



State-of-the-Art Innovators of Chemical Instrumentation
for the Semiconductor Industry

9000 Washington St., NE
Albuquerque, New Mexico 87113
505-343-9500 Fax 509-479-2980
E-mail: request@cicp.com

Visit our web sites at: www.cicp.com & www.irgas.com

Requesting Company/Distributor/Manufacturers Representative: _____

Name of Requestor: _____

Address: _____

Tel: _____

Fax: _____

Email: _____

Technical Information Required for Long/Short Path Gas Cell and IRGAS System Applications (Section A only required for gas cells; all Sections required for IRGAS.)

End User/Customer: _____ Location: _____

Date Quotation is required: _____

A. Long and Short Path Gas Cell Specifications

1. Estimated pathlength of gas cell: _____; how estimated: _____

2. Gases to be analyzed:

a. Carrier or dominant gas: _____

b. Known composition of gases: _____

c. Expected gas species in gas stream: _____

d. Impurities to be measured: _____

3. Concentration ranges and Limits of Detection (LOD)s for all gas species (in ppb to ppm):

<u>Species</u>	<u>Range</u>	<u>LOD</u>	<u>Species</u>	<u>Range</u>	<u>LOD</u>
a.			f.		
b.			g.		
c.			h.		
d.			i.		
e.			j.		

4. If moisture to be measured, LOD required: _____

5. Operational temperatures of gas cell (deg C):

a. For purging/flushing: _____

b. For sample analysis: _____

6. Pressures and flowrates of gas stream:

_____ Pressure (torr) _____ Flowrate (liter/min)

a. At source of gas:

b. At gas cell inlet

c. At downstream exhaust:

7. If gas flow is being pulled by a vacuum, at what level?: _____

8. Time response required per sample measurement (state min or sec): _____

9. Frequency of measurement (state min or hr):

- a. Samples from same gas stream: _____
- b. Samples from two different gas streams: _____
- c. Samples from multiple gas streams: No. of streams: _____ Frequency: _____

10. Which gas samples are of sufficient concentrations to be considered:

- a. Corrosive: _____
- b. Toxic: _____
- c. Non-corrosive or toxic: _____

11. Seals required for gas cell (check which type apply):

- a. Viton: _____
- b. Kalrez: _____
- c. Metal C-seals + Kalrez: _____
- d. Buna-N: _____
- e. Other (indicate): _____

12. Preferred windows for gas cell (check):

- a. KBr: _____
- b. CaF₂: _____
- c. BaF₂: _____
- d. AgCl: _____
- e. ZnSe: _____
- f. AR-coated ZnSe: _____
- g. IR-Quartz: _____
- h. Sapphire: _____

13. Preferred gas cell body material (check):

- a. Glass: _____
- b. Anodized Aluminum: _____
- c. Electropolished stainless steel: 304 SS: _____ 316L SS: _____
- d. Nickel-plated stainless steel: _____
- e. Hastelloy: C22: _____ C276: _____
- f. Monel: _____

14. Plumbing connectors preferred on gas source lines:

- a. Swagelok: _____ Size: _____
- b. VCR: _____ Size: _____
- c. Other (indicate): _____

15. Any entrained particles in gas stream that necessitate a particle filter;

Yes: _____ No: _____ What size particles: _____

16. For "wet" gas streams, is a moisture drier required to remove it before analysis:

Yes: _____ No: _____ Degree of wetness: _____

17. Is ultra dry nitrogen, argon, or air available as a purge gas; which: _____

18. FTIR or EP-IR spectrometer make and model to be used with gas cell:

- a. Make: _____
- b. Model: _____ & Detector: _____
- c. Maximum resolution (cm⁻¹) required for analyses: _____
- d. Gas Purged: _____
- e. Evacuated: _____

19: If not a FTIR, what type of Source: _____ Detector: _____