

## Datasheet

**OE-300-IN-01**

### 200 MHz Variable Gain Photoreceiver



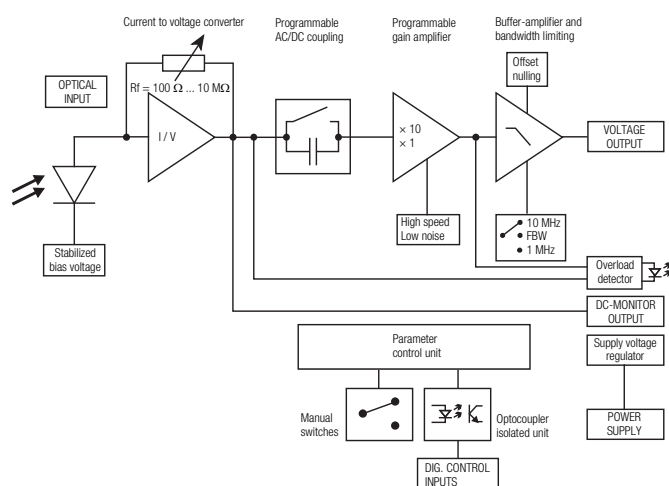
#### Features

- Adjustable transimpedance gain from  $10^2$  to  $10^8$  V/A
- Wide bandwidth up to 200 MHz
- InGaAs-PIN photodiode covering the 900 to 1700 nm wavelength range
- FC fiber optic input
- High dynamic input range up to 10 mW optical power
- Very low noise, NEP down to 47 fW/√Hz
- Switchable low pass filters for minimizing wideband noise
- Full manual and remote control capability

#### Applications

- All-purpose low-noise photoreceiver (O/E converter) for the MHz range
- Time resolved optical pulse and power measurements
- Laser intensity noise measurements (RIN)
- Optical front-end for oscilloscopes, spectrum analyzers, A/D converters and RF lock-in amplifiers

#### Block Diagram



BS01-OE-300\_R2

SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

**FEMTO**

OE-300-IN-01\_R3/TH,JMa/11 APR2024

## Datasheet

## OE-300-IN-01

### 200 MHz Variable Gain Photoreceiver

#### Intended Use

The OE-300-IN-01 is a high speed variable gain photoreceiver. It is designed for fast and precise conversion of small optical signals into equivalent output voltages. Operation is mostly self-explanatory. If in doubt, consult this document or contact [support@femto.de](mailto:support@femto.de).

For safe operation, please refer to the damage thresholds specified in the "Absolute Maximum Ratings", "Temperature Range" and "Power Supply" sections of this document.

The operating environment must be free of smoke, dust, grease, oil, condensing moisture, and other contaminants that could affect the operation or performance.

#### Available Version

OE-300-IN-01-FC



Fix/permanent FC fiber connector for high coupling efficiency and excellent conversion gain accuracy, FC/PC and FC/APC compatible

#### Related OE-300 Models

See separate datasheets for following models on [www.femto.de](http://www.femto.de):

|                  |                                                                  |
|------------------|------------------------------------------------------------------|
| OE-300-SI-10-FST | Si-PIN, 1 mm × 1 mm, 400 - 1000 nm<br>1.035"-40 threaded flange  |
| OE-300-SI-30-FST | Si-PIN, Ø 3 mm, 320 - 1000 nm<br>1.035"-40 threaded flange       |
| OE-300-IN-03-FST | InGaAs-PIN, Ø 300 µm, 800 - 1700 nm<br>1.035"-40 threaded flange |

#### Available Accessories

PRA-PAP



Alternative mounting option:  
post adapter plate, easy to mount  
on FEMTO photoreceiver series OE,  
FWPR, PWPR, HCA-S and LCA-S

PS-15-25-L



Power Supply  
input: 100 – 240 VAC  
output: ±15 VDC

LUCI-10



Compact digital I/O interface for USB  
remote control, supports opto-isolation of  
amplifier signal path from PC USB port,  
16 digital outputs, 3 opto-isolated digital  
inputs, bus-powered operation

SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

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OE-300-IN-01\_R3/TH,JMa/11 APR 2024

