
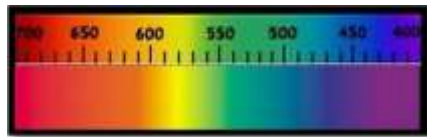



Warning: this version has been completed with Google Translate , it certainly contains errors or inaccuracies.

Technical details - general: Pink and red diamond

Gemma - names	(Italian - Diamond) (English - Diamond) (French - Diamant) (Spanish -Diamond) (Portuguese - Diamond) (Thai - เพชร phevchr)	(German - Diamant) (Arabic - الماس almas) (Russian - Алмаз Almaz) (Mandarin - 钻石 zu à nsh í) (Swahili - Almasi) (Hindi - हीरा heera)	photo 
Colors (GIA)	<p>pink diamonds they can come in 8 degrees (according to the GIA scale), soft pink, very light pink, light pink, fantasy light pink, fantasy pink, fantasy intense pink, fantasy vivid pink, fantasy dark pink or, in English: pink , very light pink , light pink , fancy light pink , fancy pink , fancy intense pink , fancy vivid pink , fancy deep / dark pink .</p> <p>The red color itself could also be considered an oversaturated level of the pink diamond spectrum. These gems are so rare that his records show that none of these stones were analyzed by their laboratories between 1957 and 1987.</p> <p>Red, just like pink, does not appear as a secondary color although it can be characterized by a modifying hue (orange, brown, purple) when it is the main color.</p>		
Cause of Color	<p>within the earth, each diamond is subjected to physical and thermal stresses. In some cases, these forces cause the carbon atoms to shift within the crystals resulting in a new partial reconfiguration, known to gemologists as internal graining . When the light passes through these planes, now no longer perfectly aligned, it is transmitted and sent back to the observer's eye in a selective way. The resulting color is often not homogeneous, but concentrated around color centers, created precisely by this <i>internal grain</i> , which can be translated into a pink hue in some gems. The exact cause of these phenomena is not yet fully understood, but it seems that, in these rare cases, nitrogen and vacant atomic spaces (NV) are co-responsible for this chromatic hue. However, the main factor remains the plastic deformation of the crystal structure . This break in the rigid regularity of the diamond's internal lattice is evidenced by an absorption band at 550 nm . Nitrogen, vacant spaces and plastic deformation have fundamentally different characteristics in the two most known types of pink diamonds: in Australian stones, also known as " Argyle " , the wave color is characterized by lamellae, with the presence of nitrogen B centers greater than that of centers A, while in the Russian ones, often called " Siberian " , the coloring is linear and straight stripes and is due to the presence of nitrogen centers A greater than that of centers B. Both Australian and Russian "modern" diamonds are all of type Ia (Uno A) , unlike the " ancient" ones, coming from famous mines of Golconda (which roughly corresponds to the present state of Andhra Pradesh), in India, which are type IIa (two A) and do not owe their color to the internal grain, These old pink crystals must, in fact, their tint pink to the so-called NV color centers (a nitrogen atom and an atomic vacuum), induced by the presence of natural radiation . These secular gems (about 0.6% of all existing ones) are also fluorescent ; when hit by ultraviolet light, they emit an orange light.</p> <p>The prevailing theory is that pink is caused when the diamond is subjected to enormous pressure during its formation. A similar theory was tested on pink diamonds originating from the Argyle mine in Kimberley, Western Australia. This theory postulates that an earthquake pushed colorless diamonds to the surface and altered their molecular structure, making them appear pink.</p> <p>The red color it would seem due, but it is not a hypothesis yet completely corroborated by experimental tests, it is due (as for the "other" pink diamonds) from a deformation of the crystalline structure which induces a selective absorption and eventually an emission of the red color. The process for the formation of "pink and red" diamonds in the earth differs substantially depending on the color defect. The twisted alignment in carbon</p>		

