

# Local Oscillator

## Input Parameters

- LocalOscillatorPhase
- LocalOscillatorOpticalPower
- LocalOscillatorOpticalPower\_dBm
- useShotNoise

## Functional Description

This block accepts a complex signal (either with XY polarization or a simple Band Pass signal) and outputs a phase constant complex signal with the same length as the input signal. The phase and optical power are defined by the values of *LocalOscillatorPhase* and *LocalOscillatorOpticalPower* respectively. This block also adds random gaussian distributed shot noise with an amplitude defined by the power of the inputs. The shot noise is activated by a boolean check fed into the block by the *useShotNoise* parameters.

## Input Signals

**Number:** 1

**Type:** Complex signal (ContinuousTimeContinuousAmplitude)

## Output Signals

**Number:** 2

**Type:** Complex signal (ContinuousTimeContinuous Amplitude)