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**OE-300-IN-01**

### 200 MHz Variable Gain Photoreceiver

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                 |                                                                                                                                                          |                          |                          |                          |                          |                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Specifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Test conditions                                 | $V_s = \pm 15\text{ V}$ , $T_A = 25\text{ }^\circ\text{C}$ , output load impedance $50\text{ }\Omega$ , warm-up 20 minutes (min. 10 minutes recommended) |                          |                          |                          |                          |                          |
| Gain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Transimpedance gain                             | $1 \times 10^2 \dots 1 \times 10^8\text{ V/A}$ (output load $50\text{ }\Omega$ )                                                                         |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Gain accuracy                                   | $\pm 1\%$ electrical, between settings                                                                                                                   |                          |                          |                          |                          |                          |
| Frequency Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Lower cut-off frequency                         | DC / $100\text{ Hz}$ , switchable                                                                                                                        |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Upper cut-off frequency ( $-3\text{ dB}$ )      | up to $200\text{ MHz}$ (see table below), switchable to $1\text{ MHz}$ or $10\text{ MHz}$                                                                |                          |                          |                          |                          |                          |
| Input                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Optical CW saturation power                     | see table below                                                                                                                                          |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Noise equivalent power (NEP)                    | see table below                                                                                                                                          |                          |                          |                          |                          |                          |
| Performance depending on Gain Setting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Gain setting (low noise) (V/A)                  | $10^2$                                                                                                                                                   | $10^3$                   | $10^4$                   | $10^5$                   | $10^6$                   | $10^7$                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Upper cut-off frequency ( $-3\text{ dB}$ )      | $200\text{ MHz}$                                                                                                                                         | $80\text{ MHz}$          | $14\text{ MHz}$          | $3.5\text{ MHz}$         | $1.8\text{ MHz}$         | $220\text{ kHz}$         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Rise/fall time ( $10\%$ - $90\%$ )              | $1.9\text{ ns}$                                                                                                                                          | $3.3\text{ ns}$          | $26\text{ ns}$           | $90\text{ ns}$           | $210\text{ ns}$          | $1.5\text{ }\mu\text{s}$ |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NEP ( $\sqrt{\text{Hz}}$ , @ $1550\text{ nm}$ ) | $180\text{ pW}$                                                                                                                                          | $22\text{ pW}$           | $1.9\text{ pW}$          | $390\text{ fW}$          | $140\text{ fW}$          | $50\text{ fW}$           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Measured at                                     | $20\text{ MHz}$                                                                                                                                          | $8\text{ MHz}$           | $1.4\text{ MHz}$         | $350\text{ kHz}$         | $180\text{ kHz}$         | $22\text{ kHz}$          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Integr. input noise (RMS)*                      | $4.9\text{ }\mu\text{W}$                                                                                                                                 | $380\text{ nW}$          | $23\text{ nW}$           | $3.3\text{ nW}$          | $0.84\text{ nW}$         | $71\text{ pW}$           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CW sat. power (@ $1550\text{ nm}$ )             | $10\text{ mW}$                                                                                                                                           | $1.0\text{ mW}$          | $100\text{ }\mu\text{W}$ | $10\text{ }\mu\text{W}$  | $1.0\text{ }\mu\text{W}$ | $100\text{ nW}$          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Gain setting (high speed) (V/A)                 | $10^3$                                                                                                                                                   | $10^4$                   | $10^5$                   | $10^6$                   | $10^7$                   | $10^8$                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Upper cut-off frequency ( $-3\text{ dB}$ )      | $175\text{ MHz}$                                                                                                                                         | $80\text{ MHz}$          | $14\text{ MHz}$          | $3.5\text{ MHz}$         | $1.8\text{ MHz}$         | $220\text{ kHz}$         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Rise/fall time ( $10\%$ - $90\%$ )              | $2.3\text{ ns}$                                                                                                                                          | $3.45\text{ ns}$         | $27\text{ ns}$           | $90\text{ ns}$           | $210\text{ ns}$          | $1.5\text{ }\mu\text{s}$ |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NEP ( $\sqrt{\text{Hz}}$ , @ $1550\text{ nm}$ ) | $132\text{ pW}$                                                                                                                                          | $6.3\text{ pW}$          | $1.4\text{ pW}$          | $350\text{ fW}$          | $113\text{ fW}$          | $47\text{ fW}$           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Measured at                                     | $18\text{ MHz}$                                                                                                                                          | $8\text{ MHz}$           | $1.4\text{ MHz}$         | $350\text{ kHz}$         | $180\text{ kHz}$         | $22\text{ kHz}$          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Integr. input noise (RMS)*                      | $3.0\text{ }\mu\text{W}$                                                                                                                                 | $285\text{ nW}$          | $21\text{ nW}$           | $3.2\text{ nW}$          | $0.84\text{ nW}$         | $71\text{ pW}$           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CW sat. power (@ $1550\text{ nm}$ )             | $1.0\text{ mW}$                                                                                                                                          | $100\text{ }\mu\text{W}$ | $10\text{ }\mu\text{W}$  | $1.0\text{ }\mu\text{W}$ | $100\text{ nW}$          | $10\text{ nW}$           |
| <p>* The integrated input noise is measured with a shaded input in the full bandwidth ("FBW") setting (referred to <math>1550\text{ nm}</math>). The measurement bandwidth is <math>3 \times</math> the upper cut-off frequency at the specific gain setting; filter slope is a 1st order roll-off.</p> <p>The input referred peak-peak noise can be calculated from the RMS noise as follows:</p> $P_{\text{Input noise peak-to-peak}} = P_{\text{Input noise RMS}} \times 6$ <p>The output noise is given by:</p> $U_{\text{Output noise RMS}} = P_{\text{Input noise RMS}} \times \text{gain}$ $U_{\text{Output noise peak-to-peak}} = U_{\text{Output noise RMS}} \times 6 = P_{\text{Input noise RMS}} \times \text{gain} \times 6$ <p>The integrated noise will be reduced considerably by setting the low pass filter to "<math>1\text{ MHz}</math>" or "<math>10\text{ MHz}</math>" instead of "FBW". This is especially useful for continuous wave (CW) measurements.</p> |                                                 |                                                                                                                                                          |                          |                          |                          |                          |                          |
| Detector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Detector type                                   | InGaAs-PIN photodiode                                                                                                                                    |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Active area                                     | Integrated ball lens, suitable for fibers up to $50\text{ }\mu\text{m}$ core diameter                                                                    |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Spectral range                                  | $900 - 1700\text{ nm}$                                                                                                                                   |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sensitivity                                     | $0.95\text{ A/W typ. (@ }1550\text{ nm)}$                                                                                                                |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Dark current                                    | $20\text{ pA typ.}$                                                                                                                                      |                          |                          |                          |                          |                          |
| Output                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Output voltage rang                             | $\pm 1\text{ V (@ }50\text{ }\Omega\text{ output load)}$ , for linear amplification                                                                      |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Output impedance                                | $50\text{ }\Omega$ (designed for $50\text{ }\Omega$ load)                                                                                                |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Max. output current                             | $\pm 40\text{ mA}$ (short-circuit proof)                                                                                                                 |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Slew rate                                       | $1000\text{ V}/\mu\text{s}$                                                                                                                              |                          |                          |                          |                          |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Output offset compensation                      | adjustable by offset potentiometer and external control voltage, output offset compensation range min. $\pm 100\text{ mV}$                               |                          |                          |                          |                          |                          |

