

ULN-PDB-400



ULTRALOW NOISE BALANCED PHOTODETECTOR

The ULN-PDB modules are plug-and-play ultralow noise balanced photodetectors in a compact and user-friendly package. They are proposed with InGaAs, Si, or Extended InGaAs photodiodes and offer a selection of bandwidths and gains in DC- or AC-coupled versions. Moreover, the ULN-PDB-x4 version offers 4 balanced photodetectors in one unit. The ULN-PDB modules offer adaptable optical coupling like free-space, FC/APC, FC/PC (either wide or narrow key) with additional mechanical adaptors.

SPECIFICATIONS

- Number of outputs: 1
- Spectral range: 400 nm – 1100 nm
- Responsivity: typ. 0.55 A/W at 850 nm
- Photodiode damage threshold: typ. 5 mW (photodiode dependent)
- Common-mode rejection ratio (CMRR): > 60 dB
- Electrical coupling: DC or AC
- Trans-impedance gain, Bandwidth, Minimum noise equivalent power (NEP) (example combinations):
 - 78 kV/A, 10 MHz, 0.3 pW/√Hz
 - 7.8 kV/A, 100 MHz, 3 pW/√Hz
 - 780 V/A, 500 MHz, 6.5 pW/√Hz
- Output impedance: 50 Ω
- Maximum Electrical Bandwidth: 500 MHz (depending on the gain)
- Output voltage noise: typ. 5 nV/√Hz with 780 V/A // typ. 24 nV/√Hz with 78 kV/A (noise floor)
- Output voltage range: -3 V to +3 V
- Output connectors: SMA female
- Input connectors: FC/PC or FC/APC (narrow or wide key) or Free space adjustable through mechanical adaptors
- Product dimensions: 108 x 79 x 33 mm³
- Product weight: 300 g



PRODUCTS



PERFORMANCES

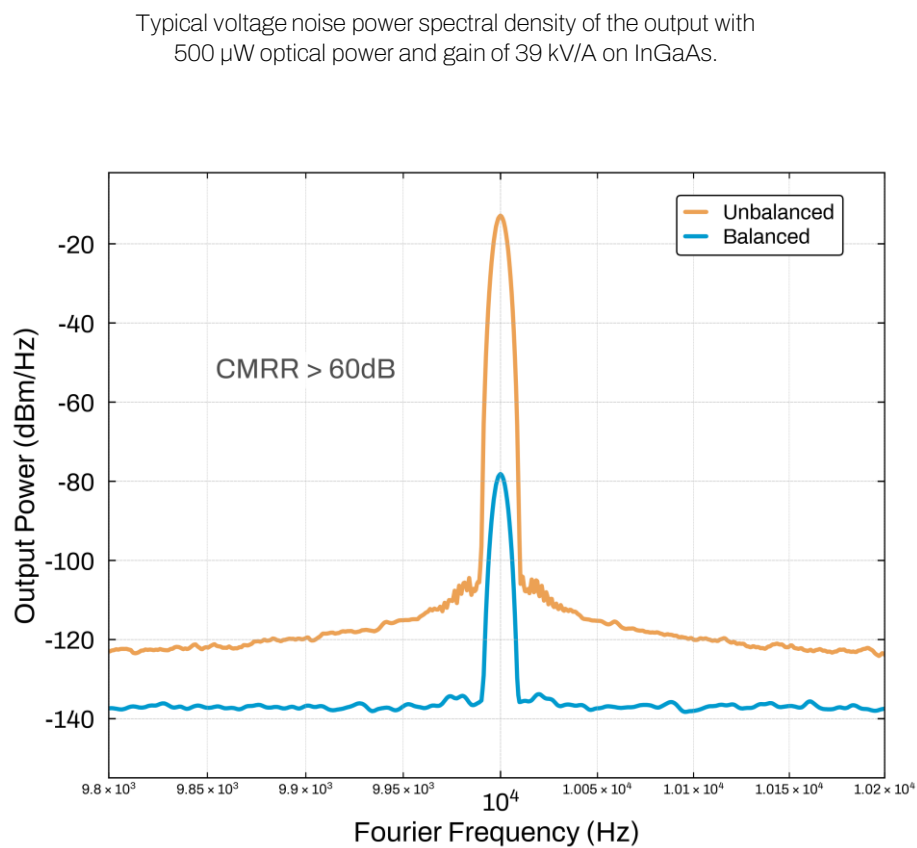
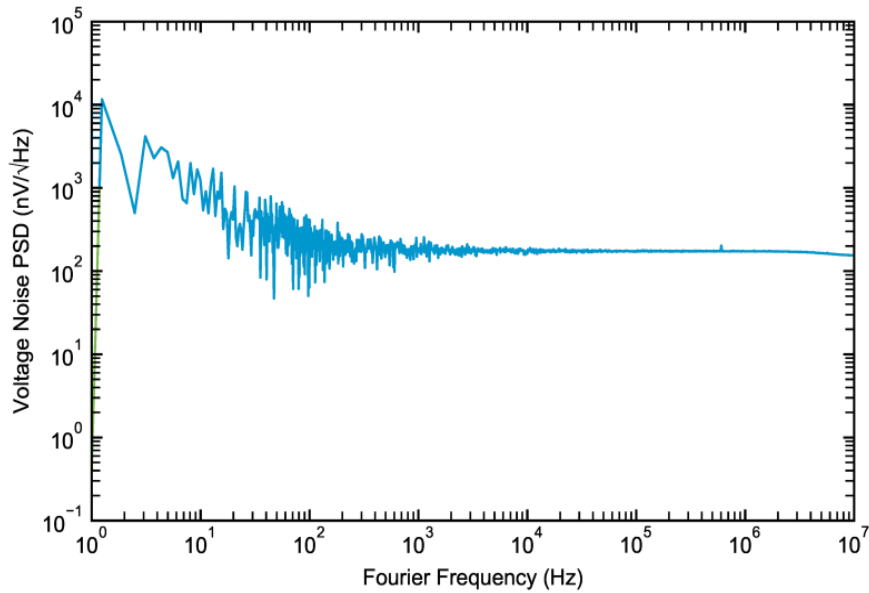


Illustration of the common-mode rejection ration (CMRR).

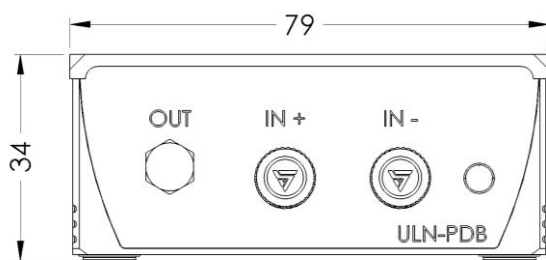


PRODUCTS

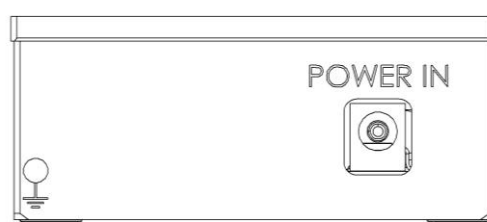


DRAWINGS

The dimensions of the device are presented here with a simplified view. It also shows the connections from the front and back view of the instrument.



FRONT



BACK

Dimensions are in [mm]

FUNCTIONAL DIAGRAM

The functional diagram is a simple view of what the instrument does. It enables a fast and simple understanding of the internal functionalities in respect to the system inputs and outputs.

