

Certificate of Calibration

No 18297100519

X New Unit
Returned Unit

Result as found: PASS
Result as left: PASS

Manufacturer Thorlabs GmbH
Model Number PM100D
Serial Number P0007350
Date of Calibration 24-Oct-2018

Calibration Standards

NO	MANUFACTURER	MODEL	SERIAL NO	LAST CAL
1	Keithley Instruments Inc.	Model 2611B	4118325	30-Aug-2017
2	HEWLETT-PACKARD	34401A	MY45034937	21-Feb-2018

Thorlabs GmbH does hereby certify that the above mentioned equipment has been calibrated in accordance with our quality management system.

Our Quality Management System is certified according to DIN EN ISO 9001.

The measurement equipment used for calibration is traceable to national standards of the 'EUROMET' members (NPL, PTB, BNM etc.), the US 'NIST' or other national metrological institutions.

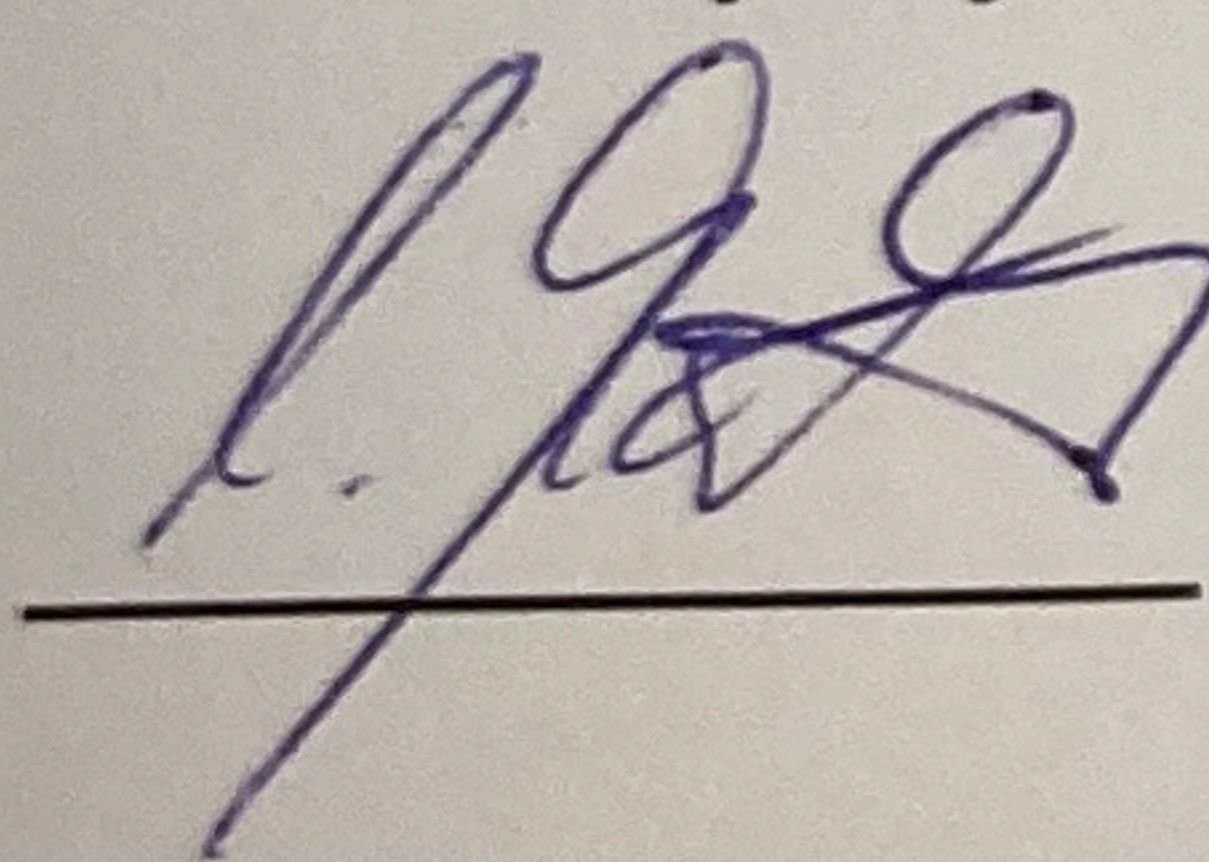
Measurements which cannot be traced to national standards can be traced to natural constants, other accepted standards or relational measurements.

Additional documentation concerning traceability of the measurement equipment is available and can be examined upon request.

The certificate of calibration may only be forwarded in complete form without any changes.

The recommended calibration interval is 12 months. The calibration period of this instrument / system begins on the date of receipt by the customer.

