

Certificate of Analysis (CoA)

Aug. 29, 2025

Product Name: Gadolinium Sputtering Target

Chemical Formula: Gd

Purity: 99.9% (3N)

Dimensions: Ø76.2 mm × 3.0 mm (±0.1 mm)

Backing Plate: Indium bonded to OFHC Copper plate, 2 mm thick

Quantity: 2 pcs

Lot Number: CSJM-25SC-0830TB

Manufactured by: Thin-Film Materials

Physical Description

- Form: Metallic sputtering target
- Appearance: Silvery-white metallic surface
- Crystal Structure: Hexagonal close-packed (hcp)
- Theoretical Density: ~7.90 g/cm³
- Fabrication: Vacuum cast, machined, elastomer bonded to copper plate

Theoretical Composition

- **Element:** Gadolinium (Gd)
- **Atomic Weight:** 157.25 g/mol
- **Mass Fraction:** 100% Gd (elemental metal)

Chemical Composition (by ICP-OES / GDMS)

Element	Symbol	Max. Content (ppm)
Gadolinium	Gd	Balance (>99.9%)
Iron	Fe	<20
Silicon	Si	<20
Calcium	Ca	<20
Magnesium	Mg	<20

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Element	Symbol	Max. Content (ppm)
Other rare earths (each) –		<50
Total Impurities –		<1000 ppm

Handling & Storage

- Gadolinium is moderately reactive, oxidizes slowly in air.
 - Store in vacuum-sealed or inert gas packaging.
 - Handle with gloves to prevent surface contamination.
 - Avoid exposure to moisture and acidic environments.
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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