	atoms is the main cause of their cause of color, however this is not 100% confirmed according to the Gemological Institute of America. The scientific gemological term that describes this phenomenon is called "atomic distortion. The arrangement of the atoms in the crystal is determined by the heat and pressure in the earth. This is the same structural anomaly that causes a purple and brown diamond. Red diamonds can be identified as fancy red, fancy purplish red, fancy orange red, fancy brownish red with one color as the highest value. Apparently, pink and red owe their color to the same process that forms the much less noble (and expensive) brown diamonds . Allochromatic Gem			
Classification	Mineral class Native non-metallic, mineral	Species - Group (mineral) Diamond	Variety Pink / red diamond	
Optical properties	Specific Gravity: 3,516-3,525 Common: 3.52	RE: 2.417 Polariscope :SR Birefringence: The birefringence of polarized light is normally present in diamonds	Character optical Isotropic	Pleochroism NO
	Luster (luster) - luster of the fracture Diamantina - <i>adamantine</i>		Dispersion (fire) 0.044	
Light	Fluorescence SWUV (254 nm) : inert, orange (rare) LWUV (365nm) : blue (noticeable or strong only in 15-20% of stones), orange (rare)		Phosphorescence NO	
Form	Crystalline dress Octahedral, dodecahedral, cube-octahedral, spherical or cubic Melting point: 4.027 ° C, Burns above 700 ° C in air.	Phenomenal optical effects /	Crystalline system Cubic Monometric Crystal class	
Chemical formula	Carbon (typically 99.95%) C.		Spectrometer image  Not indicative	
Fracture	Flaking Distinta - octahedral (4 directions)	Breaking- Parting . Twinning law of the common Spinel (which produces "macle")	Fracture Complex, irregular	
Durability	Hardness (Mohs) - Absolute 10; 1600 (with variations in directional hardness)	Toughness Fair-good	Stability (heat, light, chemicals) Excellent	
Clarity - characteristics	Typical inclusions: small, solid, colorless, polyhedral crystal inclusions. Internal incisions (etching). Veils, dots ed Other characteristics of common colorless diamonds.			
	Guy: NA	Transparency (commercial) - transparency Transparent		
Deposits - types of rocks	Initially recovered only from secondary deposits (alluvial, near watercourses or where there had been rivers in past ages), starting from the end of the 19th century, they were extracted (together with the colorless ones) from primary deposits (directly from rock). They can be related to type I crystals, coming from the upper zone of the mantle, at a depth of 150-200 km, or type II, originating from areas present over 600 km from the surface.			
Characteristics of rough stones	Often of irregular shape (if recovered in alluvial or super-deep deposits - IIA), rarities of identifiable shape (octahedral, dodecahedral etc.)>			

Main deposits	<p>Lomonosov mine , however, is located within the confines of a Baltic shield craton, most of which is in Europe. Unlike many diamond mines in South Africa, Canada and Siberia, the Lomonosov field is not in a stable geological environment of the Archean period. For about 3 decades, until 2021, 90% of the world supply of rare pink diamonds came from the Argyle mine (Western Australia). Only 40 or 50 carats were mined each year. The oldest source was India (Golconda region).</p> <p>Only occasionally pink / red gems are recovered from the deposits:</p> <p>Indonesia (Borneo, Kalimantan) - alluvial deposits, possibly from the 16th century. • Brazil - alluvial deposits (Minas Gerais, Mato Grosso). • South Africa - from kimberlite, since the end of the 19th century. • Angola * (Racauna) - from 1912. • Venezuela * (Santa Elena) - alluvial deposits, from the 1920s up. • Tanzania (Williamson mine) - from kimberlite since the 1940s. up to the present day. • Congo * (Katanga, Mbuji Mayi , Kasai province) - from alluvial deposits, from the mid-20th century. • Russia - from kimberliti, since the 1950s. • Canada * (NWT, Diavik Mine and Northern Ontario, Victor mine) - from kimberliti, since 2003. • Lesotho (Kao Mine) - from kimberlite, since 2014.</p>
