

# SUNBONDER®

## ULTRASONIC SOLDERING SYSTEM

Ultrasonic soldering makes it possible to solder glass, ceramics and low-solderability metals, such as Al, Mo, stainless steel etc.

### Common Specification

#### 【 GENERATOR 】

Ultrasonic-power	1~12W (0.1W interval)
Temperature range	OFF, 200°C~ (10°C interval)
Display	Frequency, US Power, Temperature, Amplitude
External monitoring	Temperature, US Power (0-10V)
Power Requirements	AC100V/240V, 50/60Hz

#### 【 IRON 】

Transducer	PZT Langevin type
Tip material	Stainless steel
Heater	High performance sheathed heater

※CUSTOMIZED TIP SHAPE AVAILABLE

#### USM-5 series

#### line-up

#### Detail Specification



USM-560



USM-540



USM-528

Ultrasonic frequency	<b>60kHz</b>	<b>40kHz</b>	<b>28kHz</b>
Ultrasonic power(max)	12W	20W *	70W *
Generator	SIZE	210 x 235 x 90	260 x 320 x 140
	Weight	5kg	10kg
Heater	max temp.	500°C	600°C
	Power	65W	150W
IRON	Tip SIZE	Φ 1.0~4.0mm	Φ 10.0mm
	Weight	210g	520g
	Hand Switch	No	Yes
	Cooling	No	FAN
Replaced models	USM-III / USM-IV	SO-6	USM-28
Applications	Electronic componets PV wire bonding(point) OLED	Electronic device PV wire bonding(line) Al terminal soldering	Target material bonding

\* adjustable range on display is 1-12W only

We offer manual ultrasonic irons, dipping ultrasonic soldering pot, jet type ultrasonic soldering machine and various automated soldering solutions.

Please feel free to get in touch with us.

**Sanwa Components International**

Te1:(858)427-0688 FAX:(818)459-3908 [www.sanwacomponents.com](http://www.sanwacomponents.com)

## Ultrasonic Soldering System

# SUNBONDER® USM-5

SUNBONDER is an ultrasonic soldering device that produces high quality soldered joints. The soldering iron consists of a high performance sheath heater and transducer, supplying heat and ultrasonic oscillations to the tip. Using CERASOLZER, a solder alloy specially formulated for use with the SUNBONDER, you can easily solder directly to glass, ceramics and other low solderability materials, such as Al, Mo, or stainless steel.

### Ultrasonic soldering mechanism

Standard soldering joins metals by eliminating oxide surface, using flux, and bonds substrates by accelerating the wetting of a metal and a solder.

SUNBONDER facilitates that process using ultrasonic energy.

High performance soldering is implemented by the cavitation effect which breaks the oxide surface and eliminates bubbles in solder.

You can easily solder directly to glass, ceramics and other low solderability materials by the application of this law.

### Soldering to glass, ceramics and low solderability metals

CERASOLZER is used for soldering to glass, ceramic and low solderability metals. CERASOLZER is a special solder alloy with high oxygen affinity metal.

A strong chemical bond of Zinc and Oxygen is achieved between the substrate and CERASOLZER by applying ultrasonic oscillation with the SUNBONDER device to the melting CERASOLZER solder alloy.

This superior bonding technique provides an excellent airtight, weatherproof, humidity resistant seal as well as joints with good electro-conductivity between interconnected layers.

### SUNBONDER features

#### 【Special soldering】

Direct soldering to glass, ceramics, low solderability metals without Flux.

#### 【Performance】

Stable ultrasonic frequency and temperature with new feedback system.

#### 【Oscillation】

Adjustable ultrasonic-power output.

#### 【Temperature】

Heater temperature is possible to adjust at intervals of 10°C.

#### 【Display】

Frequency, power, heater temperature and amplitude

### Accessories

Foot Switch	1
Soldering iron stand	1
Power source cord	1
Spanner for changing tip	2
Fuse	2

### OPTION

Custom tip  
External Control (Analog 0-10V)  
PC control (LAN)

CE ※No correspondence to USM-528



For operating the device, refer to the instruction manuals.  
Don't use near water, under conditions of high humidity,  
dust and soot filled places,  
to avoid electric shock, fire or breakdown.

## Sanwa Components International

Tel: (858)427-0688 FAX: (818)459-3908 [www.sanwacomponents.com](http://www.sanwacomponents.com)