



WIDEBAND OXYGEN SENSOR

CERADEX CORPORATION

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Updated: 12/14/2016 Sales Department By: William Huang



WHAT IS A WIDEBAND SENSOR?

A Wide Band Oxygen Sensor is an all range oxygen sensor for detecting broad spectrum of air to fuel ratio by continuous sampling of the oxygen content within the exhaust gas, and feeds its reading to the vehicle's ECU for air and fuel management. They are planar constructed ceramic element, dual cell current limiting sensor with integrated heater that usually comes with 5 wires or more. And unlike the regular oxygen sensor, Narrow Band, which detects the oxygen contents by rich or lean indication, a Wide Band Oxygen Sensor can detect how rich or how lean these oxygen contents are, and so to provide more accurate readings to the on vehicle ECU.





WHY CHOOSE CERADEX'S PLANAR OXYGEN SENSOR?

CERADEX's patented duel cell wideband planar technology enables our sensors to achieve higher detection accuracy and stability, while increase heating durability. To ensure the highest quality and stability, every piece of sensor manufactured undergoes strict simulated bench for function check of both lambda voltage and wideband ampere, as well as pressurized sealing bench for leakage check. With 20 years of experience in the field, choose CERADEX's Wideband Sensor for your replacement needs!





SPECIFICATION

Spec	Detail
Sensor Element	High Sensitivity ZrO2
Technology	Duel Cell Wideband Planar
Circuitry	Isolated Ground
Frontal Tube	Double Layer
Hex Nut	M18
#Wires	4
Heating	Heated
Fitting	Direct Fit
Temperature Range	-40 ° C to 1200 ° C
Operating Temperature	>400 ° C



FEATURES

Duel Cell Current Limiting

 Dual cell planar design provides higher full range detection accuracy, increased stability, and better heating durability

Monolithic Ceramic Element

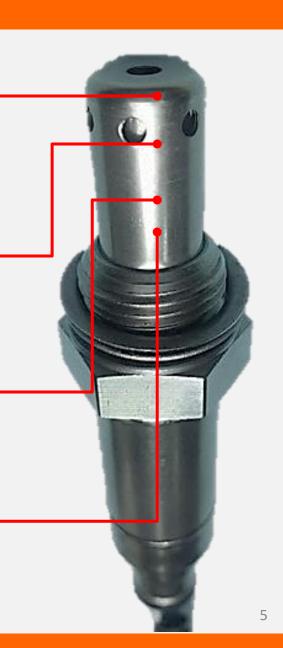
 Allowing sensor to reach operation faster and thus decrease light off time

Formulated Element Surface

 Better protection against thermal variation within exhaust pipe

Formulated Protection Layer

 Keeps harmful gas from sensing element to prevent damages to sensing catalyst



FEATURES

Double Layer Frontal Cover

- Better sensing element protection against harmful exhaust environment
- Maintaining proper temperature for faster sensing switch time

Circuitry

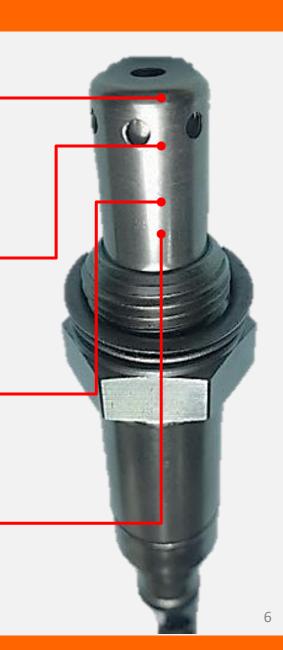
 Isolated circuitry body to minimize signal noise

Laser Wielding body

Better protection against water and oil intrusion

Stainless Steel Casing

 Premium stainless steel body protecting against extreme temperature and environment





PRODUCT VALIDATION

Function

· Burner, Connectivity

Mechanical

 Wire pull, Pendulum, Thread torque, Leakage

Environment

 Vibration (SGS), Thermal shock (SGS), Fuel ingress, Water spray, Stone impact, Salt mist (SGS), Temperature change

Durability

• Engine bench, On vehicle, On taxi

Oxygen sensor developed by CERADEX undergo series of tests to ensure quality and specification tolerance matching that of OEM. We gathered and referenced the methods of tests base on SAE, Bosch, and NGK standards, so that clients can feel safe about our products.





MATERIAL

Raw Zirconium

· Japan, China

Stainless Steel S310

Germany

Catalyst Compound

• Germany, Japan

Heater

• Japan

Teflon Wire

• Taiwan (UL1726)

Connector

· OEM, Taiwan, China

At CERADEX, we understand the importance of good material makes good product, especially with product such as oxygen sensor, where it is positioned in high temperature environment. Good materials increase product's lifecycle, maintaining healthy function, and uphold safety standard. This is why we source our materials from counties with high quality standard.





QC CHECK POINTS

100% QC Check

- Leakage
- Function
 - Voltage
- Conductivity
- Resistance

SOP Check

- Density
- Flow velocity
- Weight
- Wire pull
- Thread torque
- Function
- Temperature
- Etc....

calibrated by SGS and CLS on a yearly basis.

To further ensure sensor quality, CERADEX checks every single

sensors for functions and

out to clients. Our self-

leakage before shipping them

engineered control testers are





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