Year of discovery	<p>Uncertain: The earliest pink / red diamond deposits were possibly discovered in India in the 16th and 17th centuries and for many years India was the solitary source. It is possible that stones of this color also existed in previous eras, but there is no documentary basis to declare it with certainty.</p>
History	<p>The earliest known pink diamonds are the Daria-i- noor and Noor - ul - ain diamonds which are both part of the Iranian crown jewels. The Great Table was a large pink diamond set on the throne of <i>Mughal Emperor Shah Jahan</i> . It was described by the French jeweler / traveler Jean-Baptiste Tavernier in 1642 , who gave it its name ("Diamanta Grande Table "). The diamond was looted by Nader Shah during his invasion of India in 1739 and disappeared after his assassination. In 1965, a Canadian team from the Royal Ontario Museum conducting research on the Iranian crown jewels concluded that the larger Daria-i-Noor and the smaller 60-carat Noor- ul -Ain could have been part of the <i>Great Table</i> .</p> <p>In 1947 , Princess Elizabeth, now Queen Elizabeth II, received a 23.6-carat pink diamond from Canadian geologist Dr. John Williamson.</p> <p>The mine that for many years (until 2021) produced the greatest quantities of pink (and some red) stones is the deposit called Argyle, in Western Australia and was opened in 1983 . Its history dates back to the 1960s, when Kimberley prospectors, hunting for gold in the northern area of the region, found mineral deposits at Smoke Creek near Lake Argyle. Over the next decade, geological studies revealed that the area could be a significant source of diamonds.</p> <p>In 2002 , when Ben Affleck offered Jennifer Lopez a 6.1- carat pink diamond engagement ring . A huge pink diamond was one of the focal points of the 2006 Blood Diamond movie.</p> <p>In November 2020, an extremely rare 14.8-carat purple-pink Russian diamond called "The Spirit of The Rose " was auctioned in Switzerland for \$ 26.6 million . It was the largest diamond ever auctioned because 99% of all pink diamonds are less than 10 carats. In February 2021, American rapper Lil Uzi Vert revealed that he has a 1011-carat pink diamond implanted on the top of his head. In June 2021 he took it off his forehead.</p> <p>Unlike most colored diamonds, natural fancy red diamonds they have no degrees of color intensity. Basically, a diamond is red when the color is so saturated that it can no longer be a deep or dark pink. Therefore, a "light red" cannot exist because it would actually appear pink. A diamond that appears red with a darker tone will fall into the category of "brownish" red. While other colors come in different intensity levels, red diamonds only have one intensity level . Fancy red diamonds can be found in a pure color or with secondary hues, which include purplish, brownish and orange.</p> <p>Fancy yellow diamonds are classified using the following terms: Fancy Red.</p> <p>The name diamond comes from the ancient Greek ἁ δάμ ας (adámas), "unalterable", "indestructible", "indomitable", from ἁ - (a-), "un-" + δα μdam (damáō), "I overwhelm", or I "fame".</p> <p>In India and surroundings: Etymology: Vai = Mouth, Ra = Light, Vaira = Portal of Light. In Sanskrit it also took on the meaning of diamond club or scepter.</p> <p>The term vajra indicated 2 distinct things: the "diamond" or the "lightning bolt". It also referred to a kind of battle weapon used by the god Indra. In Tibetan Buddhism this same object-stone-weapon is indicated by the name of Dorje .</p> <p>Other trade names: /</p> <p>Varieties : Colored varieties - Fancy diamonds - Fancy color diamonds</p>

