

Visual: S E N S I N G

Visual Dust

Dust

Airborne dust is well known to be associated with a wide range of occupational diseases and systemic intoxications. Knowing the dust concentration is the first step to manage dust exposure in the workplace and create a healthy and hazard-free environment for employees.



Nihon Kasettsu's Visual Sensing

Visual Dust is a signaling device for the level of PM_{2.5} concentration in the air, using three light indicators. It also has PM₁, PM₄ and PM₁₀ measurement that can be viewed through a mobile application.

The design of the device generates a forced flow of air throughout the interior of the beacon by a silent fan. The ambient air is captured through the inlet hole located in the front part, and circulates all the way across the interior until it exits through the holes valve located in the lower part.

Inside the base is the PM_{2.5} sensor that, using Laser scattering based technology, allows the concentration in micrograms per cubic meter to be measured very precisely according to the amount of light reflected by the particles present in the air.



● Optimized air inlet

Specially designed to enhance the sampling point.

● Reliability

Blocking mesh to avoid strange bodies.

● High precision

A constant air flow through the whole fan driven system.

AQI based sensor

Thresholds have been defined using the air quality index (AQI) promoted by the United States Environmental Protection Agency (EPA) as a quick indicator for air quality. The calculation performed by the Visual Dust model only uses pollution caused by suspended particulate matter, specifically PM_{2.5} concentration.

A 10 µg/m³ increase in the daily mean concentration of PM_{2.5} increases the risk of mortality, according to the World Health Organization (WHO) in its report on the Health Risks of Air Pollution in Europe.



Technical specifications



CONNECTION

Power	1,75	W
Voltage	24	VDC*
Range	± 10 %	
Current	70	mA
*100-240 VAC adapter included		

MOUNTING

Ambient	Indoor	
Position	Vertical	
Protection Index	IP23	
Size	375 x Ø94	mm
Weight	0,6	Kg

OPERATION RANGES

Temperature	0 ÷ 50	°C
Humidity	0 ÷ 90	% RH

DUST SENSOR SPECIFICATIONS

	CONDITION	VALUE
Mass range	-	0 - 1.000 µg/m ³
Mass correlation size range	PM2.5	0,3 to 2,5 µm
Mass concentration precision PM2.5	0 to 100 µg/m ³	± 10 µg/m ³
	100 to 1.000 µg/m ³	± 10 % m.v.
Start-up Time	Maximum	20 s

Apps for mobile devices



Collect recorded values from Visual devices in a near area

The Visual APP shows collected data in a graphic mode and allows to export the data via email (csv) for further analysis.



Quick set-up to show the real time value of a selected device in a wide-screen view

Visual Display is a simple interface straightforward to show the instantaneous value to any user present in the area.



* Both Apps can be used simultaneously with the same device, or with a group of devices.

Available on iOS and Android.

Western markets:

NIHON KASETSU EUROPE

Ariza 1, Edif. Expozaragoza, Nave 1,
50011, Zaragoza
SPAIN

T. (+34) 976 068 311
M. (+34) 664 152 468

Headquarters:

NIHON KASETSU CO.

16-14-6-50, Hassamu, Nishi-ku
Sapporo, 063-0836 Hokkaido
JAPAN

www.nihonkasettsu.com
info@nihonkasettsu.com

Visual
SENSING



**Understand the environment
making measuring easy**