



# Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 2817</b>	26-Apr-2013	Number 1	Issue date 26-Apr-2013	30-Apr-2014

## Product designation

**Spectrex SharpEye™, 40/40U Series, ultraviolet flame detectors**  
(Refer to the Schedule/enclosures for further specified details)

## Agent/distributor

Fire Protection Technologies Pty Ltd  
Unit 1 / 251 Ferntree Gully Road, MT WAVERLEY, VIC, AUSTRALIA, 3149

## Registrant

Spectrex Inc.  
218 Little Falls Road, CEDAR GROVE, NJ, UNITED STATES, 07009

### Producer

Spectrex Inc.  
218 Little Falls Road, CEDAR GROVE, NJ, UNITED STATES, 07009

## Conformance criteria and evaluation

The Spectrex SharpEye™, 40/40U Series, ultraviolet flame detectors has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. European Standard EN 54-10:2002, 'Fire detection and fire alarm systems. Flame detectors. Point detectors'.
2. Loss Prevention Council - Evaluation, surveillance and approval, 'LPC approval'.

## Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

- i. Compatibility of this fire detector and with new or existing control and indicating equipment should be verified prior to installation.
- ii. Meets the requirements of EN 54-10: 2002 Class 1 at sensitivity setting 2 (default) only.

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Issued by

David Whittaker  
Executive Officer – ActivFire Scheme



# Schedule to Certificate of Conformity

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## Producer's description

The Spectrex SharpEye™, 40/40U Series, ultraviolet flame detectors detect hydrocarbon-based fuel and gas fires, invisible hydrogen flames, and fires from hydrides, ammonia, silane and other organics.

## Technical specification

The following details are a representative extract of the technical specification for the Spectrex SharpEye™, 40/40U Series, ultraviolet flame detectors and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Model	Description
Model 40/40UB	Ultraviolet Flame Detector with Built-In-Test Feature (BIT)

Property/characteristic	Value(s)	
Detection range (for 0.1 m <sup>2</sup> (1 ft <sup>2</sup> ) pan fire) at highest Sensitivity Setting <small>* 0.5m (20") high, 0.2m (8") width plume fire</small>	Fuel	Distance
	n-Heptane	15 m 50 ft
	Ethanol 95%	11 m 37 ft
	LPG*	12 m 40 ft
	Gasoline	15 m 50 ft
	Methanol	11 m 37 ft
	Polypropylene Pellets	5 m 18 ft
	Diesel Fuel	11 m 37 ft
	IPA (Isopropyl Alcohol)	11 m 37 ft
	Office Paper	6 m 20 ft
	JP5	11 m 37 ft
	Hydrogen	10 m 33 ft
	Kerosene	11 m 37 ft
	Methane*	12 m 40 ft
Field of view	Horizontal 100° Vertical 95°	
Spectral response	UV 0.185-0.260 μm	
Response time	Typically 3 seconds	
Adjustable time delay	Up to 30 seconds	
Sensitivity ranges	0.1m <sup>2</sup> (1 ft <sup>2</sup> ) n-heptane pan fire from 15m (50 ft)	
Built-in-test (BIT)	Automatic (and Manual)	
Temperature range	Operating: -55°C to +75°C (-67°F to +167°F)	
	Option: -55°C to +85°C (-67°F to +185°F)	
	Storage: -55°C to +85°C (-67°F to +185°F)	
Humidity	Up to 95% non-condensing (withstands up to 100% RH for short periods)	
Heated optics	To eliminate condensation and icing on the window	
Operating voltage	24 Vdc nominal (18-32 Vdc)	
Power consumption	Standby: Max. 90 mA (110 mA with heated window)	
	Alarm: Max. 130 mA (160 mA with heated window)	
Cable entries	2 x 3/4" - 14NPT conduits or 2 x M25 x 1.5 mm ISO	
Wiring	12 – 22 AWG (2.5mm <sup>2</sup> - 0.3mm <sup>2</sup> )	
Electrical input protection	According to MIL-STD-1275B	
Electromagnetic compatibility	EMI/RFI protected to EN61326-3 and EN61000-6-3	
Electrical interface	The detector includes twelve (12) terminals with five (5) wiring options (factory set)	
Relays	Alarm, Fault and Auxiliary	
	SPST volt-free contacts rated 5A at 30 Vdc or 250 Vac.	
0-20 mA (stepped)	Sink (source option) configuration	
	Fault: 0 +1 mA	Warning: 16 mA ± 5%
	BIT Fault: 2 mA ± 10%	Alarm: 20 mA ± 5%
	Normal: 4mA ± 10%	Resistance Loop: 100-600 Ω
HART protocol	Optional HART communications on the 0-20mA analog current (FSK) - used for maintenance, configuration changes and asset management, available in mA source output wiring options	
RS-485	RS-485 Modbus compatible communication link that can be used in computer controlled installations	
Materials Enclosure options	<ul style="list-style-type: none"> <li>• Stainless Steel 316L with electro polish finish</li> <li>• Heavy duty copper free aluminum (less than 1%), red epoxy enamel finish</li> </ul>	
	Mounting	Stainless Steel 316L with electro polish finish
Dimensions	Detector 101.6 x 117 x 157 mm (4" x 4.6" x 6.18")	
Weight	Detector (St.St.) 2.8 kg (6.1 lb) Tilt mount 1.0 kg (2.2 lb)	
	Detector, aluminum 1.3 kg (2.8 lb)	
Environmental Standards	Meets MIL-STD-810C for Humidity, Salt & Fog, Vibration, Mechanical Shock, High Temp, Low Temp	
Water and Dust	IP66 and IP67 per EN60529, NEMA 250 6P	

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## Supplementary information

### Schedule of relevant articles

The following schedule is an extract of articles significant and/or related as evidence of conformity.

Reference		Title / description	Date issued (or date validated)	Source
Ident. type	Ident.			
Certificate No.	911a-(cl-1)	Flame Detectors EN 54-10: 2011 + A1: 2005 SharpEye 40/40UB LPCB Ref. No.: 911a/08 <small>(lpcb_w3_Cert_911a-(cl-1)_v_2013-04-26.pdf)</small>	26-Apr-2013	LPCB, UK
EC-Certificate of Conformity	0832 – CPD – 0980 Issue num. 1	40/40UB Conventional Class 2 UV/IR flame detector for use in fire detection and alarm systems EN 54-10:2002, 'Fire detection and fire alarm systems. Flame detectors. Point detectors'	24-Apr-2009	BRE Global & LPCB, UK
Datasheet	DS-F-40/40U-UB	40/40U-UB UV Flame Detector	Mar-2012	Spectrex Inc., NJ, US