**SOPHISTICATED TOOLS FOR SIGNAL RECOVERY**
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OE-300-IN-01\_R3/TH,JMa/11 APR2024

**Datasheet**
**OE-300-IN-01**
**200 MHz Variable Gain Photoreceiver**
**Specifications (continued)**
**DC Monitor Output**
**Monitor output gain**

| Mode       | Monitor gain                |
|------------|-----------------------------|
| Low noise  | Gain setting divided by -1  |
| High speed | Gain setting divided by -10 |

**Monitor output polarity**

inverting

**Monitor output voltage range**
 $\pm 1 \text{ V}$  (@  $\geq 1 \text{ M}\Omega$  load)

**Monitor output bandwidth**

DC ... 1 kHz

**Monitor output impedance**

 1 k $\Omega$  (designed for  $\geq 1 \text{ M}\Omega$  load)

**Indicator LED**
**Function**

overload

**Digital Control**
**Control input voltage range**

LOW bit: -0.8 V ... +1.2 V, HIGH bit: +2.3 V ... +12 V

**Control input current**

0 mA @ 0 V, 1.5 mA @ +5 V, 4.5 mA @ +12 V

**Overload output**

 non active: <0.4 V @ 0 ... -1 mA  
 active: typ. 5 ... 5.1 V @ 0 ... 2 mA

**Ext. Offset Control**
**Control voltage range**
 $\pm 10 \text{ V}$ 
**Offset control input impedance**

 15 k $\Omega$ 
**Optical Input Connector**
**Material FC receptacle**

nickel silver

**Power Supply**
**Supply voltage**
 $\pm 15 \text{ V}$  ( $\pm 14.75 \text{ V}$  ...  $\pm 16.5 \text{ V}$ )

**Supply current**
 $\pm 110 / -90 \text{ mA}$  typ. (depends on operating conditions, recommended power supply capability min.  $\pm 200 \text{ mA}$ )

**Case**
**Weight**

360 g (0.79 lbs)

**Material**

AlMg4.5Mn, nickel-plated

**Temperature Range**
**Storage temperature**
 $-40 \text{ }^{\circ}\text{C}$  ...  $+80 \text{ }^{\circ}\text{C}$ 
**Operating temperature**
 $0 \text{ }^{\circ}\text{C}$  ...  $+60 \text{ }^{\circ}\text{C}$ 
**Absolute Maximum Ratings**
**Optical input power (CW)**

12 mW

**Digital control input voltage**
 $-5 \text{ V} / +16 \text{ V}$  relative to digital ground DGND (pin 9)

**Analog control input voltage**
 $\pm 15 \text{ V}$  relative to analog ground AGND (pin 3)

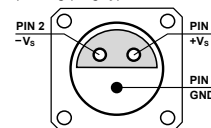
**Power supply voltage**
 $\pm 20 \text{ V}$ 
**Connectors**
**Input**

 FC fiber optic connector  
 (fix/permanent, FC/PC and FC/APC compatible)

**Output**

BNC jack (female)

**Power supply**

 LEMO® series 1S, 3-pin fixed socket  
 (mating plug type: FFA.1S.303.GLAC52)

 Pin 1: +15 V  
 Pin 2: -15 V  
 Pin 3: GND

**SOPHISTICATED TOOLS FOR SIGNAL RECOVERY**
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OE-300-IN-01\_R3/TH\_JMa/11 APR 2024

## Datasheet

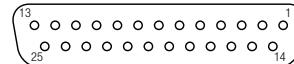
**OE-300-IN-01**

### 200 MHz Variable Gain Photoreceiver

Connectors (continued)

Control port

Sub-D 25-pin, female, qual. class 2



- Pin 1: +12 V (stabilized power supply output\*)
- Pin 2: -12 V (stabilized power supply output\*)
- Pin 3: AGND (analog ground for pins 1 - 8)
- Pin 4: +5 V (stabilized power supply output\*)
- Pin 5: digital output: overload (referred to pin 3)
- Pin 6: DC Monitor output
- Pin 7: NC
- Pin 8: offset control voltage input
- Pin 9: DGND (ground for digital control pins 10 - 16)
- Pin 10: digital control input: gain, LSB
- Pin 11: digital control input: gain
- Pin 12: digital control input: gain, MSB
- Pin 13: digital control input: AC/DC
- Pin 14: digital control input: high speed / low noise
- Pin 15: upper cut-off frequency limit 10 MHz
- Pin 16: upper cut-off frequency limit 1 MHz
- Pin 17 - 25: NC

\*stabilized power supply output current  
 $\pm 12$  V: max.  $\pm 20$  mA, +5V: max. 30 mA

Remote Control Operation

General

Remote control input bits are opto-isolated and connected by a logical OR function to the local switch settings. For remote control set the corresponding local switches to "Remote", "DC", "L" (low noise mode) and "FBW", and select the desired setting via a bit code at the corresponding digital inputs.  
Mixed operation, e.g. local AC/DC setting and remote controlled gain setting, is also possible.

