

April 06, 2026



Growth Method	CVD
Chemical Vapor Deposition (CVD)	Highly controlled environment, allowing for precise control over film thickness and composition.
Sputtering	Allows for deposition of thin films onto various substrates, but may result in higher surface roughness compared to CVD.
Molecular Beam Epitaxy (MBE)	Provides excellent control over atomic-scale growth, resulting in highly uniform and defect-free films.
Pulsed Laser Deposition (PLD)	Enables the deposition of complex stoichiometries, but often results in higher surface roughness.
Atomic Layer Deposition (ALD)	Offers exceptional control over film thickness at the atomic level, leading to highly uniform coatings.
Electrochemical Deposition	A cost-effective method for large-scale production, but may require post-processing to achieve desired properties.
Hydrothermal Synthesis	Can produce nanoscale structures with unique morphologies, but typically requires high temperatures and pressures.
Sol-Gel Process	A versatile technique for depositing oxide films, but may involve multiple steps and post-annealing.
Spin Coating	A simple and rapid method for depositing thin films, but may suffer from non-uniformity and limited material choices.
Dip Coating	A low-cost method for coating large areas, but often results in thicker, less uniform films.
Langmuir-Blodgett	Enables the deposition of monolayers and multilayers of organic materials with high precision.
Self-Assembly	An emerging technique for creating ordered nanostructures, but often requires specific conditions and precursors.

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Ultimate Diamond Cut Grade



P Poor
 F Fair
 G Good
 VG Very Good
 EX Excellent

Technical drawing of a diamond showing its proportions and measurements:

- Top width: 7.09mm
- Top width percentage: 4.37mm 62%
- Top width percentage: 35.0°
- Left height: 0.26mm 3.6%
- Left height: 4.87mm 68.7%
- Left height: 37.6°
- Right height: 0.95mm 13.5%
- Right height: 3.67mm 51.5%
- Bottom width: 0.02mm 0.2%

DIAMOND SHAPES



CARAT WEIGHT SIZES

Carat Weight	2.50	2.00	1.50	1.00	0.75	0.50
Approx. Size						
Diameter	8.60mm	8.00mm	7.30mm	6.40mm	5.80mm	5.10mm

DIAMOND CLARITY GRADING SCALE

FL	IF	VVS1	VVS2	VS1	VS2	S11	S12	I1	I2	I3
FLAWLESS - INTERNALLY FL.		VERY VERY SLIGHTLY INCLUDED		VERY SLIGHTLY INCLUDED		SLIGHTLY INCLUDED		INCLUDED/PIQUE		

DIAMOND COLOR GRADING SCALE



D - Z DIAMOND COLOR GRADING SCALE

DIAMOND FLUORESCENCE GRADING SCALE



DIAMOND POLISH & SYMMETRY GRADING SCALE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
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BRILLIANT CUT DIAGRAM



BUY WITH
CONFIDENCE

GCAL BY SARINE™
4Cs GRADING GUARANTEE

The GCAL by Sarine™ philosophy is simple: we believe consumers should feel confident about their lab grown diamond purchase, in the same way we believe experts should be accountable and stand behind their work.

This is why your lab grown diamond is protected by a zero tolerance, money-backed grading guarantee. You should know that the GCAL by Sarine™ 4Cs Grading Certificate is the only 4Cs grading certificate in the world that comes with a guarantee that ensures the accuracy of the certified lab grown diamonds' weight and quality grades. If the carat weight or any of the cut, color, or clarity grades provided in this GCAL by Sarine™ 4Cs Grading Certificate is lower than the weight or quality grade of your certified lab grown diamond, GCAL by Sarine™ will reimburse you the difference between what you paid for the lab grown diamond and the current fair value of an equivalent lab grown diamond in the market in which it was purchased, pursuant to the newly established grades. Kindly see additional details, including the limitations of the guarantee, at [GCALUSA.com](https://www.gcalusa.com).

MISSION STATEMENT

To provide the most accurate and consistent gemological grading, with uncompromising integrity and unparalleled customer service.

GEMPRINT®

Having a traceable, unique “fingerprint” of your lab grown diamond adds future protection to your investment, as well as peace of mind. GCAL by Sarine™ records the distinctive Gemprint of every diamond we certify. This patented technology for positive identification is recognized worldwide as forensic evidence and identification. Register your lab grown diamond at [GEMPRINT.com](https://www.gemprint.com)

CERTIFICATE VERIFICATION

You can verify the authenticity of this certificate by entering your GCAL by Sarine™ Certificate Number at [GCALUSA.com](https://www.gcalusa.com). You can also download a complimentary digital copy of this document to send to your insurance company.



GUARANTEED
CERTIFICATE



LAB GROWN

Independently Graded and Guaranteed by GCAL by Sarine™



8X® is the highest achievement in precision diamond cutting. The **GCAL 8X** Ultimate Diamond Cut Grading System encompasses all aspects of diamond CUT quality assessment. Your lab Grown diamond has achieved grades of Excellent in all eight aspects of CUT quality assessment. As a result, this lab grown diamond is recognized for its extraordinary brilliance and beauty.

PHYSICAL EXCELLENCE

The first three of the 8X grading factors analyze the exactness of the physical surface, the facet shapes, as well as the angles. This includes the Polish, External Symmetry and Proportions.

Decades of meticulous mathematical calculations have determined the narrow proportion ranges required to produce superior cut diamonds. Each shape has been studied individually to find the most aesthetically pleasing parameters. Some of the factors considered are listed below.

To view the proportions specifications for each shape, please visit our website [GCALUSA.COM](https://www.gcalusa.com)

Table %	Lower Girdle Facet Length
Depth %	Star Length
Crown Angle/Height	Girdle Thickness
Pavilion Angle/Height	Culet Size

LIGHT PERFORMANCE EXCELLENCE

The next three of the 8X grading factors are Brilliance, Fire and Scintillation, which analyze the light handling ability of your lab grown diamond. The combination of these factors is the essence of what makes any diamond visibly shine, dance and sparkle from across a room. Fire and Scintillation are graded while the diamond is in motion and interacting with light. View the Fire and Scintillation videos of this lab grown diamond at [GCALUSA.com](https://www.gcalusa.com) or by scanning the QR code on this certificate.

OPTICAL EXCELLENCE

The last two 8X grading factors consider optical excellence. These factors scrutinize the craftsmanship, the precise alignment of the crown and pavilion facets, the shape outline, and the length to width ratio, ensuring the lab grown diamond achieves aesthetic perfection.

Grading scales for each of the 8X grading factors can be viewed at [GCALUSA.com](https://www.gcalusa.com)