Property attributed	<p>These gems are so rare that there are few connections with possible metaphysical properties. Many are artificially created, combining the alleged powers of the diamond (colorless) with those of colors (red and pink). Red diamonds are said to strongly absorb and increase the wearer's thoughts. They give sacred love, serenity, simplicity, faith and trust. They help clear up resistances and deficiencies emanating from the root chakra, eliminating early pre-verbal panic attacks and nervousness, and can help keep the individual motivated towards your goals. Another opinion about this red diamond is that it is a good luck charm.</p> <p>This gem can provide some people with a blissful and comfortable life and will help the user gain hidden quality. Ultimately, it will improve the wearer's sexual control.</p> <p>Pink and red diamonds are also for true romantics, a true representation of passion, love, romance and commitment.</p> <p>Planet: - Month: - Zodiac sign: - Chakra: Crown</p>		
Treatments	<p>Irradiation and annealing can induce a pink / red color change of both natural and synthetic diamonds.</p> <p>Electronic bombardment using Van de Graaff generators produces orange, yellow, brown or pink colors.</p>		
Synthetic counterpart	<p>There are 2 types of single crystal synthetic diamonds: CVD (chemical vapor deposition) diamond and HPHT (high pressure and high temperature) diamond.</p> <p>Currently the only effective method of growing an artificial pink / red diamond is the CVD method.</p> <p>There are also pink / red CVD synthetic stones (type Ib or IIa) obtained by annealing with the LPHT system (Low temperature, high Pressure), or with a combination of annealing and irradiation.</p> <p>Treated red synthetic stones have been registered by the GIA since 1993, when there was still little talk of artificial diamonds.</p>		
It can be confused with	<p>Moissanite synthetic (separable through: doubling, dispersion, inclusions), YAG . (separable through: SG, dispersion), GGG (separable through: SG, luster), CZ (separable through: SG, tester),</p>		
Indicative gemological tests	<p>Australia : Type Ia , Graphite spots, "frosted" linear parallel motifs. Brazil, India, Lesotho, South Africa and Tanzania , type IIa , parallel pink "Tatami" motifs. octahedral grained, mostly clear.</p> <p>Angola, Brazil, Canada, Congo, Russia and Venezuela , type Ia , with pink stripes on octahedral or parallel design and surface grain.</p> <p>Synthetic pink diamonds exhibit strong pinkish-orange (CVD) and orange-red (HPHT) fluorescence in LWUV while natural pink (Argyle) emit blue luminescence.</p> <p>The growth zones of natural and synthetic diamonds are decidedly different and detectable by tests with UV rays. Generally natural diamonds react to long waves (LW), while artificial ones react to short ones (SW).</p>		
Value (2021)	High : \$ 1-7 million / ct 2 carat +	Average: \$ 1-2 million / ct 1-2 carats	Low: 100 -500K \$ / ct below the carat
	<p>Several modifiers, or shades, may be present along with the red color. The most common, and probably the most aesthetically pleasing, is purplish red . Other common modifiers are brownish and orange. Stones with orange and brownish shades are worth much less than pure red or purplish diamonds. Only one in 100,000 diamonds is said to qualify as a "Fancy" color. In the full dataset of more than 90,000 "pink" diamonds analyzed at the GIA between 2008 and 2016, the highest percentage was unmodified pink (40%), followed by pinkish purple to purplish pink (28%), brownish pink to pinkish brown (17 %) and orange pink (10%); see color distribution in figure 3. The rarest colors were unmodified brown (3%); purple with brown or gray modifiers (1%); unmodified red (0.5%); red with brown, purple or orange modifiers (0.4%); and, above all, unmodified violet (0.05%).</p> <p>In 2002, the average price per carat of a pink diamond was a relatively modest \$ 13,000 per carat. By 2014 the same diamond was worth around \$ 76,000. Today (2022) it surpassed \$ 100,000. Some statistics state that these gems have instead increased their value "by only 116% since 2005, others place this value around 470%.</p>		

Typical cut	Generally, the processing of these rare and expensive gems is a very long process. It does not follow a specific cut, but focuses on maximum use of weight and a carat / quality balance (intensity of color, distribution of clarity, etc.)
