



**Diamonds:
The Science
Behind the Sparkle**

GHI  TM
GEMOLOGICAL LABORATORY

Every diamond tells a story. How can you find the one that speaks to you?

When choosing a diamond, be sure to consider the science behind the sparkle.

A gemological report from an independent, reputable laboratory can confirm the microscopic details that make each stone unique. So, you'll have all the facts you need, to make an informed decision.

At GHI Gemological Laboratory we're dedicated to discovery — refining scientific techniques, monitoring industry trends, and sharing our collective experience.









Our GIA- and FGA-graduates, color specialists, clarity experts, and cutting-edge researchers work as a team. So, every analysis is exceptional. And every report is crystal clear.

GHI Gemological Laboratory: Focused on the Finer Things™



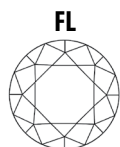
Carat Weight

A metric measurement. One carat (ct) = 100 points = 200 milligrams = 1/5 gram

								
Carat	0.25	0.50	1.00	1.25	1.50	1.75	2.00	3.00
Diameter (mm)	4.1	5.2	6.5	6.9	7.4	7.8	8.2	9.4
Height (mm)	2.5	3.1	3.9	4.3	4.5	4.7	4.9	5.6

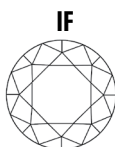
Clarity Grade

A scale that considers surface and internal features, known as blemishes and inclusions.



Flawless

No visible inclusions or surface blemishes at 10x magnification.



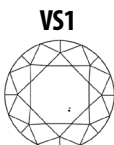
Internally Flawless

No visible inclusions at 10x magnification; may have minor surface blemishes.



Very Very Slightly Included

Very, very small inclusions; difficult to see at 10x magnification.



Very Slightly Included

Very small inclusions; difficult to somewhat easy to see at 10x magnification.



Slightly Included

Small inclusions; easy to see at 10x magnification or, at times, the unaided eye.



Included

Medium or large inclusions; obvious to the unaided eye.

Color Grade



Colorless



Near Colorless



Faint Yellow



Very Light Yellow



Light Yellow



For colorless to light diamonds, a range that considers tonal modifiers, such as brown, gray, green, pink, or, most typically, yellow.

Colored diamonds are distinguished by a combination of hue (the characteristic color), tone (lightness), and saturation (strength).



Fancy Light



Fancy



Fancy Intense



Fancy Vivid

Cut (Shape and Style)

A diamond's silhouette or form. Shapes vary from round to fancy cuts, such as cushion or emerald. And style includes variations of brilliant, step, and mixed cuts.

Sample Shapes



Cushion



Emerald



Marquise



Oval



Pear



Princess

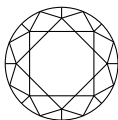


Radiant

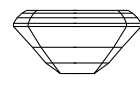
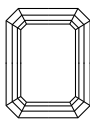


Round

Sample Styles



Brilliant



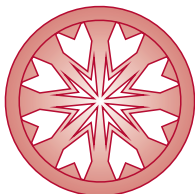
Step

Cut Grade

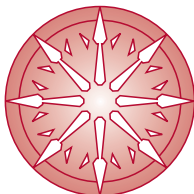
A ranking based on proportions, polish, and symmetry — factors that determine the way light interacts with the stone. Cut grade is rated from poor to ideal.

A precise diamond cut can create a unique hearts & arrows facet pattern that reveals a circle of hearts through its pavilion and arrows through its crown.

Hearts & Arrows Round Diamond



Pavilion (Bottom) View



Crown (Top) View

Enhancement

A treatment that enhances a diamond's appeal. Clarity, for example, can appear to be improved by feather/fracture filling, laser drilling, or internal laser drilling (KM). Color can appear to be changed or improved by the application of High Pressure High Temperature (HPHT) and/or irradiation.

Finish

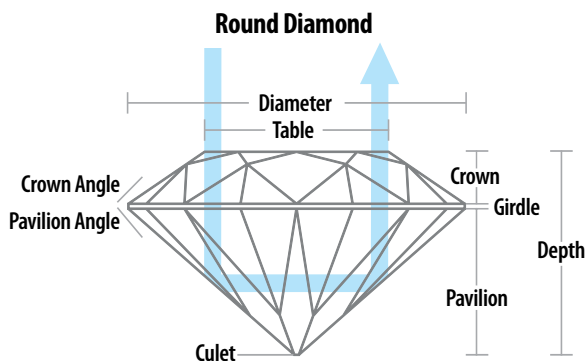
The analysis of polish and symmetry — which relate to surface condition, facet shape/arrangement, and overall contour. Both are rated from poor to excellent.

Fluorescence

The capacity of a diamond to emit visible light when its atoms react to long- and short-wave ultraviolet rays. Fluorescence is rated from none to very strong.

Proportions

Dimensions and facet angles, and the relationship between them. Proportions can impact the brilliance (strength of light return) of a diamond.



Very Good to Ideal Light Return

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