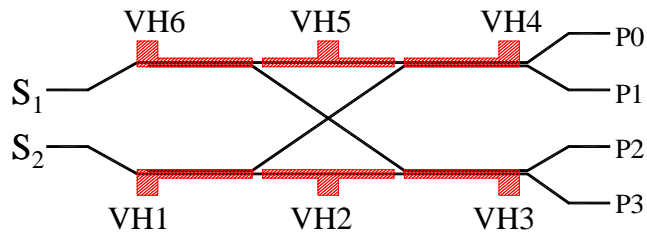
Description

The integrated broadband 90° optical hybrid can be used for coherent signal demodulation. The LiNbO₃ integrated component accepts two optical signals (S₁ & S₂) and generates four output signals: {S₁+jS₂, S₁-jS₂, S₁+S₂, S₁-S₂}.

The device has four independent bias voltages to obtain optimal power splitting and two bias controls for phase adjustment.

The Quadrature Optical Hybrid is best used in combination with two balanced receivers to recover the relative phase information between the input signals.

Possible applications of the device include coherent optical communications, test and measurement equipment, LADARs, electronic warfare and others.



Specifications

Parameter	Min.	Typ.	Max.	Units
Wavelength range	1.53	-	1.57	μm
3dB splitting bias voltage (per splitter)	-	15	20	V
Insertion loss (per input)	3	4	6	dB
Phase V _π (per phase-shifter)	0	5	10	V
Optical return loss	-	-15	-	dB

