

承认书

SPECIFICATION FOR APPROVAL

客户 (CUSTOMER): _____

客户料号 (CUST P/N): _____

产品物料编号 (PART. NO): _____ 137190100005

奥迪威产品名称 (DESCRIPTION): _____ DW0001-003

奥迪威产品型号 (P/N): _____ DW00-F05N-03

规格书编号 (SPECIFICATION. NO): _____ K2-WSP-DW-00003

规格书版本 (VERSION): _____ A2

■ 规格书状态 (Specs Type):

 样件 (Sample Specs) 量产 (Standard Specs)

样件规格书 (Sample Specs):

适用于产品的小批量试制. (Apply to trial order.)

量产规格书 (Standard Specs):

适用于产品的批量生产. (Apply to mass production.)

客户承认 CUSTOMER APPROVAL	签名 SIGNATURE.	承认章 COMPANY CHOP.

编制 DWN.	审核 CHK.	批准 APPD.

■ 产品规格书仅供参考, 在产品量产之前, 需要确认最新版本的量产规格书, 并得到客户的签名承认. (Specifications are for reference only, and it is required to be approved by customers before mass production.)

注: 承认书一式两份, 请返回一份. (Note: Specs are in duplicate, please send one copy back.)



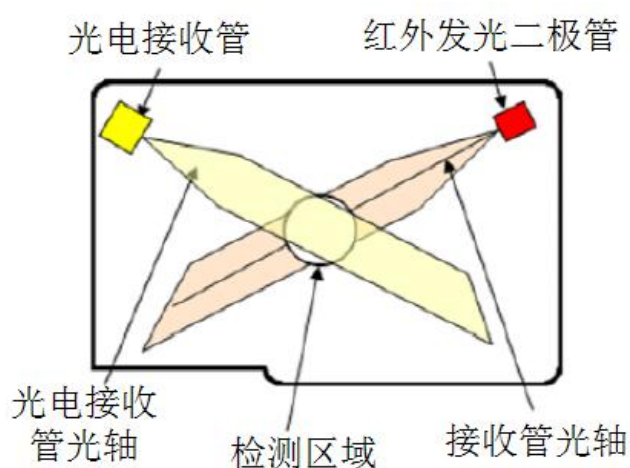
Weight Dust Sensor Product Specification

■ Product number: DW00-F05N-03

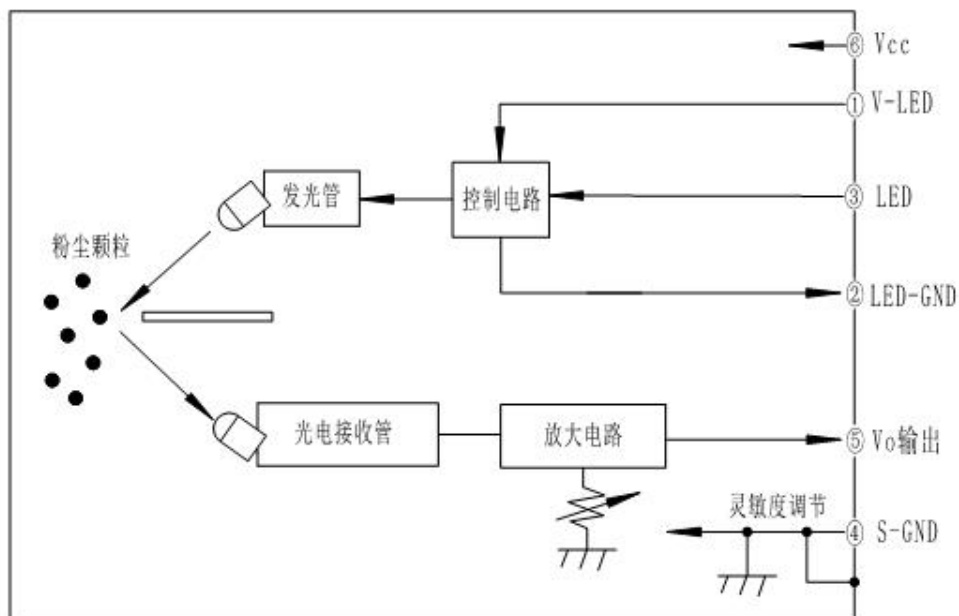
■ Product manual :

DW0001 is a dust sensor consisting of an optical sensing system, including an infrared light tube, an infrared receiving tube, a lens, a light shielding housing, a shielding cover, and a circuit board. When the airflow carrying the dust particles passes through the detection area illuminated by the infrared light-emitting tube, the generated forward scattered light is received by the photoreceiver tube, and after being amplified by the signal, a voltage signal proportional to the dust concentration is output.

