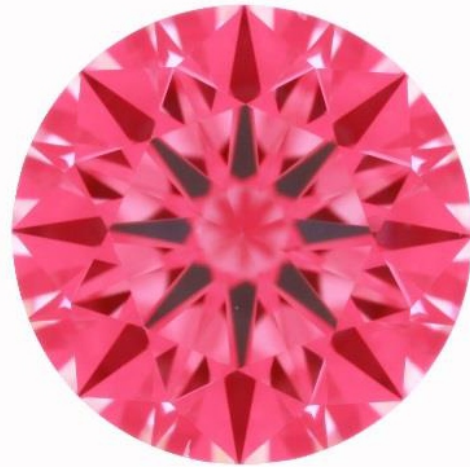




# IDEAL Scope

For "Light return" and "Symmetry" study



High Performance

Average

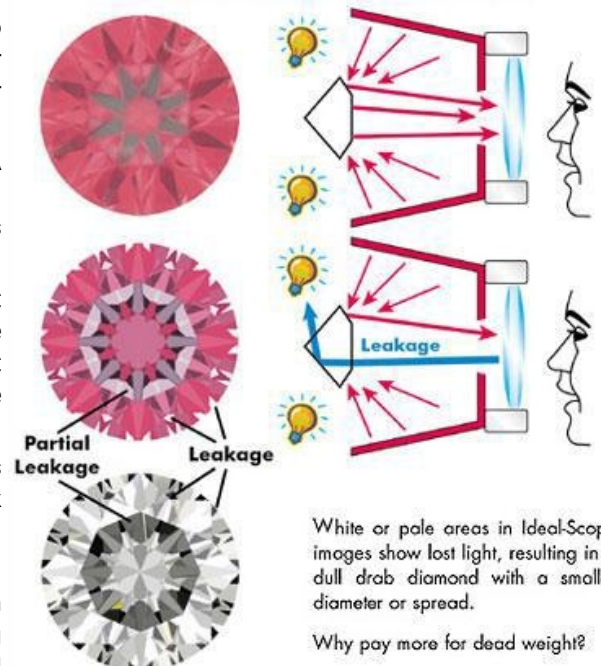
Common

Poor

## What Is The Ideal-Scope And What Does It Do?

- The diamonds are unique due to their breath taking brilliance, fire and scintillating performance. The value of the diamond depends on 4Cs, namely Carat, Color, Clarity and Cut. When it comes to Clarity and Cut, the certificate do not speak a lot. The diamond's value greatly depends on the way it performs for the buyer. But not much information is available to display it in a way a consumer will appreciate.
- The Ideal-scope is based on a principle discovered by Mr. Okuda in the 1970's. A 10x lens with a hot red / pink reflector in front of the diamond has a central viewing hole, which allows you to see just how much of the red / pink light refracts back from the diamond.
- The instrument is a simple brilliance gauge; white areas in a diamond show light transmitted from behind the diamond; often called leakage - the enemy! The blackness of the lens mimics an observer's head blocking out the light. The most brilliant diamonds look bright pink/red with a black star and minimal white or pale areas. Most ideal cuts have small 'V' shaped white leakage features at the girdle.
- Invented originally for brilliance assessment, the ideal-scope shows a diamonds symmetry. Diamonds with perfect symmetry and good proportions show a black eight-pointed star. Hearts and Arrows (and H&A's viewers) are a by-product of Mr. Okuda's discovery.
- In December 2001 the American Gem Society (AGS) announced it will work with Fire scope™ owner Richard von Sternberg to develop a new diamond cut grading system. "We strongly believe that a quantifiable cut grade for fancy shaped diamonds is now within reach," said Robert W. Bridel, AGS executive director and CEO".

The redder the diamond looks ...the better the cut



## Excellent Cut Diamond

## How to Use?

- The main idea is to have even lighting and to hold everything close to your eye
- Find a light source or moderate ambient light. A shaded fluorescent lamp (Fig. 1a) or facing a well-lit, light coloured wall (Fig. 1b) will give good results. Typical office lighting provides a good environment.
- Hold the ideal-scope very close to your eye (like glasses), with the lens to your eye.
- Pick up a loose stone (with tweezers) or a mounted stone and hold it right up to the open end of the ideal-scope. The table of the stone (the flat top) has to be facing you. (The scope does not work when you view the stone through the pavilion – the pointed bottom)
- Face toward the light source or wall with your eye shaded from direct light (Fig. 1).
- Do not hold the stone inside the scope – right at the end of the scope is the best place (Fig. 2).
- Examine the stone and look for where and how much of the stone is strong pink and black and how much is white or pale pink.
- Consistent measurement readings comfort the grader grade the stone objectively. The minor symmetries are very precisely picked up, allowing graders to completely rely on the 3D model built by the scanner, and grade the symmetry objectively: Junctions as corrected and built by HP-CR scanner:



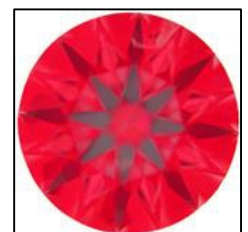
(Figure-1)



(Figure-2)

### Excellent Stone :

- Look for areas of white. Find any? No? That is because this stone is returning near to 100% of the light that is entering it. The red and black coloration is even and strong, indicating excellent light return. The black star like pattern also indicates very high optical symmetry (near to perfect arrows). An even spread of black and red indicates good scintillation.



### Medium Stone :

- Any areas of white or pale pink. Yes & Yes. An even coloration of pink? No. This stone is leaking light around the table of the stone and also around the outer edge. This leakage is causing the white and pale pink areas to appear in the stone. This light leakage is too much to overlook.



### Poor Stone :

- Reject. This stone is leaking a lot of light. Note the grey around the centre and the very pale pink and white around the outside. These areas are showing moderate to very strong light leakage. The more white the more light is leaking.
- For a comprehensive tutorial please visit the rest of the site. Pages of interest are Excellent Cut, Medium Cut, Poor Cut, Test Your Skills, Set Diamonds, and Fancy Shaped Diamonds.

