

# DUSTCOUNT® 8866 SPECIFICATIONS SHEET

## OVERVIEW

The DustCount 8866 Real-time Personal Wearable Particle Monitor provides the features required to support real-time personal aerosol monitoring in a single, lightweight, easy to use package.

Particles that have a diameter of less than 2.5µm, referred to as PM2.5, can be dangerous. Long-term exposure to PM2.5 may lead to plaque deposits in arteries, causing vascular inflammation and a hardening of the arteries which can eventually lead to heart attack and stroke. Fine particles are also known to trigger or worsen chronic disease such as asthma, heart attack, bronchitis and other respiratory problems.

The DustCount 8866 allows health officers to use real-time methods to determine if, when, and where PM2.5 amounts are at unhealthy levels and take steps to reduce the exposure.



## FEATURES AND BENEFITS

- ❖ Optical Particle Counter technology provides real-time mass, particle concentration, and particle size distribution data.
- ❖ Size distribution data is stored in 128 internal digital particle size bins, with 20 size bins exposed in logs and graphs.
- ❖ Built-in cassette houses 25mm filter for standard method gravimetric, or composition analysis.
- ❖ Wireless interface for management and control from PC or Smartphone with a maximum of 128 Bluetooth connections on user interface software on PC .
- ❖ Real-time graphing with DustCount software.
- ❖ Automated pump management eliminates ongoing manual calibration of pumps.
- ❖ Rechargeable batteries and long-life pump ensure lower maintenance demands.

## TECHNICAL SPECIFICATIONS

### DIMENSIONS

**Size (H x W x D):** 13 x 9 x 4 cm (5.5 x 3.5 x 1.8 in)

**Weight:** 0.5 Kg (1.0 lb)

### OPERATING PARAMETERS

**Temperature:** 5 to 32° C (41 to 89° F)

**Humidity:** < 80% up to 32° C, non-condensing

**Altitude:** Flow rate adjusts automatically for -2000m to +10,000m altitude. Reduce reported flow by 1% for every 100m above sea level. Increase reported flow 1% for every 100m below sea level.

**Maximum Operational Pressure:** 1.26 to 0.26 atmospheres.

### FLOW RATE

Factory set to 0.5 L/min with +/- 5% accuracy.

### DEVICE INTERFACES

**Display:** Liquid Crystal Display, monochrome, 20-character, 4-line.

**Communications Interfaces:** USB (USB-Type A connector), Bluetooth 4.2

### ALARMS / ALERTS

**Alarm Notifications:** Visual – Flashing LCD panel, and Audible alarm.

**Alarm Types:** PEL, or STEL with user configurable parameters.

## DUSTCOUNT SOFTWARE

**Operating Systems:** Mac OS 10.11 or higher and Windows 7 or higher.

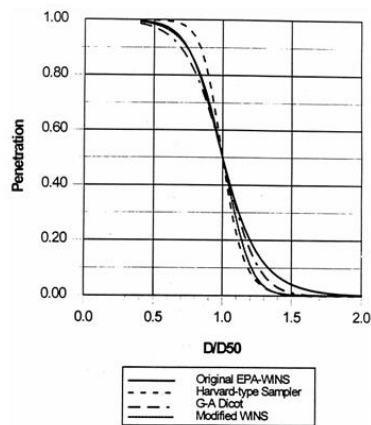
## MEASUREMENTS

**Particle Diameter:** 0.48 $\mu$ m to 4.28  $\mu$ m: EPA recommended transfer curve (shown below) Note: the x axis of is multiplied by 2.5 for the 2.5 $\mu$ m impactor.

**Post Sample Analysis:** Removable 25mm diameter filter

**Particle Count rate:** Maximum: 400X10<sup>6</sup> particles/m<sup>3</sup> maximum.

**Maximum measurable mass concentration:** 5mg/m<sup>3</sup> with Arizona Road Dust.



## CALIBRATION

Calibrated against gravimetric reference using ISO 12103-1 A1 ultra-fine test dust (Arizona Road Dust)

**Sizing Calibration:** Standard PSL particles in size range 0.4 – 3.1 $\mu$ m

## ORDERING INFORMATION

See [www.nanozen.com](http://www.nanozen.com) for sales information.

Email Nanozen at [moreinfo@nanozen.com](mailto:moreinfo@nanozen.com)

Contact Nanozen at 1-844-626-6936

## DATA

**Data Storage:** 4 GB on-board memory (holds 1 million logged events)

**Logging Interval:** Configurable between 5 seconds to 60 minutes.

**Formats:** Logs saved as either CSV, or Excel (.xlsx) format. Graphs saved as .png format.

## POWER

**Battery:** Two-cell Lithium Ion battery pack (7.5V, 2 Wh – battery protection included)

**Run Time:** 10-hour continuous use on a fully charged battery

**Charge Time:** 2-hour maximum recharge time using charger provided.

**Charger Voltage range:** 100 to 240VAC 50/60 Hz, 17W maximum  
(Use only supplied charger)