Sealed Transmissive Microfocus X-Ray Source G-311 Series
X-ray source for industrial non-destructive inspection capable of high speed imaging with high resolution

Sealed Transmissive Microfocus X-Ray Source Series

- High Brightness: 4μm res. at 10W – 8μm res. at 30W
- High magnification: FOD 0.29 mm
- Wide beam angle: 168° cone angle
- Pulse Exposure: minimum PW 50ms at period 10Hz

**FEATURES**

1. 110kV voltage ramp time within 1sec.
   - Quick image acquisition
2. Target maintenance free
   - No need for target rotation
   - Improving equipment operation ratio
3. Warming-up within 3 min.
   - Solution of the long waiting time at starting up X-ray equipment
   - No need for tube aging after long term storage
4. Self diagnosis of X-ray tube life time
   - Scheduled maintenance of X-ray equipment
5. CE and RoHSII compliant
   - Applicable for overseas operation

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>G-311MH-D</th>
<th>G-311MH-DP</th>
<th>G-311ML-D</th>
<th>G-311VH-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube Voltage Operational Range</td>
<td>kV</td>
<td>60 – 110</td>
<td>40 – 110</td>
<td>60 – 110</td>
<td>60 – 110</td>
</tr>
<tr>
<td>Tube Current Operational Range</td>
<td>μA</td>
<td>10 – 100</td>
<td>10 – 300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Output</td>
<td>W</td>
<td>10</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Resolution</td>
<td>μm</td>
<td>4</td>
<td>4 – 5</td>
<td>4 – 8</td>
<td></td>
</tr>
<tr>
<td>X-ray Window Material/Thickness</td>
<td>– / mm</td>
<td></td>
<td>C(Diamond) / 0.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target Material</td>
<td>–</td>
<td>W(Tungsten)</td>
<td></td>
<td></td>
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<tr>
<td>X-ray Beam Angle</td>
<td>deg.</td>
<td>168(Max.), 80(80%, Equidistance)</td>
<td></td>
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</tr>
<tr>
<td>Weight</td>
<td>kg</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation</td>
<td>–</td>
<td>Continuous, Pulse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulse</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External Control</td>
<td>–</td>
<td>RS-232C(External contact input is available with G-311MH-DP)</td>
<td></td>
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<tr>
<td>Input Voltage (DC)</td>
<td>V</td>
<td>24 (+1.2, -1.2)</td>
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<tr>
<td>Maximum Power Consumption</td>
<td>W</td>
<td>40</td>
<td>65</td>
<td></td>
<td></td>
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<tr>
<td>Operational Ambient Temperature</td>
<td>ºC</td>
<td>10 – 45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>ºC</td>
<td>0 – 50</td>
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<tr>
<td>Operational and Storage Humidity</td>
<td>%</td>
<td>≤85(No Condensation)</td>
<td></td>
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<tr>
<td>High Voltage Power Supply</td>
<td>–</td>
<td>Built-in</td>
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</tbody>
</table>
● MICRO CHART IMAGE (JIMA RT RC-02B)

● TUBE CURRENT OPERATIONAL RANGE

G-311MH-D/-DP

G-311ML-D

G-311VH-D

● FOCUS CHARACTERISTICS

G-311MH-D/-DP

G-311ML-D

G-311VH-D

* The figures showed in each graph are typical values.

■ IMAGE EXAMPLES

Bonding wire

Flip chip

BGA

Tire

15μm

120μm

350μm

(300x)

(300x)

(120x)

(1x)
DIMENSIONAL OUTLINE (Unit:mm)

Installation side: Top (exposure port side) and Bottom

CAUTION The X-ray sources introduced in this material generate X-rays. To be used by qualified personnel only. Safe use is the responsibility of the operator.

NOTICE: The X-ray sources introduced in this material were developed specifically for industrial use and can not be used for food and drinks or medical applications. Since the X-ray sources introduced in this material are subject to local laws and regulations, what you are required to use may vary from region to region. Please consult with our sales representative.

October 2018

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