



# Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 1207</b>	4-Dec-1998	Number 14	Issue date 28-Jun-2019	30-Apr-2020

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## Product designation

**Fireray 2000, optical beam smoke detector**

(Refer to the Schedule/enclosures for further specified details)

## Agent/distributor

Ampac Pty Ltd  
7 Ledger Road, BALCATTA, WA, AUSTRALIA, 6021

## Registrant

Ampac Pty Ltd  
7 Ledger Road, BALCATTA, WA, AUSTRALIA, 6021

### Producer

FFE Limited  
9 Hunting Gate, Wilbury Way, HITCHIN, HERTFORDSHIRE, UNITED KINGDOM, SG4 0TJ

## Conformance criteria and evaluation

The Fireray 2000, optical beam smoke detector has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 1603.7-1996, 'Automatic fire detection and alarm systems - Optical beam smoke detectors'.

## 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. Installation and maintenance as recommended by the manufacturer of the product (except 'RETRO' configuration),
- ii. Maximum of one detector connected per fire alarm zone,
- iii. Operating temperature range -10 °C to 55 °C
- iv. Used in a dry indoors environment.

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 Fireray 2000, optical beam smoke detector comprises a transmitter which projects a modulated infra-red light beam (880 nm) onto a receiver unit. The received signal is analysed in a controller which can be located at ground level.

Should smoke be present in the beam path for a period of approximately 8 to 10 seconds, a fire relay is activated. The system is designed to be mounted so that the beam will project between 0.3 to 0.6 metres below (and parallel to) the roof or ceiling level at ranges up to 100 metres. The maximum lateral detection range is 7.5 metres either side of the actual beam.

The detector has three user selectable thresholds of 25 %, 35 % and 50 %. The 50 % threshold is recommended by the manufacturer for 'RETRO' operation. Range setting is made by adjustment of a screw at the transmitter with 10, 30 and 100 metre settings.

Alignment of the detector is initially performed by using a sighting device. Final alignment is achieved by vertical and horizontal adjustment of the transmitter until a maximum reading is obtained at the test meter outputs on the controller.

The manufacturer specifies the working voltage range for the detector as 11.5 Vdc to 28 Vdc. The manufacturer's specified quiescent current is 13 mA and maximum stated alarm current is 20 mA. The detector is rated for operation over the temperature range of -20 °C and +55 °C.

Other features of the detector include, fault indication (low signal level or light beam obscuration), latching or non latching alarm relay. The manufacturer claims that the detector may also be configured to operate in 'RETRO' mode where the optical heads are mounted adjacent to each other with the infra-red signal being returned via prisms.

## Technical specification

The following details are a representative extract of the technical specification for the Fireray 2000, optical beam smoke detector and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

### Controller:

<b>Input voltage:</b>	12 Vdc to 24 Vdc
<b>Protection:</b>	100 mA fuse
<b>Quiescent current:</b>	8 mA @ 24 Vdc
<b>Alarm thresholds:</b>	25%, 35%, and 50%
<b>Temperature range:</b>	-20°C to +55°C
<b>Contact rating (resistance):</b>	
Nominal Load:	1 A @ 24 Vdc 0.5 A @ 120 Vac
Max switching power:	60 VA 24 W
Max switching current:	2 A
<b>Size:</b>	210 x 160 x 80 mm
<b>Weight:</b>	1060 grms
<b>IP Rating:</b>	IP50

### Optical detector heads:

<b>Input voltage:</b>	12 Vdc to 24 Vdc
<b>Tx supply current:</b>	5 mA @ 24 Vdc
<b>Temperature range:</b>	-20°C to +55°C
<b>Alignment:</b>	External Universal Bracket
<b>operational range:</b>	10 m to 100 m
<b>Size:</b>	83 x 115 x 135 mm
<b>Weight:</b>	650 grms (including bracket)
<b>IP rating:</b>	IP50