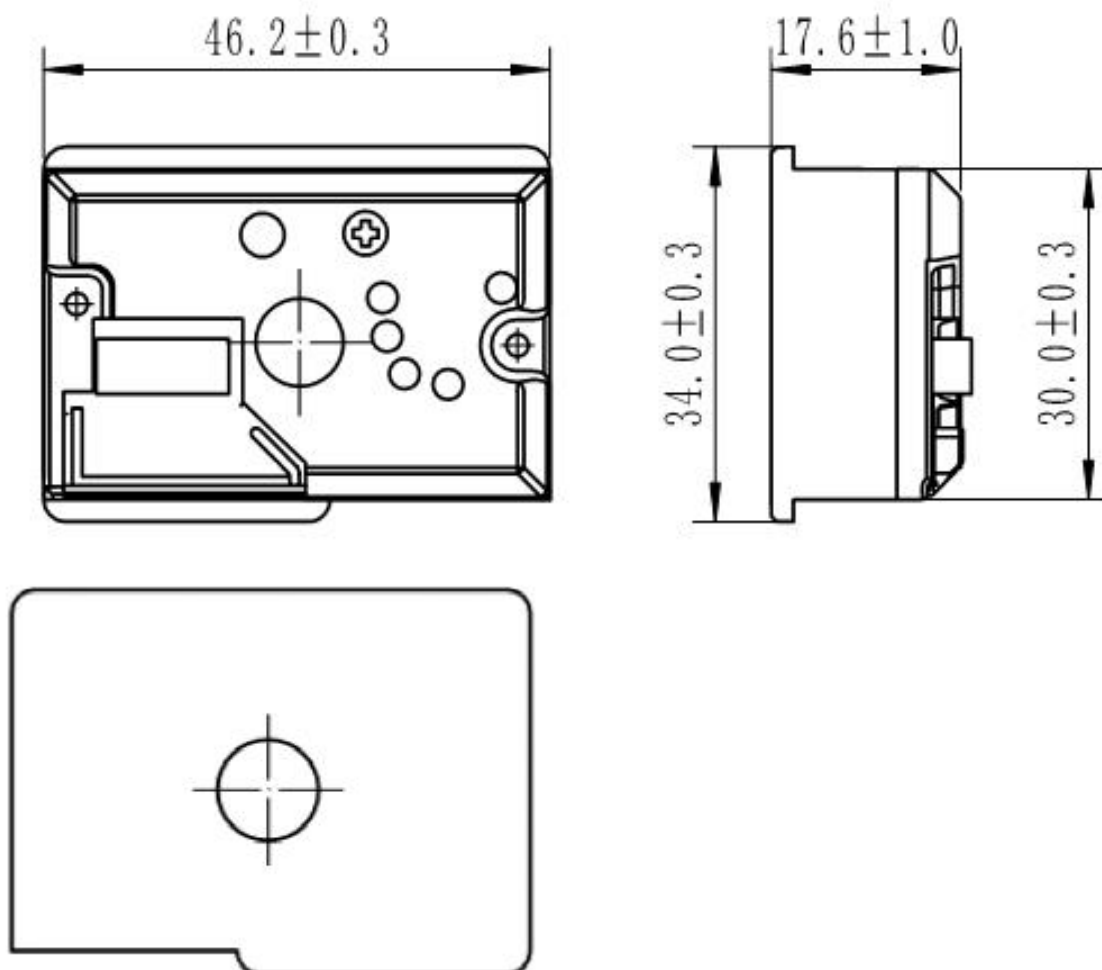
Internal optical schematic



Internal working principle diagram

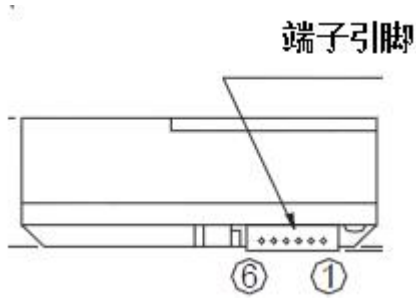


■ Physical dimension: (Unit :mm)



■ Terminal connection diagram :





Pin number	symbol	Pin Definition
①	V-LED	LED power supply
②	LED-GND	LED ground
③	LED	LED drive pulse
④	S-GND	Ground
⑤	Vo	output signal
⑥	Vcc	Supply voltage (5V±0.5)



■ Electrical performance parameters :

(1) Absolute maximum rating

(Ta=25°C)

parameter	Marking	Rated	Unit
voltage	Vcc	-0.3 to +7	V
Launch tube control end	Vled	-0.3 to VCC	V
Operating temperature	Topr	-10 to +65	°C
Storage temperature	Tsol	-20 to +80	°C
Ripple voltage	Vrp	Max100	mV

