



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Coherent, Inc.

27650 SW 95th Avenue
Wilsonville, OR 97070

(with satellite locations and capabilities identified on the scope of accreditation)

Fulfills the requirements of

ISO/IEC 17025:2017

And

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 15 May 2024

Certificate Number: AC-1630



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory
quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
AND
ANSI/NCSL Z540-1-1994 (R2002)**

Coherent, Inc., Wilsonville
27650 SW 95th Avenue
Wilsonville, OR 97070
Philip Taylor 800-343-4912
Philip.Taylor@coherent.com

CALIBRATION

Valid to: **May 15, 2024**

Certificate Number: **AC-1630**

Photometry and Radiometry

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Electrical Calibration of Laser Power Thermal Meters	100 μ W to 5 000 W 1.831 μ V to 2 V	0.8 % of reading	ARB, DMM, Attenuator
Electrical Calibration of Laser Power Optical Meters	10 nW to 30 mW 51 nA to 19.1 mA	0.8 % of reading	Current Source
Electrical Calibration of Laser Energy Meters	100 nJ to 3 J 40 μ V to 5 V	0.8 % of reading	ARB, Attenuator
Laser Power Measuring Sensors at 514 nm -Measure	(0.18 to 1.2) W (0.000 2 to 7) V/W	1 % of reading 1 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter
Laser Power Measuring kW Sensors at 1070 (+/-10) nm - Measure	(360 to 440) W (0.000 004 5 to 0.000 4) V/W	2.5 % of reading 2.5 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter
Laser Power Measuring kW Sensors at 10 600 nm - Measure	200 W to 1.1 kW (0.000 06 to 0.000 4) V/W	3.7 % of reading 3.7 % of reading	
Energy Measuring Sensors at 193 nm - Measure	3 μ J to 2 mJ (24 to 80) V/J	2 % of reading 2 % of reading	Coherent Working Standard Sensor, Oscilloscope, Coherent Energy Meter
Energy Measuring Sensors at 248 nm - Measure	60 μ J to 7 mJ (6 to 32) V/J	2.1 % of reading 2.1 % of reading	
Energy Measuring Sensors at 1 064 nm - Measure	10 μ J to 160 mJ (2 to 21 700) V/J	2 % of reading 2 % of reading	



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Laser Power Measuring Sensors at 810 (+/- 10) nm - Measure	(70 to 80) W (0.08 to 13) mV/W	1.7 % of reading	Coherent Working Standard Sensor, Coherent Power Meter
Laser Power Measuring Sensors at 10 600 nm - Measure	(0.5 to 150) W (0.001 4 to 0.226) V/W	2 % of reading 2 % of reading	Coherent Working Standard Sensor, Coherent Power Meter
Laser Power Measuring kW Sensors at 1070 (+/-10) nm - Measure	(250 to 2500) W (0.000 004 5 to 0.000 4) V/W	2.5 % of reading 2.5 % of reading	
Laser Power Measuring Sensors from 250 nm to 400 nm (UV-Range) - Measure	200 nW to 20 μ W (0.05 to 0.2) A/W	3 % of reading 3 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter
Laser Power Measuring Sensors from 400 nm to 450 nm (VIS-Range) - Measure	3 μ W to 20 μ W (0.01 to 0.1) A/W	10 % of reading 10 % of reading	
Laser Power Measuring Sensors from 450 nm to 1100 nm (VIS-Range) - Measure	3 μ W to 100 μ W (0.01 to 1) A/W	4.8 % of reading 4.8 % of reading	
Laser Power Measuring Sensors from 800 nm to 1 700 nm (IR-Range) - Measure	300 nW to 60 μ W (0.1 to 1.2) A/W	4 % of reading 4 % of reading	
Laser Power Measuring Sensors from 1 700 nm to 1 800 nm (IR-Range) - Measure	200 nW to 1 μ W (0.08 to 1) A/W	8 % of reading 8 % of reading	



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**Services performed at satellite laboratory:
Coherent Shared Services B.V.**

Dieselstrasse 5B
Dieburg, Germany D-64807
Philip Taylor 800-343-4912
Philip.Taylor@coherent.com

