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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 **\$4,900.00**

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### Volume Pricing

Qty 1+	<b>\$4,900.00</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

320 - 1000 nm **Spectral Range:**

## Sensor

Si-PIN photodiode **Detector Type:**

## Electrical

$2 \times 10^4$  or  $6 \times 10^4$ (switchable) **Transimpedance Gain ( $\Omega$ ):**

$7.4 \times 10^{-12}$  @880nm **Noise Equivalent Power NEP ( $W/Hz^{1/2}$ ):**

100 MHz **Bandwidth (-3 db):**

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

$10.8 \times 10^3$  or  $32.4 \times 10^3$ @850 nm switchable **Conversion Gain ( $V/W$ ):**

50 **Common Mode Rejection (dB):**

## Hardware & Interface Connectivity

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

Power Supply Required and Sold Separately.  
USA: [#59-180](#)  
Europe: [#59-180](#)  
Japan: Not Available  
Korea: Not Available  
China: [#59-180](#) **Power Supply:**

## Environmental & Durability Factors

0 to +60 **Operating Temperature ( $^{\circ}C$ ):**

## Regulatory Compliance

[Compliant](#) **RoHS 2015:**

[View](#) **Certificate of Conformance:**

## 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.