

Certificate of Analysis (CoA)

Aug. 11, 2025

Product Name: Germanium (Evaporation Pieces)

Chemical Formula: Ge

Purity: 99.999% (5N)

Dimensions: 3–6 mm pieces

Form: Irregular solid pieces for evaporation use

Lot Number: SCJM-250807TB

Manufactured by: Thin-Film Materials

Physical Description

- Form: Metallic evaporation pieces
 - Appearance: Gray, metallic luster
 - Crystal Structure: Diamond cubic
 - Theoretical Density: ~5.32 g/cm³
 - Fabrication: Zone refined, cut into 3–6 mm pieces
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Theoretical Composition (Mass %)

Element	Symbol	Mass %
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Germanium	Ge	100%
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Balance: Germanium

Chemical Composition (by GDMS / ICP-MS)

Element	Symbol	Max. Content (ppm)
Germanium	Ge	Balance (>99.999%)
Oxygen	O	<10
Carbon	C	<5
Iron	Fe	<5
Aluminum	Al	<5

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Element	Symbol	Max. Content (ppm)
Copper	Cu	<5
Nickel	Ni	<3
Zinc	Zn	<3
Calcium	Ca	<3
Sodium	Na	<3
Lead	Pb	<1
Other trace metals (each) –		<5
Total Impurities	–	<100 ppm

Handling & Storage

- Store in a clean, dry, vacuum-sealed container.
- Handle with clean gloves to prevent surface contamination.
- Avoid moisture and oxidation at high temperatures.

Declaration

We certify that the above product has been manufactured and tested in accordance with our quality control system and meets the specifications stated herein.

Authorized Signature:Inspection Certificate by: Nancy LiuApprover by: Chen Qiang