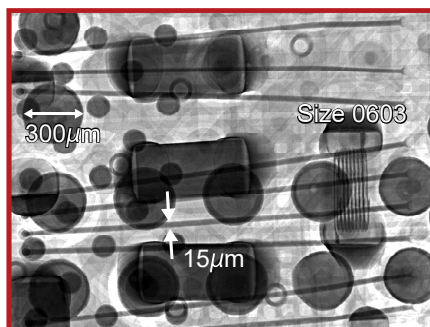


# Sealed Transmissive Microfocus X-Ray Source Series

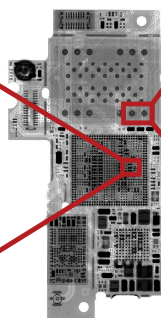
## X-ray source realizing high Speed and high Resolution

### Image examples

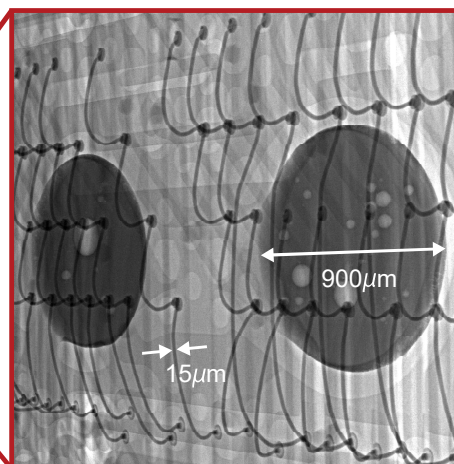
PCB for Music player



100kV / 60µA 320msec

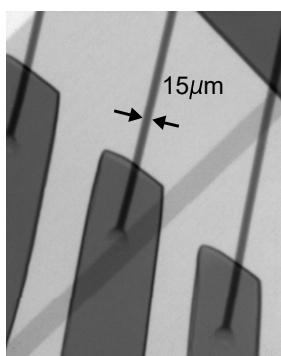


100kV / 60µA 320msec



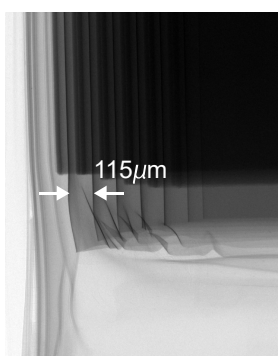
100kV / 60µA 320msec

Wire



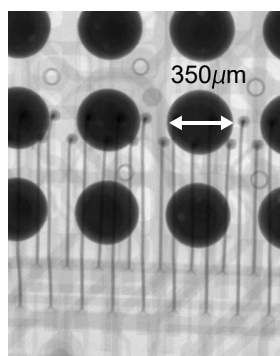
100kV 100µA (300×)

Li-ion battery



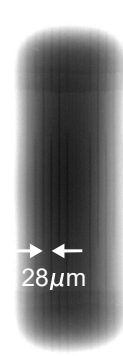
110kV 90µA (45×)

BGA



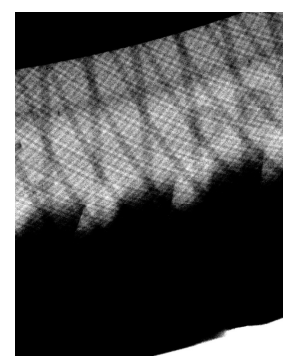
90kV 100µA (120×)

MLCC



60kV 60µA (70×)

Tire



40kV 100µA (1×)



Standard Holder Type



Long Holder Type

- Target maintenance free, Long-term storage is possible
- Self diagnosis of X-ray tube life time
- Widely dealing with analysis of semiconductors and electronic components
- Provide the most suitable X-ray source to a use
  - High Power G311VH-D ... High throughput imaging
  - High Resolution G-511LV-D ... Applicable for analysis

## Seamless coverage from atmosphere to ultra high vacuum

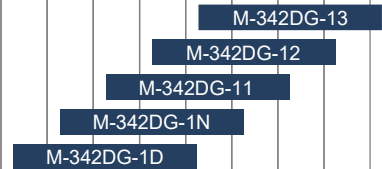
### measurement range

	Ultra High Vacuum				High Vacuum				Medium Vacuum			Low Vacuum			
(Pa)	$10^{-9}$	$10^{-8}$	$10^{-7}$	$10^{-6}$	$10^{-5}$	$10^{-4}$	$10^{-3}$	$10^{-2}$	$10^{-1}$	1	10	$10^2$	$10^3$	$10^4$	$10^5$

#### Capacitance Diaphragm Gauge M-342DG

High precision, stable pressure measurement

- Excellent zero point stability
- Has low temperature dependence providing excellent stability without the need of a temperature adjustment mechanism
- Excellent anti-vibration noise performance



#### Pirani Gauge M-350PG

- Good repeatability and low cost
- From  $5 \times 10^{-2}$  Pa to atmospheric pressure
- Suitable for low to medium vacuum range measurements



#### M-351PG (corrosion-resistant)

This model uses an Ni filament to increase corrosion resistance

- Supports hard process equipment such as RIE and CVD



#### Cold Cathode Gauge M-370CG

Cold cathode gauge that does not use hot filament

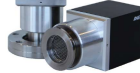
- Good startability under high vacuum
- Eliminating undischage and discharge delay



#### Cold Cathode Pirani Gauge M-361CP

Wide range measurement is realized by just one gauge

- Combination gauge combining pirani gauge measuring atmospheric pressure to medium vacuum and cold cathode gauge measuring high vacuum to ultra high vacuum



#### Ion Gauge M-311HG

Wide pressure measurement range

- Four emission current setting modes can be selected based on the application to improve filament life during use in high pressure range



#### Crystal Ion Gauge M-336MX

High precision with excellent repeatability in the low vacuum range

- Combination gauge combining crystal gauge with miniature B-A gauge
- From ultra high vacuum to atmospheric pressure



#### Display (1ch type / 3 ch type) M-601GC / 603GC

1. Gauge auto recognition
2. Large digital LCD
3. Standard equipped with RS232C interface
4. Excellent operability
5. Capable of simultaneous display (3ch)
6. Easy to view 3 type display (3ch)
  - Digital display
  - Trend graph (up to 18H)
  - Analog meter



M-601GC (1ch type)



M-603GC (3ch type)

# Quadrupole Mass Spectrometer

## High sensitivity analysis and low emission

### ■ M-070QA-TDF/M-101QA-TDF M-101/201QA-TDM

- ✓ Selectable measurement range  
1 to 70 m/z, 1 to 100 m/z, 1 to 200 m/z
- ✓ Line-up of Standard model and high sensitivity model



### ■ M-401QA-MU/G

- ✓ High-speed measurement (M-401QA-MGSY/MUSY)  
Obtains data with  $M/e = 1$  to 400 m/z at 1 second interval
- ✓ High-sensitivity (M-401QA-MGHY/ MUHY)  
8 digit dynamic range



### ■ M-080A-HPM Process Gas Monitor

- ✓ Capable of operating under pressure less than 2.0 Pa at sputtering process
- ✓ Detecting  $H_2$  with high sensitivity in deposition process
- ✓ Applicable for PVD process monitoring and residual gas analysis



## Helium Leak Detectors

### The best selection of leak detectors

#### ■ Features

- ✓ Simple operation
- ✓ Excellent measurement stability, sensitivity and response
- ✓ Portable
- ✓ Tablet type controller (option)