Famous stones	<p>Pink stones :</p> <p>Daria-i-Noor believed to be the oldest diamond among the Iranian crown jewels. The Noor- ul -Ain , probably made from the same 400-carat rough diamond as the Daria-i-Noor.</p> <p>The Williamson was discovered in the mine of the same name in Mwadui , Tanzania, in 1947 by Canadian geologist Dr John Williamson who donated the uncut stone to Princess Elizabeth and Prince Philip at their wedding. The 54.5-carat (10.90g) rough diamond was cut in London by Briefel and Lemer and set by Cartier's Frederick Mew who created a 23.6-carat round brilliant.</p> <p>The Pink Star: see below.</p> <p>The Hortensia diamond belonged to the crown jewels of France and was worn by the Queen of Holland, Hortense de Beauharnais (from which it takes its name).</p> <p>The Graff Pink The price per carat of the most expensive pink diamond ever paid at auction.</p> <p>The 18.96-carat modified rectangular cut Pink Legacy purchased by Harry Winston in 2018, previously owned by the Oppenheimer family.</p> <p>The Gran Condé , donated in 1643 by Louis XII to the prince of Condé, Louis de Bourbon.</p> <p>Artemis Pink (sold in a pair of earrings together with the blue Apollo diamond) is a pear cut pink diamond in the color Fancy Intense Pink. The diamond is natural in color and weighs 16 carats.</p> <p>The Agra Diamond : Originally owned by the Rajah of Gwalior's family, who later gave it to Babur, the Mughal Emperor, in thanks for saving their lives.</p> <p>The Princie once owned by the royal family of Hyderabad.</p> <p>Other famous stones: the Argyle Eclipse , 3.47 carats, Fancy pink diamond, Intense radiant cut.</p> <p>Red stones :</p> <p>The 5.05-carat Kazanjiano was discovered in Lichtenberg, South Africa in 1927 and weighed 35 carats in its raw form. After the preparation of the diamond cutter reduced its size by 85%, the jewelers transformed the stone into a beautiful emerald-cut diamond. The largest red diamond in the world is the Moussaieff Red Diamond . It weighs 5.11 carats, shows a trilliant / trillion (modified brilliant) cut and is internally flawless (IF). It was discovered in Brazil in the early 1990s by a farmer, originally weighing 13.9 carats. In 2007, the Graff Purplish -Red (purplish -red, of uncertain origin) was auctioned for \$ 2.65 million, (\$ 1.17 million per carat).</p> <p>DeYoung Red , a 5.03-carat one, was discovered by Sydney DeYoung at a flea market. It was mistakenly bought as a red garnet. The jeweler donated the diamond to the National Museum of Natural History in Washington, DC in December 1987.</p> <p>Hancock Red , a 0.95-carat Fancy Purple-Red gemstone, was sold in 1987 for \$ 880,000, a remarkable \$ 926,315 per carat, eight times its pre-sale estimate. It had been purchased for the "paltry" amount of \$ 13,000.</p> <p>Rob Red is a teardrop -shaped diamond, VS1 clarity and 0.59 ct .</p> <p>Other famous gems: The Rosso / Red (5.05 carat, emerald cut), The Graff Purplish Red (purplish red), 2.26 carat (octagonal brilliant cut), The Lady in Red , (0.54 carat, cut round brilliant), Argyle Bohème , 1.01 carat, radiant cut.</p>
Record stones	The popularity of pink diamonds increased in November 2013, when the 59.6-carat Pink Star diamond was auctioned in Geneva for \$ 83 million by New York-based diamond cutter Isaac Wolf , later renamed Pink Dream . Wolf ultimately went bankrupt, creating a scandal in the world of extravagantly colored diamonds, forcing the auctioneer Sotheby's to pay the owners the promised sum. On April 3, 2017, Sotheby's again auctioned the Pink Star, in Hong Kong, which was sold to Chow Tai Fook Enterprises for a record \$ 71.2 million (HK \$ 553 million, including taxes).