

GCAL LG361366067

Growth Method	CVD
Chemical Vapor Deposition (CVD)	Highly controlled environment, allowing precise control over film thickness and composition.
Sputtering	Allows deposition of a wide range of materials, but may result in higher defect density compared to CVD.
Molecular Beam Epitaxy (MBE)	Enables atomic-level precision in growth, resulting in ultra-thin films with low defect density.
Pulsed Laser Deposition (PLD)	Can produce high-quality thin films, but often requires complex equipment and process optimization.
Atomic Layer Deposition (ALD)	Offers exceptional conformality and uniformity, making it ideal for depositing nanoscale layers.
Electrochemical Deposition	A cost-effective method for large-scale production, but may require careful control of electrolyte composition and current density.
Hydrothermal Synthesis	Often used for growing nanostructures like nanotubes or nanowires, but typically involves high temperatures and pressures.
Sol-Gel Process	A versatile technique for depositing oxide films, but may require post-deposition annealing for improved properties.
Spin Coating	A simple and scalable method for depositing uniform thin films, but may have limited material compatibility.
Dip Coating	An economical approach for coating substrates, but may result in thicker, less uniform films compared to other methods.
Langmuir-Blodgett	Enables the deposition of highly ordered monolayers, but is typically limited to organic materials.
Self-Assembly	A promising approach for creating nanostructured films, but often requires specific surface chemistry and conditions.



P Poor
 F Fair
 G Good
 VG Very Good
 EX Excellent

Category	Frequency
P (Poor)	1
F (Fair)	2
G (Good)	3
VG (Very Good)	4
EX (Excellent)	5

P Poor **F** Fair **G** Good **VG** Very Good **EX** Excellent

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Technical drawing of a diamond showing its proportions and measurements:

- Top width: 7.71mm
- Top width percentage: 4.59mm 59%
- Top width percentage: 35.5°
- Left side height: 0.30mm 3.9%
- Left side height: 4.77mm 61.8%
- Left side angle: 40.4°
- Right side height: 1.11mm 14.5%
- Right side height: 3.36mm 43.5%
- Bottom width: 0.02mm 0.3%

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)