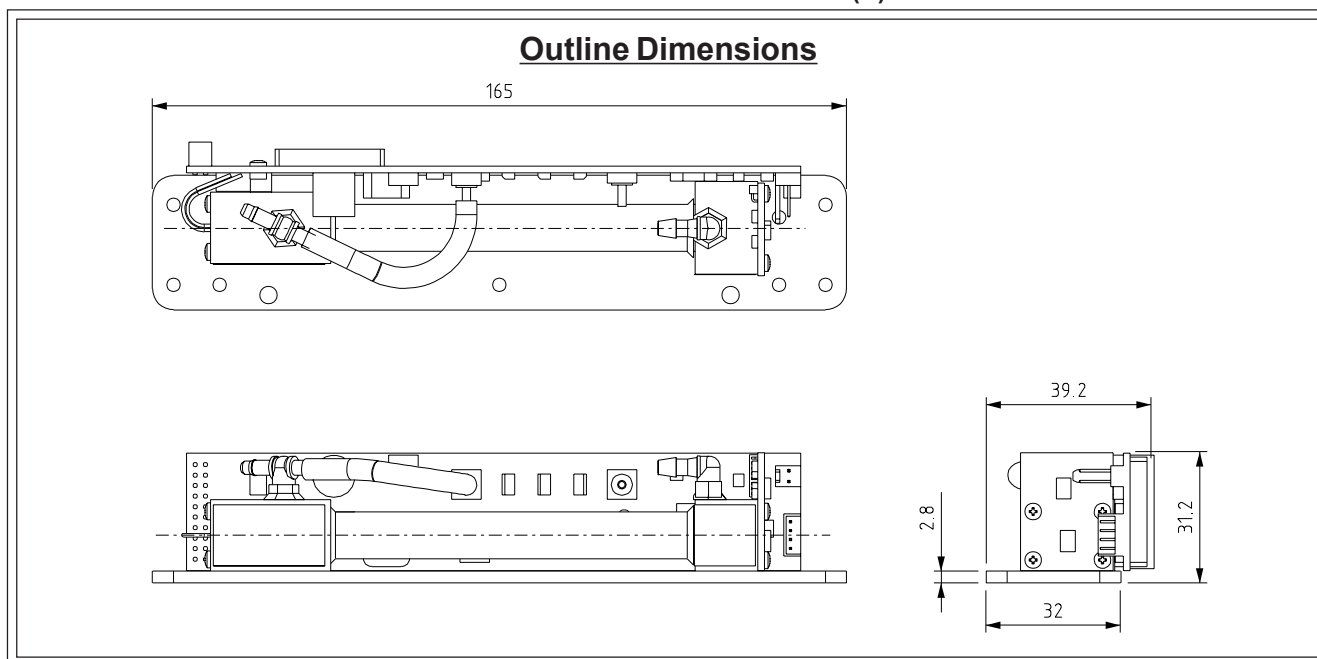


IRidium® Specification



IRidium®100

Reference 3 gas infrared bench for BAR 97 markets
Conforms to BAR97 and OIML R 99:2000(E) Class 0



Performance Characteristics

Physical Characteristics

Range	
HC	0-30000ppm
CO	0.00-15.00%
CO₂	0.00-20.00%
O₂(Option)*	0.00-25.00%
NO(Option)*	0-5000ppm
Response Time T_{10-90%}	
NDIR (HC, CO, CO₂)	<3 seconds
O₂ and NO options*	see relevant data sheets
Operating Temperature Range	0 to 50°C
Relative Humidity Range	0 to 90% RH (non-condensing)
Input voltage range	8.0 to 36.0 VDC unregulated
Power consumption	<1.0 watt average power <1.5 watt peak power
Recommended flow rate	1L/min
Warm-up time	60 seconds (full accuracy) 2 minutes (span functions)
Operating pressure range	813 to 1060 mBar

Weight	114g
Length	165mm
Width	31mm
Height	39mm
Recommended Storage Temperature Range	-40 to 70°C
Warranty Period	12 months from date of despatch, please refer to IRidium warranty terms. (This amounts to a variation of condition 6 of our standard terms and conditions which otherwise apply)

N.B. All performance data is based on conditions at 20°C, 50%RH, and 1013mBar



Attention
Observe precautions for handling electrostatic sensitive devices

* O₂ and NO are measured via optional electrochemical sensors. For further details see the relevant data sheets.

