



NABL

National Accreditation Board for Testing and Calibration Laboratories

Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

ELECTRONICS TEST & DEVELOPMENT CENTRE

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

STQC Directorate, 100 Feet Road, Peenya Industrial Area, Bangalore, Karnataka

in the discipline of

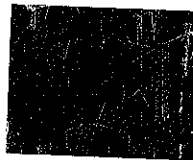
THERMAL CALIBRATION

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number C-0013

Issue Date 02/09/2014

Valid Until 01/09/2016



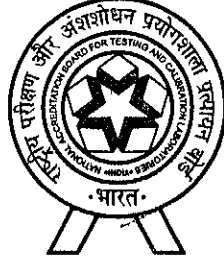
This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

Avijit Das
Program Manager

Anil Relia
Director

Prof. K. VijayRaghavan
Chairman



रा.प्र.प्र.बो.

राष्ट्रीय परीक्षण और अंशशोधन
प्रयोगशाला प्रत्यायन बोर्ड
विज्ञान एवं प्रौद्योगिकी विभाग, भारत

प्रत्यायन प्रमाण-पत्र

इलेक्ट्रॉनिकी परीक्षण एवं विकास केन्द्र

का मूल्यांकन और प्रत्यायन निम्न मानक के अनुसार

आई.एस.ओ./आई.ई.सी. 17025:2005

“परीक्षण एवं अंशशोधन प्रयोगशालाओं की सक्षमता की सामान्य अपेक्षाएँ”

बैंगलूर, कर्नाटक

में स्थित इसकी सुविधाओं के लिए

तापीय अंशशोधन

के विषय क्षेत्र में किया गया।

(इस प्रयोगशाला के प्रत्यायन के विषय क्षेत्र की जानकारी एन ए बी एल वेबसाइट www.nabl-india.org से भी प्राप्त कर सकते हैं)

प्रमाण-पत्र संख्या अ-0013

जारी करने की तिथि 02/09/2014

वैधता की तिथि 01/09/2016

यह प्रमाण-पत्र उपर्युक्त मानक तथा राष्ट्रीय परीक्षण और अंशशोधन प्रयोगशाला प्रत्यायन बोर्ड की अतिरिक्त अपेक्षाओं का निरंतर संतोषप्रद अनुपालन किए जाने पर अनुबंध में निर्दिष्टानुसार प्रत्यायन के क्षेत्र के लिए वैध रहेगा।

रा.प्र.प्र.बो. की ओर से हस्ताक्षरित

अ. दास

अविजीत दास
कार्यक्रम प्रबन्धक

अनिल रेलिया

अनिल रेलिया
निदेशक

कें विजयराघवन

प्रो. के. विजयराघवन
अध्यक्ष



NABL

SCOPE OF ACCREDITATION

Laboratory Electronics Test & Development Centre, STQC Directorate, 100 Feet Road, Peenya Industrial Area, Bangalore, Karnataka

Accreditation Standard ISO/IEC 17025:2005

Discipline Thermal Calibration **Issue Date** 02.09.2014

Certificate Number C-0013 **Valid Until** 01.09.2016

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
I. TEMPERATURE			
1. Liquid in Glass Thermometer, RTD, Thermocouples, Temperature Indicators with sensors ^s	-100 °C to 25 °C	0.13 °C	Using SSPRT, Black Stack with SPRT Module, Low temperature Alcohol bath by Comparison Method
	25 °C to 250 °C	0.06 °C	Using SSPRT, Black Stack with SPRT Module, Water bath & Silicon oil bath by Comparison Method
2. RTDs, Thermocouples, Temperature Indicators with sensors ^s	250 °C to 600 °C	0.5 °C	Using SSPRT, Black Stack (SPRT Module), DMM & Temperature calibrator by Comparison Method
3. Thermocouple, Temperatures Indicators with Sensors ^s	600 °C to 1000 °C	1.6 °C	Using 'S' type Thermocouple, DMM & Black Stack (TC module) by Comparison Method
4. Ice point ^s	0 °C	0.025 °C	Using SSPRT with Black stack by Comparison Method

Avijit Das
Program Manager

Neeraj Verma
Convenor



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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
5. Temperature baths and Dry block calibrators ^s	-100 °C to 250 °C 250 °C to 600 °C 600 °C to 1000 °C	0.13 °C 0.62 °C 1.7 °C	Using SSPRT, Reference S-type Black Stack (SPRT Module & TC scanner module) by Comparison Method
6. Temperature Indicator with sensor of Furnace*	200 °C to 1000 °C	2.0 °C	Using S type sensor with Black stack – PTC module by Single Position Calibration Method
7. RTD, Thermocouple, Indicators with sensors*	50 °C to 500 °C	0.6 °C	Using SSPRT with Black Stack -SPRT Module by Comparison Method
RTD, Thermocouple, Indicators with sensors*	500 °C to 1000 °C	1.9 °C	Using S type sensor with Black stack – PTC module by Comparison Method
II. SPECIFIC HEAT & HUMIDITY			
1. Relative Humidity and Temperature Indicators ^s	@ 25 °C 15% to 95% RH 10 °C to 70 °C	1%RH 0.21 °C	Using Temperature & humidity Indicator, Humidity generator by Comparison Method
2. Calibration of climatic Chambers / Temperature and humidity chambers*	-75 °C to 250 °C	1.50 °C	Using Data logger with PT 100 sensors by Multi Position Calibration Method

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
3. Humidity Indicator with Sensor of Climatic Chambers *	@ 25 °C 30% to 95% RH	@ 25 °C 2% RH	Using Temperature & humidity Indicator & Data logger with PT 100 sensors by Multi Position Calibration Method

* Measurement Capability is expressed as an uncertainty (\pm) at a confidence probability of 95%

^SOnly in Permanent Laboratory

*Only for Site Calibration

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