Gain setting

| Low noise  | High speed  |        |        |        |
|------------|-------------|--------|--------|--------|
| Gain (V/A) | Gain (V/A)  | Pin 12 | Pin 11 | Pin 10 |
| Pin 14=LOW | Pin 14=HIGH | MSB    |        | LSB    |
| $10^2$     | $10^3$      | LOW    | LOW    | LOW    |
| $10^3$     | $10^4$      | LOW    | LOW    | HIGH   |
| $10^4$     | $10^5$      | LOW    | HIGH   | LOW    |
| $10^5$     | $10^6$      | LOW    | HIGH   | HIGH   |
| $10^6$     | $10^7$      | HIGH   | LOW    | LOW    |
| $10^7$     | $10^8$      | HIGH   | LOW    | HIGH   |

AC/DC setting

| Coupling | Pin 13 |
|----------|--------|
| DC       | LOW    |
| AC       | HIGH   |

Low pass filter setting

| Upper cut-off freq. limit | Pin 15 | Pin 16 |
|---------------------------|--------|--------|
| full bandwidth            | LOW    | LOW    |
| 10 MHz                    | HIGH   | LOW    |
| 1 MHz                     | LOW    | HIGH   |

High speed / low noise setting

| Mode            | Pin 14 |
|-----------------|--------|
| low noise mode  | LOW    |
| high speed mode | HIGH   |

**SOPHISTICATED TOOLS FOR SIGNAL RECOVERY**
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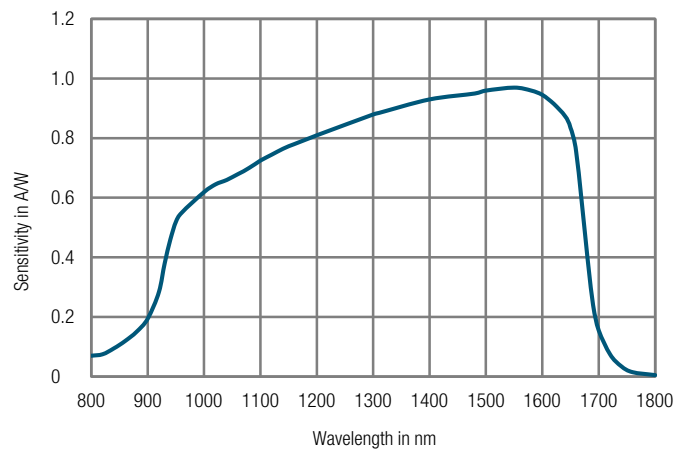
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**200 MHz Variable Gain Photoreceiver**

|                      |                                                                      |                                                                          |
|----------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------|
| Scope of Delivery    | OE-300-IN-01-FC, LEMO® 3-pin connector, datasheet, transport package |                                                                          |
| Ordering Information | OE-300-IN-01-FC                                                      | FC fiber optic connector<br>(fix/permanent, FC/PC and FC/APC compatible) |

Spectral Responsivity

OE-300-IN-01-FC



DB-Sens: OE-300-IN1-FC\_R2

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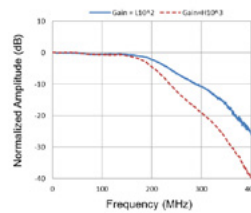
### 200 MHz Variable Gain Photoreceiver

Typical Performance  
Characteristic

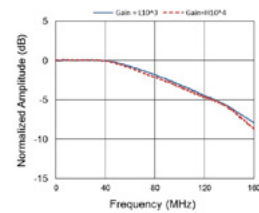
Frequency response

$V_{\text{Supply}} = \pm 15 \text{ V}_{\text{DC}}$ ;  $R_{\text{Load}} = 50 \Omega$

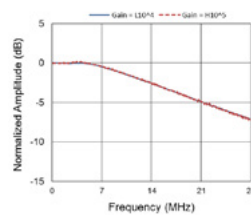
Gain setting:  $L10^2$ ,  $H10^3$



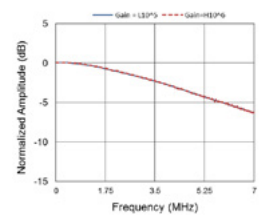
Gain setting:  $L10^3$ ,  $H10^4$



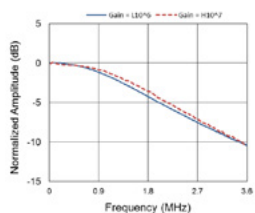
Gain setting:  $L10^4$ ,  $H10^5$



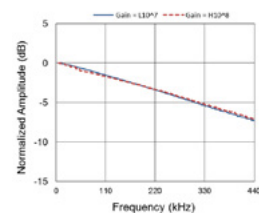
Gain setting:  $L10^5$ ,  $H10^6$



Gain setting:  $L10^6$ ,  $H10^7$



Gain setting:  $L10^7$ ,  $H10^8$



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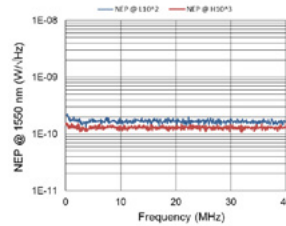
**OE-300-IN-01**

