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## SI Free-Space Balanced Photoreceiver, 320-1000nm



#90-639 SI Free-Space Balanced Photoreceiver, 320-1000nm

Stock **#90-639** NEW **2 In Stock**

⊖ 1 ⊕ **A\$5,600<sup>00</sup>**

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### Volume Pricing

Qty 1+	<b>A\$5,600.00</b> each
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### Product Downloads

### General

**Note:**

- Includes:  
 (2) Threaded coupler ring  
 Lemo®3-pin connector  
 (3) Adapter SMA (male) to BNC (female)  
 Datasheet

### Physical & Mechanical Properties

**Weight (g):**

410

**Dimensions (mm):**

Case Size: 80 x 80 x 30.5

## Optical Properties

### Spectral Range:

320 - 1000 nm

## Sensor

### Detector Type:

Si-PIN photodiode

## Electrical

### Transimpedance Gain ( $\Omega$ ):

$2 \times 10^4$  or  $6 \times 10^4$ (switchable)

### Noise Equivalent Power NEP ( $W/Hz^{1/2}$ ):

$7.4 \times 10^{-12}$  @880nm

### Bandwidth (-3 db):

100 MHz

### Output Signal:

$\pm 1.0$  V at 50  $\Omega$  load (for linear gain and low harmonic distortion), maximum  $\pm 2.0$  V at 50  $\Omega$  load

### Conversion Gain (V/W):

$10.8 \times 10^3$  or  $32.4 \times 10^3$ (@850 nm switchable)

### Common Mode Rejection (dB):

50

## Hardware & Interface Connectivity

### Power Requirement:

$\pm 15$  V ( $\pm 14.5$  V ...  $\pm 16.5$  V) -90 / +120 mA

### Power Supply:

Power Supply Required and Sold Separately.

USA: [#59-180](#)

Europe: [#59-180](#)

Japan: Not Available

Korea: Not Available

China: [#59-180](#)

## Environmental & Durability Factors

### Operating Temperature ( $^{\circ}C$ ):

0 to +60

## Regulatory Compliance

### RoHS 2015:

[Compliant](#)

### Certificate of Conformance:

[View](#)

## Product Details

- Subtracts Two Photodiode Signals for Differential Detection
- Improved Signal to Noise Ratio (SNR) for Weak or Modulated Optical Signals
- High Common-Mode Noise Suppression for Improved Measurement Sensitivity and Accuracy
- Available in Si and InGaAs models for UV-VIS and NIR spectral ranges

Balanced Photoreceivers use true differential detection by subtracting the photocurrents from two matched photodiodes, producing a single electrical output proportional to the difference in optical power between the two inputs. This suppresses common-mode noise, such as laser intensity fluctuations, improving SNR and measurement sensitivity. Balanced Photoreceivers are engineered with a low-noise transimpedance amplifier, which ensures stable, consistent performance for precision optical measurements. Available in Si and InGaAs models for UV-VIS (320-1000nm) and NIR (800-1700nm) spectral ranges, these photoreceivers are ideal for coherent optical detection, interferometry, spectroscopy, and optical coherence tomography (OCT).

**Note:** Power supply sold separately. Please see specifications for more details.