# **CERASOLZER®**

# SOLDERING ON GLASS

Cerasolzer line is the world's first product enabling soldering to glass. We provide both Cerasolzer Eco (Pb-free) and Cerasolzer (Pb-based).

## Introduction

Cerasolzer enables bonding to previously low-solderability materials, such as glass, ceramic substrates, aluminum, tungsten, molibdenum and titanium thanks to its special elements and Kuroda Techno's ultrasonic soldering technology.

Ultrasonic soldering method cleans the soldered surface mechanically using cavitation effect induced by ultrasonic vibrations. It does not use flux thus generates no fumes and eliminates cleaning process or any environmental polution.

Kuroda Techno provides not only ultrasonic soldering technology but also systematic know-how from design to on-site installation for all customers facing troubles with demanding soldering.



## Characteristics

- ·No need for any pre-treatment of the substrate surface;
- Application of caviation phenomenom instead of chemical agent (flux).
- •Suitable for bonding almost all "low-solderability" materials.
- $\cdot \text{Preventing voids.}$
- Availability of 16 different types of Cerasolzer depending on melting point, use of lead no lead.

# Materials used with positive results

glass ITO aluminum stainless steel silicon

copper nickel PET graphite ceramics

etc.

## Application, materials

- solar cell electrode printing support technology
- light fiber and ferrule bonding
- organic EL light electrode bonding
- aluminum terminals bonding etc

we can do soldering test if you can send your materials. Please feel free to ask us for more details.



3kg-Glass



External Electrode FLuorescent Lamps: EEFL



Paper-plating



Aluminum



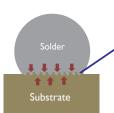
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## Old generation soldering technique / Creating a bond using Cerasolzer

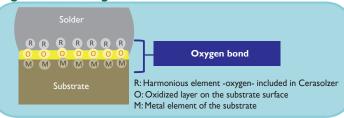
## ■Old generation soldering technique



Diffusion bond (alloying)

Soldering was done by heating the solder over its melting point to create a bond between solder and metal substrate.

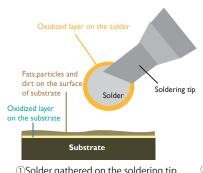
## ■Creating a bond using CERASOLZER/CERASOLZER ECO



Thanks to Kuroda Techno's special solder, Cerasolzer / Cerasolzer Eco, you can now bond previously unsolderable materials, such as glass and ceramics.

Cerasolzer includes elements which have a very strong chemical affinity with oxygen, which easily creates bonding with the oxidized layer on the substrate's surface.

### ■ Cavitation effect of SUNBONDER



①Solder gathered on the soldering tip

Both solder and substrate are covered in



②Solder being placed on the substrate

Oxidized layer still present on both solder and substrate.



③Ultrasounds are being released

By cavitation effect, the oxidation at the point of contact disappears.



4 Solder has been bonded to the substrate

Particles and dirt have been removed from the substrate. Solder and substrate have been bonded by oxygen.

# Cerasolzer product line up

#### Cerasolzer Eco (Pb free)

Cerasolzer Eco #155 dia1.0mm / 150g Cerasolzer Eco #182 dia1.0mm / 150g Cerasolzer Eco #217 dia1.0mm / 1.0kg

Cerasolzer AL-200 dia 1.6mm for aluminum / 1.0kg

#### Cerasolzer (Pb-based)

Cerasolzer #186, dia1.0mm / 1.0kg Cerasolzer #186, dia1.6mm / 1.0kg Cerasolzer #186, dia1.6mm / 150g

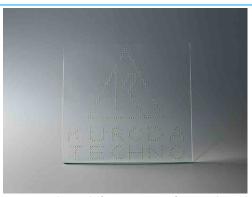
#224 Cerasolzer #224, dia1.0mm(available on request)/ 1.0kg

Cerasolzer #224, dia1.6mm / 1.0kg Cerasolzer #224, dia1.6mm / 150g

#246 Cerasolzer #246, dia1.0mm(available on request)/ 1.0kg

Cerasolzer #246, dia1.6mm / 1.0kg Cerasolzer #246, dia1.6mm / 150g #297 Cerasolzer #297, dia1.0mm / 1.0kg Cerasolzer #297, dia1.6mm / 1.0kg

Cerasolzer #297, dia1.6mm / 150g



We provide 16 different types of Cerasolzer, depending on melting point, use of lead or lack thereof, line diameter and mass.

The model numbers of both Cerasolzer and Cerasolzer Eco are indicated by its melting point. e.g. #186 = 186 degC.

We can also supply our product in different forms and shapes. Please consult your individual soldering requirements with our specialists.



#### Soul in Technology

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