

Certificate of Calibration

No	21053084636
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New Unit
X Returned Unit

Result as found: FAIL
Result as left: PASS

Manufacturer Thorlabs GmbH
Model Number PM100D
Serial Number P0007350
Date of Calibration 22-Feb-2021

Calibration Standards

NO	MANUFACTURER	MODEL	SERIAL NO	LAST CAL
1	Keithley Instruments Inc.	Model 2611B	4118325	11-Nov-2020
2	Agilent Technologies	34461A	MY53205384	14-May-2020

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



Silke Danneberg
Thorlabs GmbH

Date Received

Calibrated Due

Test Report - as left

Model PM100D
Serial No P0007350
Firmware V2.8.1

Temperature 23°C +/-5°C
Humidity 35% +/-15%
Scan CAL_PM100

Test Date 22-Feb-2021
Tester Silke Danneberg
Test Result PASS

CURRENT INPUT

AMP RANGE	INPUT CURRENT	DISPLAY (AMP)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
5 mA	5,0003E-03	5,0003E-03	0,05%	0,20%	2,0024E+00	0,11%	3,00%	PASS
500 µA	5,0003E-04	5,0004E-04	0,05%	0,20%	2,0020E+00	0,09%	3,00%	PASS
50 µA	5,0002E-05	5,0005E-05	0,06%	0,20%	1,9947E+00	0,27%	3,00%	PASS
5 µA	5,0003E-06	5,0005E-06	0,05%	0,20%	1,9966E+00	0,18%	3,00%	PASS
500 nA	5,0002E-07	5,0008E-07	0,06%	0,20%	1,9963E+00	0,19%	3,00%	PASS
50 nA	5,0001E-08	5,0012E-08	0,07%	0,50%	2,0416E+00	2,08%	5,00%	PASS

VOLTAGE INPUT

Pyroelectric Sensor

VOLT RANGE	INPUT VOLTAGE	MEASURED (VOLTS)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
100 V	4,0003E+01	4,0011E+01	0,07%	0,50%	8,0204E-01	0,25%	3,00%	PASS
10 V	1,0001E+01	1,0003E+01	0,07%	0,50%	1,9998E+00	0,02%	3,00%	PASS
1 V	1,0001E+00	1,0004E+00	0,08%	0,50%	2,0049E+00	0,24%	3,00%	PASS
100 mV	1,0004E-01	9,9674E-02	0,42%	0,50%	2,0009E+00	0,00%	3,00%	PASS

Thermal Sensor

VOLT RANGE	INPUT VOLTAGE	DISPLAY (VOLT)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
1 V	1,0002E+00	1,0002E+00	0,05%	0,50%	2,0072E+00	0,36%	3,00%	PASS
100 mV	1,0003E-01	1,0002E-01	0,06%	0,50%	2,0093E+00	0,46%	3,00%	PASS
10 mV	1,0002E-02	1,0002E-02	0,05%	0,50%	2,0161E+00	0,81%	3,00%	PASS
1 mV	1,0003E-03	1,0007E-03	0,09%	0,50%	2,0106E+00	0,53%	5,00%	PASS

Test Report - as found

Model PM100D
 Serial No P0007350
 Firmware V2.8.1

Temperature 23°C +/-5°C
 Humidity 35% +/-15%
 Scan CAL_PM100

Test Date 22-Feb-2021
 Tester Silke Danneberg
 Test Result FAIL
 Last Calibration 24-Oct-2018

CURRENT INPUT

AMP RANGE	INPUT CURRENT	DISPLAY (AMP)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
5 mA	4,9999E-03	4,9985E-03	0,08%	0,20%	2,0021E+00	0,11%	3,00%	PASS
500 µA	5,0002E-04	4,9998E-04	0,06%	0,20%	2,0019E+00	0,09%	3,00%	PASS
50 µA	4,9998E-05	4,9992E-05	0,06%	0,20%	1,9944E+00	0,28%	3,00%	PASS
5 µA	5,0002E-06	4,9999E-06	0,06%	0,20%	1,9965E+00	0,18%	3,00%	PASS
500 nA	4,9997E-07	4,9981E-07	0,08%	0,20%	1,9958E+00	0,20%	3,00%	PASS
50 nA	4,9999E-08	5,0002E-08	0,06%	0,50%	2,0415E+00	2,07%	5,00%	PASS

VOLTAGE INPUT

Pyroelectric Sensor

VOLT RANGE	INPUT VOLTAGE	MEASURED (VOLTS)	UNCERT.	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
100 V	4,0004E+01	4,0006E+01	0,06%	0,50%	8,0204E-01	0,25%	3,00%	PASS
10 V	1,0001E+01	1,0002E+01	0,07%	0,50%	1,9999E+00	0,01%	3,00%	PASS
1 V	1,0001E+00	1,0002E+00	0,06%	0,50%	2,0048E+00	0,23%	3,00%	PASS
100 mV	1,0006E-01	1,0073E-01	0,72%	0,50%	2,0012E+00	0,00%	3,00%	FAIL

Thermal Sensor

VOLT RANGE	INPUT VOLTAGE	DISPLAY (VOLT)	UNCERT AINTY	TOL.	ANALOG OUT (VOLT)	UNCERT.	TOL.	RESULT
1 V	1,0003E+00	1,0003E+00	0,06%	0,50%	2,0075E+00	0,38%	3,00%	PASS
100 mV	1,0009E-01	1,0009E-01	0,05%	0,50%	2,0106E+00	0,53%	3,00%	PASS
10 mV	1,0004E-02	1,0003E-02	0,06%	0,50%	2,0163E+00	0,82%	3,00%	PASS
1 mV	1,0009E-03	1,0013E-03	0,09%	0,50%	2,0111E+00	0,56%	5,00%	PASS

Inspection Report

Model PM100D
Serial No P0007350
Software V2.8.1

Temperature 23°C +/-5°C
Humidity 35% +/-15%
Scan CAL_PM100

Test Date 22-Feb-2021
Tester Silke Danneberg
Test Result FAIL
Last Calibration 24-Oct-2018

Incoming Conditions:

Ingoing unit visual in perfect condition: YES

In need of repair: NO

Damaged during transportation: NO

Work Performed:

Firmware update: YES

Repair: NO

Modification: NO

Calibration and verification: YES

Notes: