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

### Technical details - general: Yellow and orange diamond

Gemma -	( Italian - Diamond)	( German - Diamant )	photo	
names	(English - Diamond)	( Arabic - الماس almas)	photo	
names	( French - Diamant )	( Russian - Anmas Almaz )		
	(Spanish -Diamond)	(Mandarin -钻石 zu à nshí)		
	( Portuguese - Diamond)	( <b>Swahili</b> - Almasi)	of Liveryon	
	( Thai - เพชร phechr )	( Hindi - हीरा heera )		
Colors (GIA)	Colorless ( GIA : DEF scale within the D: Z classification			
	amount of yellow, gray or brown above grade Z is			
	classified as a Fancy Color	_		
	Yellow Diamonds GIA	The state of the s		
	diamonds can exhibit some	(1) 李章 (1) [1]		
	levels of any colored diar	STATE OF THE PARTY		
	color charts, which start wi	S. Contraction of the Contractio		
	or Light, yellow diamond	The same of the sa		
	Fancy Light. This is bec			
	diamonds are part of GIA's	D to Z color scale which		
	is used to classify white			
	diamonds are classified u			
	Fancy Light Yellow, Fanc	y Yellow, Fancy Intense		
	Yellow, Fancy Dark Yellow, Fancy Deep Yellow and			
	Fancy Vivid Yellow.		P S S S S S S S S S S S S S S S S S S S	
	Orange diamonds GIA o	classification: Since pure		
	orange is a blend of the	. ,		
	yellow, this category inclu			
	orange-red to orange-ye		WEST AND THE STATE OF THE STATE	
	purple and yellow are the	secondary hues found in		
	fancy orange natural diam		10000000000000000000000000000000000000	
	Fancy Orange Diamonds	are classified using the	<b>2.</b> 多色度温度2.00000000000000000000000000000000000	
	following terms: Faint Orange, Very Light Orange,			
	Light Orange, Fancy Orange, Fancy Intense Orange,			
	Fancy Vivid Orange and Fancy Deep Orange.			
Cause of	Yellow Diamonds: The colo	r is usually caused by <b>nitro</b>	gen atoms replacing the carbon in	
Color		· · · · · · · · · · · · · · · · · · ·	There are <b>4 main types</b> of these	
00101	•		emical-physical origins of the color.	
	These characteristics can be detected by the respective absorption levels of the light			
			ar <b>spectrometer</b> InfraRed or Visible	
	Near Infrared):		•	
	· · · · · · · · · · · · · · · · · · ·	amonds (from the name o	of the location in South Africa and	
	about 70% of the total), which are <b>type IA</b> (one A) and are characterized by			
	spectrometric detection peaks called <b>N3</b> (3N + V, 415 <b>nanometers o nm</b> ), groups			
	composed of 3 nitrogen atoms (500-5000 parts per million) centered around an empty			
	atomic space and <b>N2</b> (478 nm).			
	1	•	e jewelry market there are those of	
	I		ns (about 100 PPM) and which are	
	1 '		over time (millions of years) these	
			s of two and subsequently of four.	
	1 -		peaks, but a general absorption of	
	I		blue-green part. These gems can	
			Id as Canary <b>Diamonds</b> (Canary	
	Diamonds in English),			

3. yellow diamonds colored by centers A and C and which have an absorption peak at **480 nm.** These diamonds tend towards orange. In addition to being present in 86% of pure orange natural diamonds, the presence of this band also contributes to the thermochromic properties. Color is affected by changes in temperature. When a diamond with this characteristic is heated to 400 ° - 500 ° C, the absorption band expands and creates a temporary shift of the color towards more orange tones. This effect can also be seen in chameleon diamonds which always show the same absorption band of 480 nm.

4. Diamonds colored by H3 groups, ie pairs of nitrogen atoms around an empty atomic space and sometimes, but not always, associated with an absorption peak around 550 nm (which increases the orange tint). The N3 group can also cause greenish fluorescence.

pure orange diamonds, devoid of secondary shades (usually brown), are another rarity. Recent research has established that some yellow diamonds contain colorless nuclei, which means that the yellow outer layers have crystallized over the lighter centers. This study also allowed us to hypothesize that yellow diamonds crystallized more than 30,000 years before the kimberlite eruptions that brought them to the earth's surface.

Orange diamonds: The defects that produce the orange color have not been determined with absolute certainty and may vary from one diamond to another (they can be type IaA / one aA , type IB / one B or a combination thereof). Some internal imperfections, perhaps related to the presence of oxygen, cause the stones to selectively absorb blue light and transmit orange. Some gems have the characteristic of being luminescent, in the presence of UV rays (for example the sun) and emit fluorescent light; this quality gives them a very special brilliance.

In 2013, the GIA examined a particular gem, which did not meet the standard characteristics expected for gems of its type. The 1.53 ct diamond was classified as a Fancy Intense pinkish orange color . Spectroscopic analysis revealed that it was type Ila and dominated by an absorption band of around 550nm, which usually introduces a pink-red color in natural diamonds rather than orange.

The GIA estimates that the presence of existing pure, unmodified orange diamonds constitutes 0.05% of natural fancy diamonds.

### Allochromatic Gem

Classification	Mineral class Native non-metallic,		Species - Group (mineral) Diamond		Variety Yellow / orange diamond		
O 1'1	mineral		DF: 0.417	<b>O</b> I-		Dia a alamaiana	
Optical	Specific		<b>RE:</b> 2.417	_	aracte	Pleochroism	
properties	Gravity:	25 <b>Birefringence:</b> The birefringence			ptical	NO	
				Isotropic	tropic		
	Luster (luster)	Luster (luster) - luster of the fracture			Dispersion (fire)		
	Diamantina - adamantine			0.044			
Light	Fluorescence SWUV (254 nm): inert LWUV (365nm): blue / purple (Ellendale) red (cape defects, yellow orange (480nm band), green (H3 defects)		Phosphorescence Weak yellow (480 nm band)				
Form	Crystalline dress Phenomenal optic		al Crystalline system				
	Octahedral, dodecahedral, effects		Cubic				
	cube-octahedral, spherical or		/		Monometric		
	cubic / Melting point: 4.027 ° C, Burns		Crystal class				
	above 700 ° C in a					•	
Chemical	Carbon	on (typically 99.95%)			Spectro	meter image	
formula	C.			Ye	llow diamonds dicative (difficult to see)		
Fracture	Flaking		Breaking- Parting			Fracture	
	Distinta - octahed	Iral	. Twinning law of the	<del>)</del>	Со	mplex, irregular	
	(4 directions) common Spinel (which produces "macle")		ch				

Durability	Hardness (Mohs) -	Toughness	Stability (heat, light, chemicals)	
	<b>Absolute</b> 10; 1600	Fair-good	Excellent	
	(with variations in directional			
Claudh.	hardness)			
Clarity -	The clarity of a colored diamond is much less			
characteristics	important than a			
	colorless one, as any			
	inclusions are masked			
	by the color and			
	therefore do not affect			
	the transparency of the stone as much.		A Parker	
		onazione Grininiii solidi	Nuvole Aghetti orientati	
	T	amonds, they are cut primarily	to emphasize their color.	
		encounter small clouds or string		
	in yellow diamonds. Occasionally dark crystals are also seen. Graphite is the most common mineral inclusion, typically occurring in fractures of various sizes, showing a flat			
		al crystals of both peridotitic a		
		een), pyrope garnet (purple) a	<u> </u>	
		facite (greyish blue) and rutile		
	- · · · · · · · · · · · · · · · · · · ·	nan 100 µm / micron. Macro eu		
		ed diamonds, and this was als		
		black, metallic-looking needle bear in some of the yellow diar		
		usions appear such as clouds of	• •	
	needles (type lb diamonds, v	with isolated hydrogen atoms)	· ·	
	if they have a 480 nm band.	-		
	Guy: NA	Transparency (comme Transp	ercial) - transparency parent	
Deposits -	In general, over 80% of all natural diamonds are peridotitic, while the remaining 20% are			
2000000	_	iorai alarriorias are periadiliic,	, while the remaining 20% are	
types of rocks	formed in eclogitic deposits.		-	
_	formed in eclogitic deposits. Diamonds that contain nitro	gen do not form in depth, suc	ch as those of type IIa or IIb,	
-	formed in eclogitic deposits. Diamonds that contain nitro which appear to crystallize	gen do not form in depth, suc 600-1000 km below the surfc	ch as those of type IIa or IIb, ace. The yellow, yellow and	
-	formed in eclogitic deposits. Diamonds that contain nitro which appear to crystallize orange ones collect their	gen do not form in depth, suc	ch as those of type IIa or IIb, ace. The yellow, yellow and -200 km underground. The	
-	formed in eclogitic deposits. Diamonds that contain nitro which appear to crystallize orange ones collect their formation characteristics are (pale to intense, the rarity	gen do not form in depth, suc 600-1000 km below the surfo chromatophore around 150 e similar to those of most com of which increases with incr	ch as those of type IIa or IIb, ace. The yellow, yellow and -200 km underground. The mon diamonds. Yellow ones reasing vividness) are more	
-	formed in eclogitic deposits. Diamonds that contain nitro which appear to crystallize orange ones collect their formation characteristics are (pale to intense, the rarity common than colorless on	gen do not form in depth, suc 600-1000 km below the surfor chromatophore around 150 e similar to those of most com of which increases with increases. In fact, in the DZ scale	ch as those of type IIa or IIb, ace. The yellow, yellow and -200 km underground. The mon diamonds. Yellow ones reasing vividness) are more devised by the American	
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	South Africa is famous for giving its name to a type of pale yellow colored diamond (Cape).
	Most of the <b>orange diamonds</b> come from two locations namely South Africa and the Argyle mine in Western Australia.
Year of discovery	<b>Uncertain:</b> It is said that the <b>Florentine</b> (a yellow diamond of about 137 carats (metric) dates back to 1477 (or earlier). It is said that the stone, now disappeared, was worn in battle by Charles the Bold. Unfortunately the gem did not give the protection hoped for and the nobleman fell during the fighting. In reality, the first recognized official owner of the Florentine was the Cardinal and Grand Duke of Tuscany Ferdinando I de 'Medici (1549 - 1609). The precise historical documentation attributes the large diamond to him yellow began in 1657, when Jean Baptiste Tavernier saw the stone among the possessions of the Grand Duke (calling it by various names including those of "Fiorentino",
History	"the Giallo Austriaco," and the "Gran Duca di Toscana."  Yellow diamonds:
	Yellow diamonds correspond to the <b>second most common color</b> , after brown ones, but they are much more abundant than the latter among the gems on the market. They are less rare but more popular on the market.  One of the most important diamonds in history:  The Eureka diamond was the first diamond discovered in South Africa. It originally weighed 21.25 carats and was later cut to a 10.73 carat cushion-shaped diamond, which is currently on display at the Kimberley Mine Museum. The discovery of Eureka (and other stones in the same area) eventually led to the Kimberley Diamond Race and marked the beginning of the mineral revolution. The Eureka diamond was apparently found near Hopetown on the Orange River by a 15-year-old boy named Erasmus Stephanus Jacobs in 1867. The gem came into the hands of a local farmer, Schalk Van Niekerk, who entrusted the stone to a geologist, John O'Reilly, who took it to Colesberg
	to inquire about its nature and value. The stone passed under the eyes of the interim Civil Commissioner Lorenzo Boyes, who seeing that the glass cut in stone declared: "I think it is a diamond". The stone was then mailed in a regular paper envelope to Dr. William Guybon Atherstone, the colony's foremost mineralogist, in Grahamstown. Atherstone confirmed that it was a diamond. From that moment the interest in the area was triggered, as a potential diamond field that led to the birth of the world of diamonds as it is known today.  The Iranian Yellows: The collection of 23 yellow diamonds with a minimum of 38 carats and a maximum of 152 carats are an important part of the Iranian national royal jewels and are collectively known as the Iranian yellow diamonds.  The collection of 23 yellow diamonds with a minimum of 38 carats and a maximum of 152 carats are an important part of the Iranian National Royal Jewels, and are together known as the Iranian Yellow diamonds.

These yellow diamonds are all of South African origin and, considering the year the diamonds were purchased (1889), they may have originated in the highly productive De Beers or Kimberley mines, which began production in the mid-1860s. . Iranian yellow diamonds are part of the Iranian national royal jewels.

One of the most memorable early references to orange diamonds is found in the 1882 book The Great diamonds of the world: their history and romance by gemologist Edwin Streeter, Great Diamonds of the World. In the book, Streeter calls them fire diamonds, and for good reason. Well cut, the stones flicker and sparkle like solidified flames.

In the early 1950s, Marilyn Monroe famously wore one of the oldest recorded yellow diamonds, the Moon of Baroda, in the film Men Prefer Blondes. The drop-shaped 24karat canary diamond is thought to have been mined in Vadodara, India in the 15th century and remained in the possession of the Gaekwad family, the Maharajas of Baroda, for centuries. It was loaned to Empress Maria Theresa of Austria, but returned to the Gaekwad family and sold in the 1920s . Detroit-based diamond dealer Meyer Rosenbaum purchased it in 1953. The stone was auctioned at Christie's in New York in 1990 and again in 2018, to a private collector for \$ 10.3 million.

Although not Australia's first diamond mine, Ellendale was the country's first hard rock deposit. It holds a special place in the world history of diamonds as it resulted in 1976 to the recognition of a new host rock for the diamond, the lamproite olivine. Until that time, commercial-sized diamonds were considered to come only from kimberlite.

In 2018, ALROSA surprised the diamond market by auctioning off a collection of 250 colored diamonds in Hong Kong . Known as the "True Colors" auction, ALROSA wanted to make the sale an annual event. The company reported being able to support the annual sale because it **produces at least 7,000 carats of colored diamonds per year.** (all of which are cut and polished in Russia).

18.49-carat yellow Fancy Intense \* diamond known as the " **Golden Drop**" sold at auction for \$ 203,461 per carat in 1990, while a 13.83-carat yellow Fancy Vivid was sold for \$ 238,792 per carat in 1997.

Although gem quality synthetic diamonds have **been around since the 1970s**, they were only actually commercially available **since the late 1980s**. Until then, GE diamonds (the US company General Electric), produced through the HPHT process were too small for the use of gems and were commonly used for industrial purposes. However, this discovery paved the way for GE to create gem-quality crystals in 1971. Their process used a tube to add heat and pressure to a graphite seed in the center until it turned into a diamond.

**Yellow** and blue HPHT synthetic diamonds were available at prices well below those of natural (untreated) diamonds of the same color, while nearly colorless to colorless synthetic diamonds were more expensive than natural diamonds. The price difference was due to the fact that the production of colorless synthetic diamond was difficult, with most of the material turning yellowish and included.

Until 2003, all gem quality synthetic diamonds were produced with the HPHT process, after which the Apollo Diamonds USA company announced the successful growth of single crystal gem quality synthetic diamonds using the CVD process.

Today, there is a particularly significant problem with colored diamonds as , **as of 2010**, **virtually all of the** author's yellow melee (small) diamond packs contained HPHT synthetic diamonds. Additionally, as of 2019 most brown melee diamond packs contained CVD synthetic diamonds and as of 2020 gray and salt and pepper diamonds (included) often contain HPHT and CVD diamonds.

In **2009** Ellendale, in the West Kimberley region of Western Australia, approximately 400-500km west of Argyle, was closed. However, new ground reconnaissance

The Argyle mine itself **closed its doors in November 2020**, after 37 years of production. At the end of 2019, some Australian companies ( **Burgundy** and **India Bore Diamond Holding**) began operations to buy the deposits. In the future it is possible that production will resume. At the moment (2022) there are no active mines in Australia. In **2020**, Australian explorer India Bore Diamond Holdings revealed that he had unearthed a large alluvial deposit of rare diamonds at a site near Derby, which once produced half the world's supply of fancy yellow diamonds. The company is targeting an ancient buried river system, known as the L-Channel, which formed about 22 million years ago and is estimated to contain at least 1.3 million carats of gem-quality diamonds.