### 200 MHz Variable Gain Photoreceiver

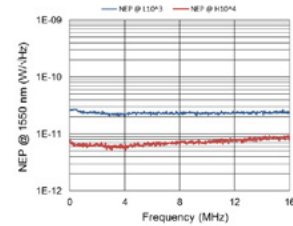
Typical Performance  
Characteristic (continued)

Input noise equivalent power (NEP)

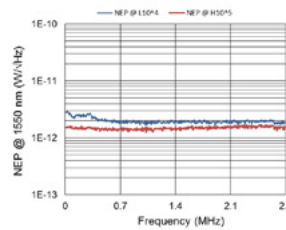
Gain setting: L10<sup>2</sup>, H10<sup>3</sup>



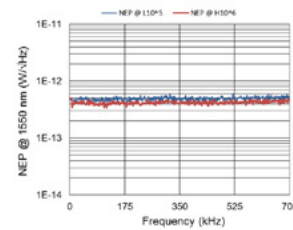
Gain setting: L10<sup>3</sup>, H10<sup>4</sup>



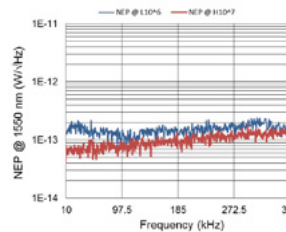
Gain setting: L10<sup>4</sup>, H10<sup>5</sup>



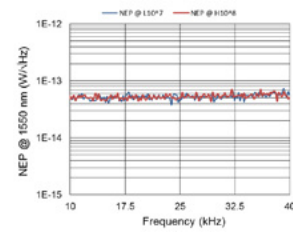
Gain setting: L10<sup>5</sup>, H10<sup>6</sup>



Gain setting: L10<sup>6</sup>, H10<sup>7</sup>



Gain setting: L10<sup>7</sup>, H10<sup>8</sup>



SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

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# Datasheet

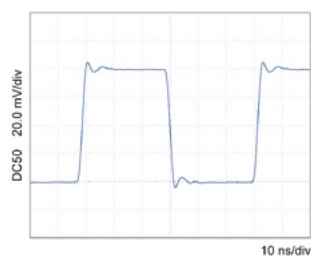
OE-300-IN-01

## 200 MHz Variable Gain Photoreceiver

Typical Performance  
Characteristic (continued)