(2) Electro-optical properties

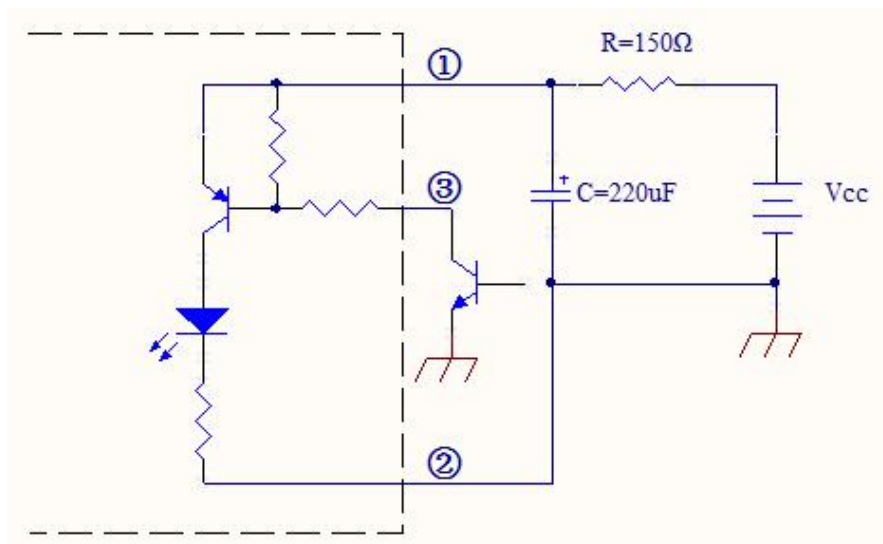
Item	Marking	Condition	MIN	TYP	MAX	Unit
Detectable particle size	D	*1 *2	1.0	2.5	—	um
Sensitivity	K	*1*2*3	0.70	1	1.3	V/ (mg/m3)
Clean output voltage	Voc	*2*3	0	—	1	V
Ourput voltage (Vcc=5V)	VOH	*2*3RL=4.7kΩ	3.4	—	—	V
LEDTransmitter current	I _{LED}	*2LED terminal voltage = 0	—	10	20	mA
Input Current	I _{cc}	*2RL = ∞	—	11	20	mA

*1 The sensitivity K is defined by the amount of change in output voltage when the dust concentration is changed to 0.1 mg/m3.

*2 input conditions are LED output terminals

*3 timing pulse of sample output

(3) Recommended Transmitter Control Terminal External Circuit





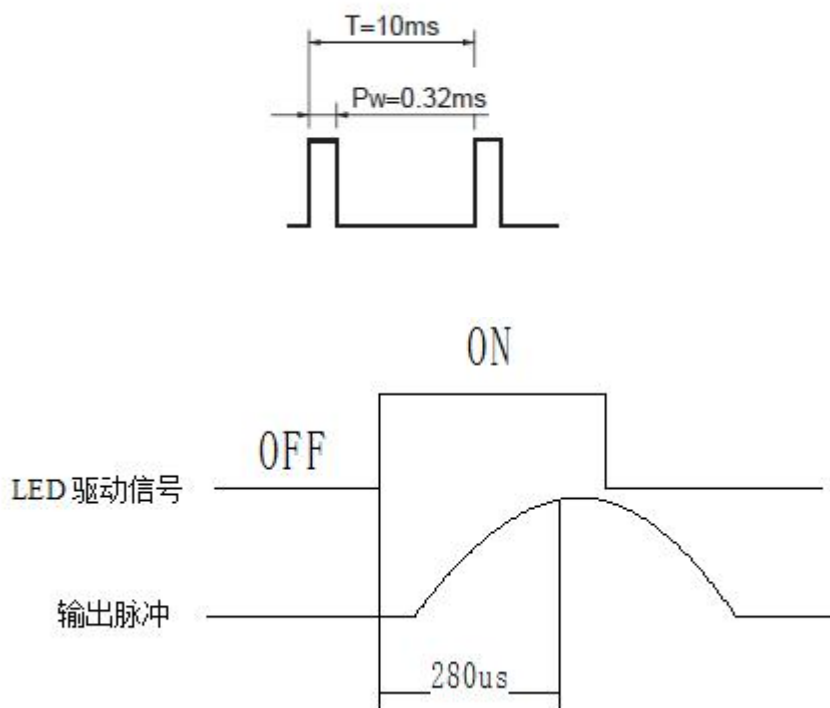
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(4) Transmitter control terminal and output pulse timing diagram

