AIM2000
LASER DUST MONITOR

LASER LIGHT SOURCE-ULTIMATE WAWELENGHT STABILITY, EXCELLENT COLLIMATION AND HIGH SENSITIVITY

- **Minimum optics needed - less maintenance**
- **Optimal for stacks up to 65.6 ft. (20 meters)**
- **No moving parts-minimal maintenance**
- **Large operation range (0 ... 90 %)**
- **Good stability and reliability**

SYSTEM FEATURES & BENEFITS:

- Sensitive to very low levels of Dust, or Aerosols (i.e. Acid Mist in flue gases, etc.)
- No zero drift
- Multiple Ranges available, from 1 mg/Nm^3 to 10 g/Nm^3
- Insensitive to Sunlight or other Light sources
- Insensitive to sample flow rate or temperature
- Simple Installation and Start-up
- No optical alignment; no concern of alignment changes with temp, etc.
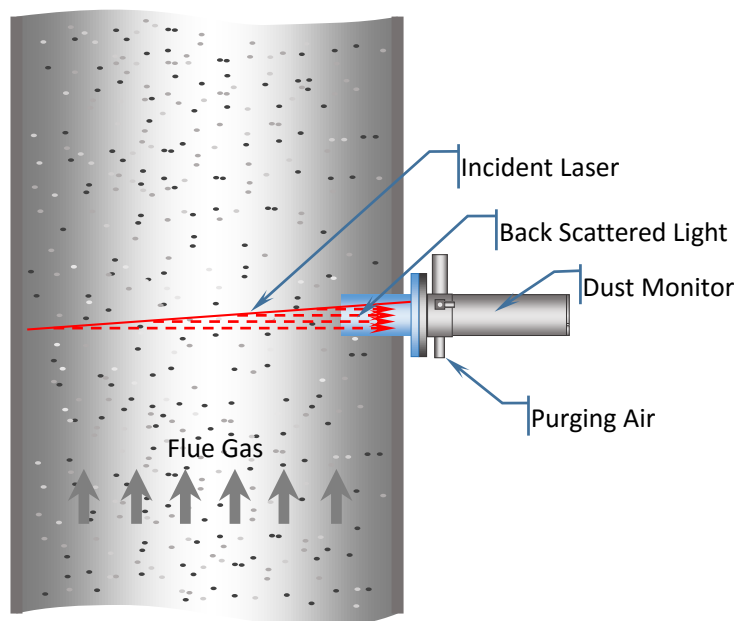- Minimum Maintenance
- Lower Sensitivity to Water Drops

PRINCIPLE OF OPERATION

The measuring system is based on the Laser Backward Scattering principle. The laser beam is projected from the transceiver into the flue gas stream or ambient air volume to be sampled. The laser beam is scattered by the particulates and/or aerosols present. The back-scattered radiation is collected and measured at a detector in the transceiver. The intensity of backscattered radiation is proportional to the dust loading [nm/Nm^3].

TYPICAL APPLICATIONS

- Power Plant
- Cement Factories
- Incinerators
- Tunnels

Incident Laser

Back Scattered Light

Dust Monitor

Purging Air

Flue Gas

Dust

SPECIFICATIONS

Light Type	Semi-Cond Laser
Wavelength	650 nm, visible light
Measuring Range	0 to 100 mg/m^3 0 to 250 mg/m^3 0 to 500 mg/m^3 0 to 1000 mg/m^3 0 to 2000 mg/m^3
Accuracy	±2% F.S./ 24 h
Zero Drift	±2% F.S./ 24 h
Range Drift	±2% F.S./ 24 h
Linearity	±2% F.S./ 24 h
Resolution	1 mg/m^3
Response Time	5s
Stack Diameter	3.28' to 65.62' (1 to 20 m)
Environment Demand	Temp.: -40 °F to 149 °F (-40 °C to 65 °C) Humidity: 0 to 100% R.H.
Purge Flow Requirement	Min. 10 L/min
Operate Temp.	Max 572 °F (300 °C); Optional for higher
Output	Analog 4 to 20 mA
Max. load	500Ω
Power	220 VAC 50/60 Hz, or 24 VDC
Consumption	Max. 5W
Dimension	6.3" × 6.3" × 9.8" (160×160×250 mm)
Weight	141Oz (4 kg)

Dust