**Name** : The name diamond comes from the ancient Greek  $\dot{\alpha}$   $\delta \dot{\alpha} \mu$  as (adámas), "unalterable", "indestructible", "indomitable", from  $\dot{\alpha}$  - (a-), "un-" +  $\delta \alpha$   $\mu$ dam ( damáō ), "I overwhelm ", or I" tame ".

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.

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.

Other trade names: / Variety:

## Property attributed

Psychologically, yellow is upbeat and revitalizing, bringing the energy of the sun and youthful exuberance, as well as a feeling of confidence and prosperity. Yellow can stimulate the left half of the brain which affects concentration and quick decision making.

The yellow diamonds they vary in hue and are created when a diamond is formed in the presence of nitrogen gas. This color is associated with playfulness, optimism and is perfect for creative and fun-loving people. These rare gems vary in hue from very light yellow to the deepest yellow when more nitrogen is present in the stone. Yellow color is associated with optimism, playfulness and sociability. Yellow diamonds are a good choice for those who are adventurous, creative and fun-loving. They are said to bring energy that pushes the wearer to achieve his or her goals. They also help with creativity and honesty. Even in love they can push you to find a faithful partner. At work they lead to decisions that reduce stress.

Some **orange gemstones**, such as citrine, are thought to bring good luck and even reverse bad luck. Many orange gemstones are believed to have healing properties and

	promote not only physical but also mental and emotional health. The traditional properties closely associated with diamonds are <b>action</b> , <b>passion and energy</b> . Jewelry containing diamonds is believed to enhance relationships, increase inner strength and provide the wearer with balance, clarity and abundance. Wearing jewelry containing a diamond is believed to focus the precious gem's energies through the gem. The orange color has a strong and traditional meaning that symbolizes courage and courage.			
	Planet:			
	Month: April (diamond in general) Zodiac sign:			
	Chakra: solar plexus (third, yellow), sacral (second, orange)			
Treatments	Electronic bombardment using Van de Graaff generators produces <b>orange</b> , <b>yellow</b> ,			
	brown or pink colors.  In all diamonds, the <b>HPHT treatment</b> can produce graphite feathers or inclusions or frosted facets that are not properly re-polished afterwards. The irradiation and annealing treatments can leave <b>yellow or orange areas</b> near the apex. However, it is often impossible to gemmologically identify these types of treatments and all fancy color diamonds should be sent to a laboratory for definitive determination of the origin of the color.			
	Annealing is the process of heating and cooling a diamond. When annealing is used in addition to irradiation, the result can be <b>an orange diamond</b> .			
Synthetic		ystal synthetic diamonds: <b>CVD</b>		
counterpart			rature) diamond. However,	
Coomerpan	remember that one way to	recognize a synthetic diamo	nd is that it has very specific	
	<b>impurities</b> that are different f			
		n an unmodified <b>yellow-orang</b>		
	while the Chemical Vapor Deposition (CVD) process can result in an orange-pink or brown-orange stone.			
It can be		ırable through: doubling, di	ispersion, inclusions), Zircon	
confused with			ic Zirconium / CZ (separable	
	through: optical character, spectrum, splitting), <b>Strontium titanate</b> (separable through:			
	dispersion, SG, inclusions), YAG. (separable through: SG, dispersion), GGG (separable through: SG, luster). Synthetic rutile (separable through: optical character, dispersion)			
	through: SG, luster), <b>Synthetic rutile</b> (separable through: optical character, dispersion, splitting), <b>Sapphire / Natural / synthetic spinel colorless</b> (separable through: optical			
		doublets / triplets (separable		
Indicative		s, especially those of pure col	or, it is generally advisable to	
gemological tests	rely on a trusted laboratory for	or this type ot analysis. neir color to nitrogen impuritie	s and the line that divides an	
	orange gem from a yellow one is extremely thin. Body colors in diamonds are produced by an arrangement of visible light transmitted over a certain wavelength. The <b>yellow</b>			
		<del>-</del>	elengths below ~ 510 nm and	
	the orange body color is seen when such absorptions extend to ~ 600 nm. However, it is			
	important to note that when defects reach certain concentrations, the absorption band can shift to the wavelength position, which means that a yellow body color can be seen			
	showing an absorption band			
Value (2021)	High:	Medium:	Bass:	
	<b>Yellow:</b> 30,000 + \$ / ct	<b>Yellow:</b> \$ 10,000 / ct	<b>Yellow:</b> \$ 1,000 / ct	
	<b>Orange:</b> 2,000,000 + \$ / ct	<b>Orange:</b> \$ 200,000 / ct	<b>Orange</b> : 5000+\$/ct	
	5 carat +	1-2 carats	below the carat	
		pends on the intensity (satura	opreciated, each secondary	
			carat (even a tenth or less).	
	Some shades are more sought after than others (for example blue compared to yello			
	or gray).	1 1 10 11 0 1	1 1 1 1 1 1 1 1	
Typical cut			and make it stand out in the	
	setting; or, the color of the metal and the color of the diamond can be in harmony with each other. Gold, platinum, rose gold and other metals, each with a unique look, can			
	offer these cues for complementarity or contrast.			
Famous stones	Yellow: the Fiorentino from 13	37.27 carats (disappeared); <b>G</b> i	raff Vivid Yellow , 100.09 carat	
	type IB (one B), sold in 2014 for <b>\$ 16.3 million at</b> Sotheby's (or \$ 16,285 per carat); the <b>Tiffany Diamond</b> , 128.54 carats; the 101.29 carat <b>Allnatt Diamond</b> , sold in 1996 for over \$ 3 million; a <b>Nameless Yellow Diamond</b> , of 20.49, mounted on a ring and sold in 2018			

