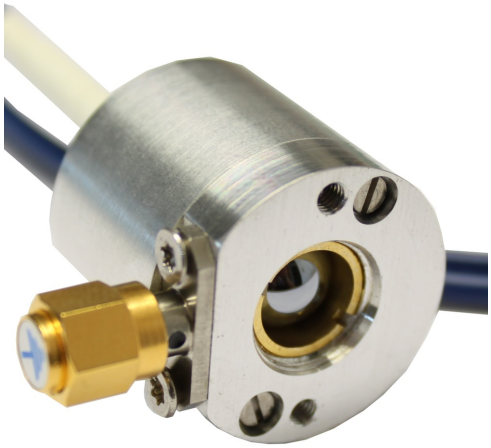
PM-TX
PM-Tx Photomixer
Part-No.: 02700002



Technical Specifications	
Wavelength	750 - 860 nm
Optical Input	Pigtailed with single mode fiber, with FC/APC connector and fiber patch with Hytrel 900 µm tubing. Customized fiber patch cables are available with: • reinforced Ø3 mm furcation tubing, • reinforced Ø3 mm furcation tubing with polarization maintaining fiber (Panda type), narrow key aligned to slow axis
Electrical Input	SMA female
Operation boundaries	Storage Temperature: 0-50°C Operation Temperature: 0-40°C. Cryogenic devices (optional) enable operation in range 4K-300K. Maximum input laser power: 50 mW (coupled into fiber) Maximum bias voltage: 13 V and 2 V for transmitter and receiver modules respectively Maximum photo current: 1 mA
Antenna	Broadband Upon request, resonant -custom designs
Polarization of THz beam	Elliptical (almost circular) for broadband designs Linear for resonant designs,
THz Output beam	Collimated beam through high resistivity silicon hyper-hemispherical substrate lens 3 mm FWHM @ 300GHz
THz Output power (PM-Tx)	> 100 nW @ 100 GHz (at 1 mA photo current) > 10 nW @1000 GHz (at 1 mA photo current)
THz Output power (PM-Rx)	< 15 pA/sqrt(Hz) @ 30 mw laser power
Typical SNR in homodyne detection scheme	~ 80 dB @ 100 GHz ~60 dB @ 1000 GHz ~40 dB @ 2000 GHz (all for 300 ms integration time, 1 mA peak photocurrent)
Mechanical dimensions	Cylindrical form, 1 inch diameter, 25.8 mm long (standard). Other dimensions upon request.

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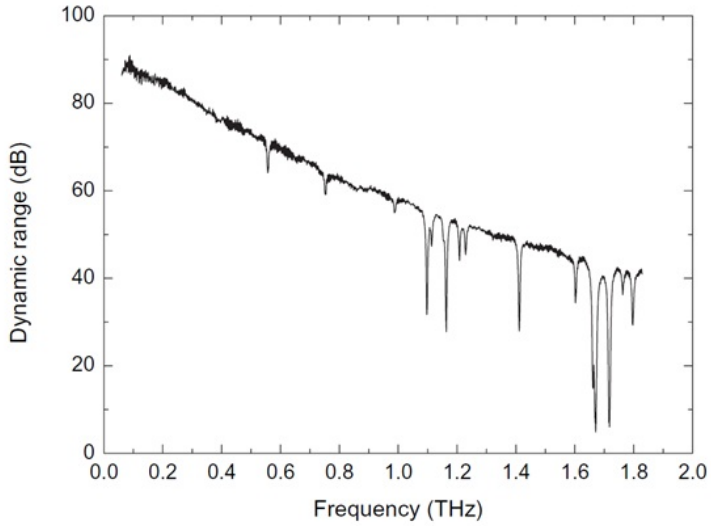
Typical Performance



Note: Unless otherwise noted, all specifications are to be treated as “typical” and can be changed without notice.

Typical dynamic range dependence on frequency plot for a homodyne setup

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