



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx TRC 12.0015X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 4	Issue 3 (2019-04-04)
Date of Issue:	2020-10-09		Issue 2 (2015-03-20)
Applicant:	Michell Instruments Ltd., Unit 48, Lancaster Way Business Park Ely Cambridgeshire CB6 3NW United Kingdom		Issue 1 (2013-09-16)
Equipment:	Gas Moisture Analyzer, OptiPEAK TDL600		Issue 0 (2013-02-13)
Optional accessory:			
Type of Protection:	Flameproof, Intrinsically Safe, Optical Radiation		
Marking:	Ex db ib op is IIC T5 Gb Ta = -20 °C to +60 °C		

Approved for issue on behalf of the IECEx
Certification Body:

Stephen Winsor

Position:

Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Element Materials Technology
Unit 1 Pendle Place
Skelmersdale
West Lancashire





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Date of issue: 2020-10-09

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Manufacturer: **Michell Instruments Ltd.**,
Unit 48, Lancaster Way Business Park
Ely
Cambridgeshire
CB6 3NW
United Kingdom

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-28:2015 Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/TRC/ExTR12.0014/00](#)
[GB/TRC/ExTR12.0014/03](#)

[GB/TRC/ExTR12.0014/01](#)

[GB/TRC/ExTR12.0014/02](#)

Quality Assessment Report:

[GB/BAS/QAR07.0018/10](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Michell Instruments OptiPEAK TDL600 is a Tuneable Diode Laser (TDL) Gas Analyzer is designed for online measurements by means of a tuneable diode laser analyzer to measure gas composition, typically of natural gas. The optical analysis technique provides a non-contact sensor measurement of the sample gas stream. A microprocessor controls all functions associated with sampling and data processing, providing a fully automatic and objective monitoring system.

The all of the control, processing, power supply and laser signal generation functions of the analyzer of the OptiPEAK TDL600 are housed within an IECEx component certified flameproof enclosure (JCE model GUB5, certificate number IECEx TRC12.0002U) suitable for use with IIC gases. Mounted directly behind, and inside of the flameproof enclosure glass window, is a controlling interface operated by through glass proximity switches and a display module.

A tubular cylinder, separate from the flameproof enclosure, provides the location at which an analysis measurement is made. A flexible conduit connects the flameproof enclosure to the tubular cylinder. The flexible conduit is terminated at the entry of the flameproof enclosure via an IECEx certified barrier conduit gland. Through the flexible conduit passes an optical fibre transmitting the laser generated optical output signal and a hardwired photo-detected input signal. The tubular cylinder consists of a sealed cylindrical chamber with gas in and out ports through which passes the gas stream to be measured. At one end of the measurement chamber an additional segregated sealed chamber is provided in which is housed the connection for the flexible conduit, and the mount & termination points for the optical fibre and photo detector device. The optical signal is emitted through a sealed window along the length of the chamber containing the gas sample stream. A passive optical device returns the optical signal back through the sealed window on to the photo detector device. A filter connected to the inlet port of the measurement cylinder removes any particulate matter greater than 1.0 micrometre.

The equipment can be supplied either uncoated, painted or powder coated.

Electrical input rating 90-260 Vac 50/60Hz 180W.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Do not open when an explosive gas atmosphere may be present.
2. Do not open when energised.
3. External cables shall be compatible with a maximum temperature of 90°C.
4. Only suitably IECEx certified (as appropriate to the equipment application) cable glands, conduit entry devices and blanking elements shall be used.
5. The enclosure must be earthed externally using the earth point provided.
6. Where painted or powder coated, the enclosures could present an electrostatic hazard. Clean only with a damp or anti-static cloth.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 4:

Update of standards to latest edition.

Current limiting resistor protecting secondary cell changed

Annex:

[CSF353 Annex to IECEx TRC 12.0015X Iss. 4_1.pdf](#)



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Annex to IECEx Certificate of Conformity

IECEx TRC 12.0015X issue No.: 4

Special conditions for manufacture

None

Routine Tests

None

Manufacturer's Documents

Title:	Drawing No.:	Rev. Level:	Date:
OptiPEAK TDL600 Gas Analyser IECEx and ATEX Certification Drawing (4 pages)	Ex90498	4	2020-07-28
TDL600 OptiPEAK - User's Manual – Appendix G (2 pages)	97319	4.5	2020-02
"ib" Protection circuit PCB details	Ex83357	2	2018-11-22
OptiPEAK TDL600 ib protection circuit PARTS LIST	Ex83357	2	2018-11-22
Signal Input ib protection circuit PARTS LIST	EX83886	2	2018-11-22
ib PROTECTION CIRCUIT PCB DETAILS	Ex83886	2	2018-11-22

* Denotes information not provided by manufacturer



Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.