for \$5.5 million (about \$370,000-carat, the most expensive ever). According to a study, the price of yellow diamonds increased by 21%, on average, between 2010 and 2020; while according to another research, the increase would have been 25% from 2005 to 2020.

**Orange**: The **Pumpkin Orange**, a crystal classified by the GIA as Vivid Orange. 5.54 carat. was initially mined from 11 carats as an orange-brown crude in South Africa in 1997. The diamond was auctioned by Harry Winston. It is believed that the color, shape and time of purchase helped to baptize the gem with the name Zucca / Pumpkin diamond. The buyer's identity and price are still unknown. Although there are rumors that the stone sold for just over \$ 3 million in March 2005.

The **Koi Diamond** is a **32-carat white and orange crystal** cut in the shape of an elongated drop. The 60-carat crude was unearthed in Congo around **2003** and was initially classified as industrial due to its mottled color and inclusions; however, its resemblance to the sacred Japanese **koi fish** led it to its new "life" as a gemstone. It is currently owned by Rawstone Business Holdings and stored in a vault in Antwerp.

#### **Record stones**

**Yellows:** The **Incomparable** (*Incomparable in English*) **is** a **407.48 carat faceted brownish yellow diamond**. It is the third largest clear faceted diamond in the world, after the Golden Jubilee and the Cullinan I. It measures 53.90 x 35.19 x 28.18mm and is cut into a unique triangular shape called a "trioletta".

### Graff Vivid Yellow,

The 100.09 carat Graff Vivid Yellow diamond is one of the largest fancy vivid diamonds never seen yellow. It set a new record for the highest price ever paid for a yellow diamond at auction when it sold for \$ 16.3 million at Sotheby's in 2020.

### The Golden Star

In 2005, a 101.28 ct modified brilliant yellow Fancy Vivid, known as the "Gold Star", was presented to the public in Palm Beach, Florida by jeweler Laurence Graff, who reported that this diamond had been cut from a large crystal found at the Finsch Mine in South Africa.

**Orange**: **The Orange**, a 14.82-carat *fancy vivid* diamond with VS1 clarity, broke all records when it hit the block at Christie's Geneva auction. Christie's had predicted that this Type 1a diamond would earn between \$17 million and \$20 million, but the stunning stone far exceeded those expectations, grossing a staggering \$35.5 million, or \$2.4 million for carat.