* Without an O₂ sensor connected to bench, a simulated 9-13mV input to the O₂ channel is required to avoid error codes being generated.

IRidium® Specification



Gas	Measuring range	Accuracy	Repeatability	Noise
HC n-hexane	0 to 2000 ppm 2001 to 15000 ppm 15001 to 30000 ppm	±4ppm abs. or 3% rel. ±5% rel. ±8% rel.	±3ppm abs. or ±2% rel. ±3% rel. ±4% rel.	2ppm abs. or 0.8% rel.
CO	0.00% to 10.00% 10.01% to 15.00%	±0.02% abs. or ±3% rel. ±5% rel.	±0.02% abs. or ±2% rel. ±3% rel.	0.01% abs. or 0.8% rel.
CO2	0.00% to 16.00% 16.01% to 20.00%	±0.3% abs. or ±3% rel. ±5% rel.	±0.1% abs. or ±2% rel. ±3% rel.	0.10% abs. or 0.8% rel.
NOx	0 to 4000 ppm 4001 to 5000 ppm	±20ppm abs. or 4% rel. ±5% rel.	±20ppm abs. or 3% rel. ±4% rel.	10ppm abs. or 1% rel.
O2	0.00% to 25.00%	±0.01% abs.	±0.1% abs.	0.05% abs.

User Interfaces**Host Communications Interface**

Interface type: RS232, asynchronous
 Baud rate: 9600bps
 Format: 1 start bit, 8 data bits, no parity, 1 stop bit
 Signals: Transmit data, receive data, signal ground

Auxiliary I/O

Control signals: Eight user-defined TTL outputs and digital ground
 Input signals: Tachometer input - 0 to 5 volt pulse.
 Three analog signals. 0 to 5 VDC. 8bit ADC resolution

Connector J1 - Main connector

The main connector is marked J1 and is a 2x10 way block.

Mating parts are available from a number of suppliers, a selection of which include:

Leotronics Part number: 2045-3201
 FCI Part number: 89947-320 (Minitek)
 Samtec Part number: TCSD-10-01-N
 DonConnex Part number: AO5a-20BSB1

J1

VPWR	19	20	VPWR
TACH	○	○	TXD#
USER7	○	○	RXD#
USER3	○	○	Vcc
USER6	○	○	USER5
USER4	○	○	USER2
USER1	○	○	USER0
EXTA3	○	○	EXTINT
EXTA2	○	○	EXTA1
GND	1	2	GND

IRidium®100 Ordering information

The IRidium®100 is available in four configurations as follows:

Type	Contents	Product Code
IRidium® 5 Gas BAR 97	Reference 3 Gas Bench AO2, NX-1 Sensors, 2 Manifolds and Leads	AUTO-5NX1
IRidium® 5 Gas NON BAR 97	Reference 3 Gas Bench AO2, NX-3 Sensors, 2 Manifolds and Leads	AUTO-5NX3
IRidium® 4 Gas OIML 0	Reference 3 Gas Bench AO2 Oxygen Sensor, Manifold and lead	AUTO-4AO2
IRidium® 3 Gas OIML 0	Reference 3 Gas Bench	AUTO-3

Every effort has been made to ensure the accuracy of this document at the time of printing. In accordance with the company's policy of continued product improvement City Technology Limited reserves the right to make product changes without notice. No liability is accepted for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale. The products are always subject to a programme of improvement and testing which may result in some changes in the characteristics quoted. As the products may be used by the client in circumstances beyond the knowledge and control of City Technology Limited, we cannot give any warranty as to the relevance of these particulars to an application. It is the clients' responsibility to carry out the necessary tests to determine the usefulness of the products and to ensure their safety of operation in a particular application.

Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.