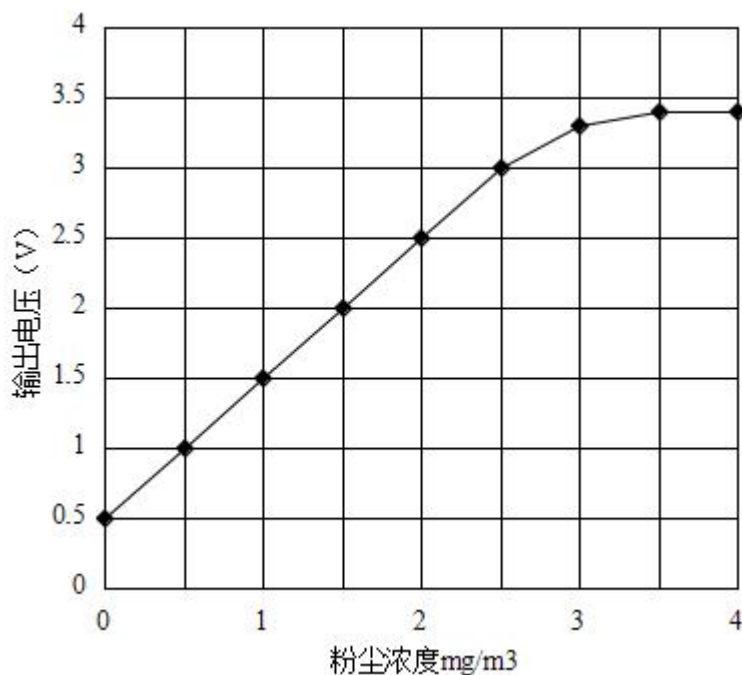
驱动脉冲波形



Recommended input conditions for the launch tube console

Parameter	Marking	Value	Unit
Pulse leadtime	T	10 ± 1	ms
Pulse Width	Pw	0.32 ± 0.02	ms
Supply voltage	Vcc	5 ± 0.5	V

(5) Output voltage and dust concentration diagram



■ Precautions :**(1) About the connection between the case and GND**

The bottom case is made of a conductive resin, and the upper part (test port) is a metal plate, and is connected to the internal GND of the sensor by a fixing screw.

(2) About cleaning

Cleaning the product will cause changes in the optical properties of the product, resulting in poor properties. Please do not clean.

(3) Pulse input requirements

Please arrange the input pulse and detection timing according to the recommended timing chart.

(4) About dust adhesion

The dust adhering to the inside of the intermediate hole causes the optical axis of the light receiving portion to change, resulting in an error in the detection of the concentration of the dust. Regarding the problem of dust adhesion, consider the structure and machine aspects of the equipment to avoid the effects of dust adhesion. If dust is attached, use a blower to pick up or blow off dust and other maintenance operations.

(5) About the light output

In the circuit design, the effect of sensitivity reduction due to the decrease in luminous efficiency due to long-term continuous operation (about 50%/5 years) should be considered.

(6) VR for sensitivity adjustment and background level

The VR for sensitivity adjustment and background level adjustment has been adjusted to the best at the factory. If this VR has been adjusted by your company, the characteristics of the electrical optics on the specification will be abnormal, so please do not adjust it.

(7) About dismantling

Do not disassemble this product. After disassembling and reassembling the product, the values of the product will not match the specifications on the specification.

(8) About use on fire alarm

Do not use this product on a fire alarm. In addition to being installed on products other than air-conditioning and air purifiers with air purification, please be sure to contact us.

(9) About the impact of noise

The noise source emitted by the electric dust collector or the like is disposed near the sensor, and the induced noise causes the output of the sensor to change. Or the noise of the power cord can cause the output of the sensor to change. Please fully confirm the influence of the noise source on the sensor output before using it.

(10) About the impact of vibration

This product may cause changes in output due to mechanical vibration. Please confirm the fault in actual use and use it again.

(11) About the impact of external light

If a circular hole on the bottom surface of the product is incident on external light, it will directly affect the output. Please pay attention to the installation of the product, please avoid the external surface affected by external light, the bottom surface is installed on the inside of the device; in the test, the bottom surface contact surface should be tested without reflection, to avoid internal light reflection on the test results Have an impact.

(12) About condensation

If the inside of the sensor is condensation, it will not work properly. Please avoid condensation on the product.



■ Package

pcs/carton	Packaging (cm)	Gross Weight (kg)	Net Weight (kg)
250	50*28*17	MAX 6Kg	4Kg

■ revision history

File revision history			
Revsion time	Version of revision	The number of ECR	Contents of revision
2017/5/31	A1	/	New Spec. Issued.
2017/9/26	A2	N-ECR-1701894	Cancel the bottom mark

