

3.8.5 High Power - In-Line Industrial Beam Monitoring

3.8.5.1 II-VI-CO₂ Series

- An in-line industrial laser beam monitoring solution
- Rapidly tune lasers for best performance for each job
- Monitor fluctuations while processing
- Optimize beams in real-time
- Diagnose faults quickly

The II-VI-CO₂-BS-35 Profiler Beam Sampler was developed by II-VI, a leading industrial optics supplier, specifically to enable measurement and viewing of high power industrial CO₂ beams. Spiricon and II-VI have teamed up to provide solutions to vexing laser beam stability, alignment, tuning, and optimizing difficulties.

The II-VI-CO₂-58 series Profiler consists of a set of turning mirrors that direct the beam to a sampling beam splitter, and then returns it to the original in-line path. After passing through the splitter, the sampled beam passes through additional attenuation and a beam telescope to size the beam for a Pyrocam III infrared camera. The camera is connected to a PC computer through a Firewire interface. A Basic Image Viewer presents 3D isometric plots, 2D color contour plots and grayscale, among other views. Add BGS-PC-PIII beam analyzer software to access many quantitative analysis, computations and charting functions.

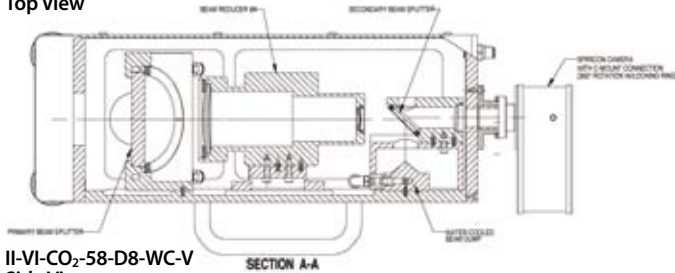
The II-VI-CO₂-58 Series Profiler is similar to the BS model but the original beam is not returned "in-line". Both a horizontal and vertical entry model are available.

The Pyrocam III with BGS-PC software must be ordered separately.

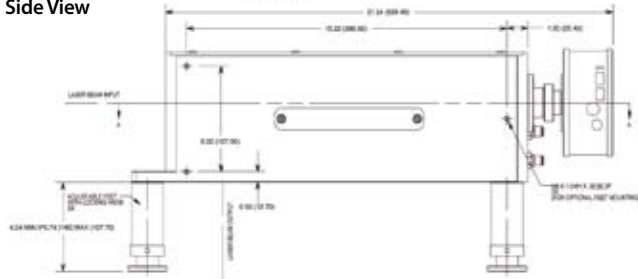
II-VI-CO₂-BS-35



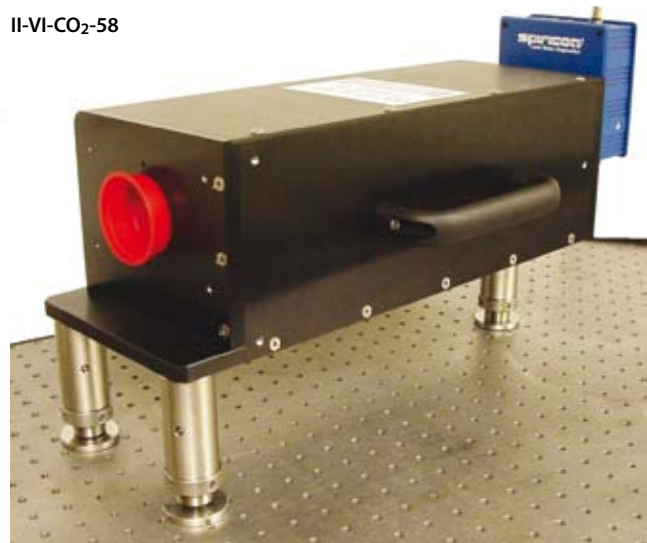
II-VI-CO₂-58-D8-WC-V
Top View



II-VI-CO₂-58-D8-WC-V
Side View



II-VI-CO₂-58



Model	Wavelength	Power	Beam Width	Beam Input	Cooling
II-VI-CO ₂ -BS-35	10.6μm	up to 8kW	20mm	Vertical or Horizontal	Requires external water
II-VI-CO ₂ -58-D8-WC-H	10.6μm	up to 10kW	29mm	Horizontal	Requires external water
II-VI-CO ₂ -58-D8-WC-V	10.6μm	up to 10kW	29mm	Vertical	Requires external water

Ordering Information

Item	Description	P/N
II-VI-CO ₂ -BS-35	II-VI-CO ₂ in-line sampler, for 10.6μm beams up to 8 kW. Beam width up to 20 mm. Pyrocam III Beam Profiler System required (ordered separately). Recommended model: PY-III-C-A or PY-III-C-B with a Germanium 10.6μm window. BGS-PC-PIII laser beam analyzer software included with Pyrocam system	SP90062
II-VI-CO ₂ -58-D8-WC-H	CO ₂ laser beam sampler for lasers up to 10kW. Input Clear Aperture is 58mm. Requires cooling water. Horizontal entry. Built-in 8X beam reducer and adapters for Pyrocam III. Order Pyrocam III separately. BGS-PC-PIII laser beam analyzer software included with Pyrocam system	SP90160
II-VI-CO ₂ -58-D8-WC-V	Same as above but with Vertical Entry	SP90161