Photometry and Radiometry

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Electrical Calibration of Laser Power Thermal Meters	100 μ W to 5 000 W 1.831 μ V to 2 V	0.8 % of reading	ARB, DMM, Attenuator
Electrical Calibration of Laser Power Optical Meters	10 nW to 30 mW 51 nA to 19.1 mA	0.8 % of reading	Current Source
Electrical Calibration of Laser Energy Meters	100 nJ to 3 J 40 μ V to 5 V	0.8 % of reading	ARB, Attenuator
Laser Power Measuring Sensors at 514 nm -Measure	(0.18 to 1.2) W (0.000 2 to 7) V/W	1 % of reading 1 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter
Laser Power Measuring Sensors at 10 600 nm - Measure	(0.5 to 150) W (0.001 4 to 0.226) V/W	2 % of reading 2 % of reading	Coherent Working Standard Sensor, Coherent Power Meter
Energy Measuring Sensors at 193 nm - Measure	3 μ J to 2 mJ (24 to 80) V/J	2 % of reading 2 % of reading	Coherent Working Standard Sensor, Oscilloscope, Coherent Energy Meter
Energy Measuring Sensors at 1 064 nm - Measure	10 μ J to 160 mJ (2 to 21 700) V/J	2 % of reading 2 % of reading	
Laser Power Measuring Sensors from 250 nm to 400 nm (UV- Range) - Measure	200 nW to 20 μ W (0.05 to 0.2) A/W	3 % of reading 3 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter
Laser Power Measuring Sensors from 400 nm to 450 nm (VIS- Range) - Measure	3 μ W to 20 μ W (0.01 to 0.1) A/W	10 % of reading 10 % of reading	
Laser Power Measuring Sensors from 450 nm to 1100 nm (VIS- Range) - Measure	3 μ W to 100 μ W (0.01 to 1) A/W	4.8 % of reading 4.8 % of reading	
Laser Power Measuring Sensors from 800 nm to 1700 nm (IR- Range) - Measure	300 nW to 60 μ W (0.1 to 1.2) A/W	4 % of reading 4 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter
Laser Power Measuring Sensors from 1700 nm to 1800 nm (IR- Range) - Measure	200 nW to 1 μ W (0.08 to 1) A/W	8 % of reading 8 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter

Services performed at satellite laboratory:

Coherent Japan, Inc.

Business Office: 26F Shinjuku Maynds Tower
 2-1-1 Yoyogi, Shibuya-ku Tokyo, Japan 151-0053
 Service Location: Atsugi Tech Center
 1042-4 Toda, Atsugi-shi, Kanagawa, Japan 243-0023
 Philip.Taylor@coherent.com

Photometry and Radiometry

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Electrical Calibration of Laser Power Thermal Meters	100 μ W to 5 000 W 1.831 μ V to 2 V	0.8 % of reading	ARB, DMM, Attenuator
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Electrical Calibration of Laser Energy Meters	100 nJ to 3 J 40 μ V to 5 V	0.8 % of reading	ARB, Attenuator
Laser Power Measuring Sensors at 514 nm -Measure	(0.18 to 1.2) W (0.000 2 to 7) V/W	1 % of reading 1 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter
Laser Power Measuring Sensors at 10 600 nm - Measure	(0.5 to 150) W (0.001 4 to 0.226) V/W	2 % of reading 2 % of reading	Coherent Working Standard Sensor, Coherent Power Meter
Laser Power Measuring Sensors from 250 nm to 400 nm (UV-Range) - Measure	200 nW to 20 μ W (0.05 to 0.2) A/W	3 % of reading 3 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter
Laser Power Measuring Sensors from 400 nm to 450 nm (VIS-Range) - Measure	3 μ W to 20 μ W (0.01 to 0.1) A/W	10 % of reading 10 % of reading	
Laser Power Measuring Sensors from 450 nm to 1 100 nm (VIS-Range) - Measure	3 μ W to 100 μ W (0.01 to 1) A/W	4.8 % of reading 4.8 % of reading	
Laser Power Measuring Sensors from 800 nm to 1 700 nm (IR-Range) - Measure	300 nW to 60 μ W (0.1 to 1.2) A/W	4 % of reading 4 % of reading	
Laser Power Measuring Sensors from 1 700 nm to 1 800 nm (IR-Range) - Measure	200 nW to 1 μ W (0.08 to 1) A/W	8 % of reading 8 % of reading	Coherent Working Standard Sensor, DMM, Coherent Power Meter

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1630.



R. Douglas Leonard Jr., VP, PILR SBU