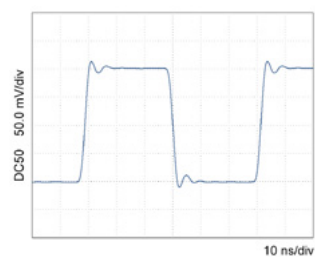
Signal pulse response

Gain setting L10<sup>2</sup>



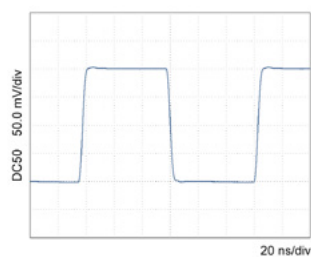
Rise: 1.84 ns Fall: 1.90 ns

Gain setting H10<sup>3</sup>



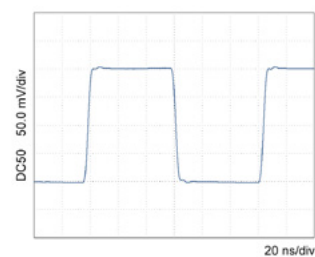
Rise: 2.27 ns Fall: 2.32 ns

Gain setting L10<sup>3</sup>



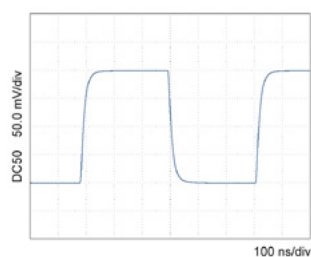
Rise: 3.30 ns Fall: 3.41 ns

Gain setting H10<sup>4</sup>



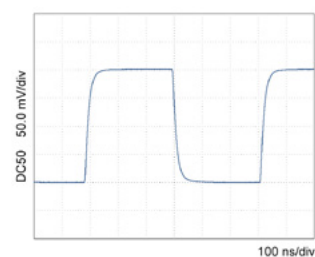
Rise: 3.44 ns Fall: 3.52 ns

Gain setting L10<sup>4</sup>



Rise: 26.42 ns Fall: 26.49 ns

Gain setting H10<sup>5</sup>



Rise: 26.77 ns Fall: 27.01 ns

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**F E M T O**

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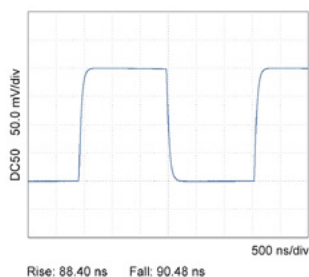
## Datasheet

**OE-300-IN-01**

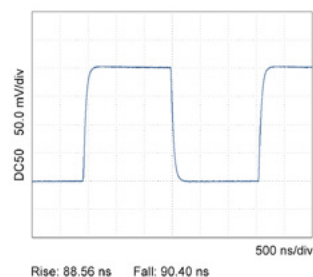
### 200 MHz Variable Gain Photoreceiver

Typical Performance  
Characteristic (continued)

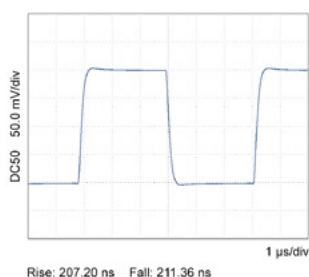
Gain setting L10<sup>5</sup>



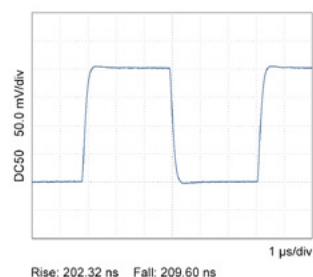
Gain setting H10<sup>6</sup>



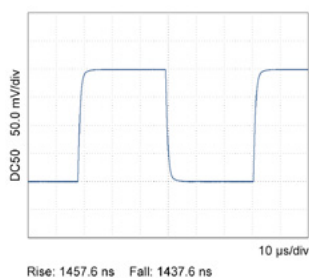
Gain setting L10<sup>6</sup>



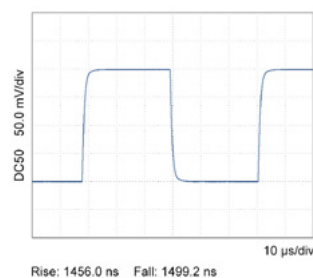
Gain setting H10<sup>7</sup>



Gain setting L10<sup>7</sup>



Gain setting H10<sup>8</sup>



SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

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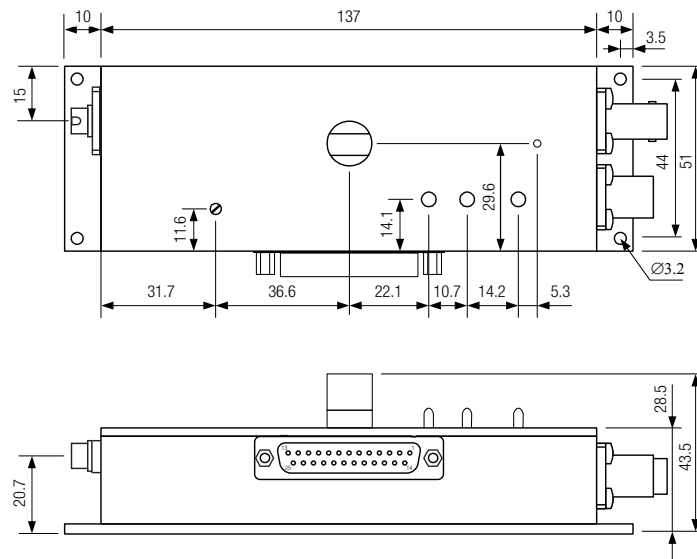
## Datasheet

**OE-300-IN-01**

### 200 MHz Variable Gain Photoreceiver

Dimensions

OE-300-IN-01-FC



DZ-OE-300-FC\_R01

all dimensions in mm unless otherwise noted

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