Calibrated by



Lothar Moerth
Thorlabs GmbH

Date Received

Calibrated Due

Test Report - as left

Model PM100D
 Serial No P0007350
 Firmware V2.6.0

Temperature 23°C +/-5°C
 Humidity 35% +/-15%
 Scan CAL_PM100D

Test Date 24-Oct-2018
 Tester Lothar Moerth
 Test Result PASS

CURRENT INPUT

AMP RANGE	INPUT CURRENT	DISPLAY (AMP)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
5 mA	5,0011E-03	5,0009E-03	0,06%	0,20%	2,0030E+00	0,13%	3,00%	PASS
500 µA	5,0003E-04	5,0004E-04	0,05%	0,20%	2,0022E+00	0,10%	3,00%	PASS
50 µA	5,0010E-05	5,0010E-05	0,05%	0,20%	1,9951E+00	0,27%	3,00%	PASS
5 µA	5,0003E-06	5,0002E-06	0,05%	0,20%	1,9967E+00	0,17%	3,00%	PASS
500 nA	5,0009E-07	5,0006E-07	0,05%	0,20%	1,9969E+00	0,17%	3,00%	PASS
50 nA	5,0001E-08	5,0002E-08	0,05%	0,50%	2,0413E+00	2,06%	5,00%	PASS

VOLTAGE INPUT

Pyroelectric Sensor

VOLT RANGE	INPUT VOLTAGE	MEASURED (VOLTS)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
100 V	4,0002E+01	4,0004E+01	0,06%	0,50%	8,0209E-01	0,26%	3,00%	PASS
10 V	1,0000E+01	1,0001E+01	0,05%	0,50%	1,9999E+00	0,01%	3,00%	PASS
1 V	1,0000E+00	1,0001E+00	0,06%	0,50%	2,0049E+00	0,24%	3,00%	PASS
100 mV	1,0001E-01	1,0003E-01	0,07%	0,50%	2,0005E+00	0,02%	3,00%	PASS

Thermal Sensor

VOLT RANGE	INPUT VOLTAGE	DISPLAY (VOLT)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
1 V	9,9995E-01	9,9993E-01	0,05%	0,50%	2,0069E+00	0,35%	3,00%	PASS
100 mV	9,9970E-02	9,9975E-02	0,06%	0,50%	2,0083E+00	0,41%	3,00%	PASS
10 mV	9,9999E-03	9,9996E-03	0,05%	0,50%	2,0157E+00	0,79%	3,00%	PASS
1 mV	9,9987E-04	9,9989E-04	0,05%	0,50%	2,0089E+00	0,44%	5,00%	PASS

Test Report - as found

Model PM100D
 Serial No P0007350
 Firmware V2.6.0

Temperature 23°C +/-5°C
 Humidity 35% +/-15%
 Scan CAL_PM100D

Test Date 24-Oct-2018
 Tester Lothar Moerth
 Test Result PASS
 Last Calibration 19-Nov-2013

CURRENT INPUT

AMP RANGE	INPUT CURRENT	DISPLAY (AMP)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
5 mA	5,0011E-03	4,9987E-03	0,10%	0,20%	2,0030E+00	0,13%	3,00%	PASS
500 µA	5,0003E-04	5,0023E-04	0,09%	0,20%	2,0022E+00	0,10%	3,00%	PASS
50 µA	5,0011E-05	4,9993E-05	0,09%	0,20%	1,9951E+00	0,27%	3,00%	PASS
5 µA	5,0003E-06	5,0012E-06	0,07%	0,20%	1,9967E+00	0,17%	3,00%	PASS
500 nA	5,0008E-07	4,9986E-07	0,09%	0,20%	1,9970E+00	0,17%	3,00%	PASS
50 nA	5,0002E-08	4,9957E-08	0,14%	0,50%	2,0409E+00	2,04%	5,00%	PASS

VOLTAGE INPUT

Pyroelectric Sensor

VOLT RANGE	INPUT VOLTAGE	MEASURED (VOLTS)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
100 V	4,0002E+01	3,9985E+01	0,09%	0,50%	8,0212E-01	0,26%	3,00%	PASS
10 V	1,0001E+01	9,9967E+00	0,09%	0,50%	2,0001E+00	0,00%	3,00%	PASS
1 V	1,0000E+00	1,0000E+00	0,05%	0,50%	2,0049E+00	0,24%	3,00%	PASS
100 mV	1,0002E-01	1,0015E-01	0,18%	0,50%	2,0008E+00	0,02%	3,00%	PASS

Thermal Sensor

VOLT RANGE	INPUT VOLTAGE	DISPLAY (VOLT)	UNCERT AINTY	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
1 V	9,9995E-01	9,9979E-01	0,07%	0,50%	2,0069E+00	0,35%	3,00%	PASS
100 mV	9,9976E-02	9,9999E-02	0,07%	0,50%	2,0085E+00	0,42%	3,00%	PASS
10 mV	1,0000E-02	9,9992E-03	0,06%	0,50%	2,0158E+00	0,79%	3,00%	PASS
1 mV	9,9992E-04	1,0013E-03	0,19%	0,50%	2,0087E+00	0,44%	5,00%	PASS