

TwinPD

TEST SHEET

Serial number : 2601033

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VM Photonics GmbH

Burgberg 6

31832 Springe

Germany

The VM Photonics **TwinPD**
equipped with two 500 μ m diameter InGaAs photodiodes.

Parameter	Result
Transimpedance gain	5k Ω (per design)
Photodiode bias voltage	+/- 5 V
AC bandwidth (-3 dB) (depending on PD capacity and transimpedance compensation tuning)	24 MHz
AC gain	4.096 V V ⁻¹ , equivalent to: 20.45 k Ω (at 50 Ω load)
AC darknoise (100 kHz - 10 MHz)	< 4 pA / $\sqrt{\text{Hz}}$
Maximum DC per photodiode	20 mA
Maximal DC current difference	0.6 mA

Signal to darknoise measurements:

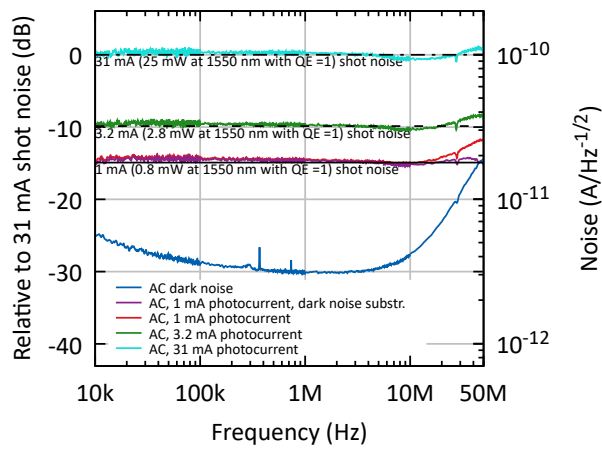


Fig. 1: AC output:

Dark noise and bright noise calibrated to photocurrent with the transfer function below, measured with 50 Ω load.

Transfer function measurements:

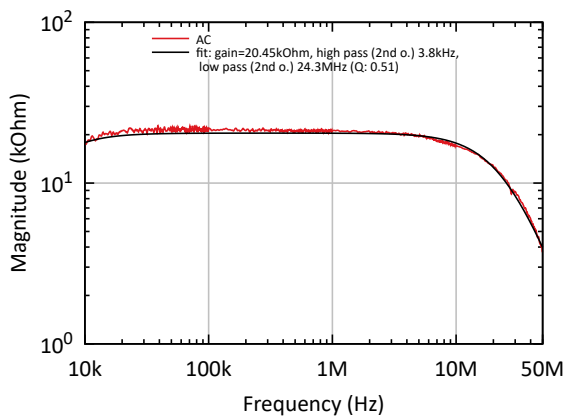


Fig. 2: AC output:

AC transfer function with 500 μ m InGaAs photodiodes, measured with 50 Ω load.

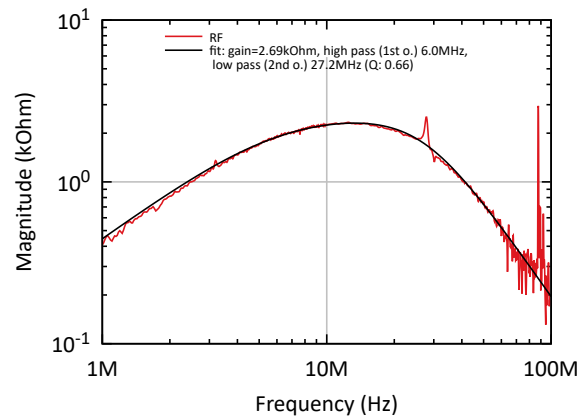


Fig. 3: RF output:

RF transfer function with 500 μ m InGaAs photodiodes, measured with 50 Ω load.