



**INTERNATIONAL  
GEMOLOGICAL  
INSTITUTE**

**ELECTRONIC COPY**

**COLORED STONE REPORT**

November 28, 2024	
IGI Report Number	657428468
Species	NATURAL TOURMALINE
Variety	BI-COLOR TOURMALINE
Shape and Cutting Style	EMERALD MIXED CUT
Weight	1.39 CARAT
Measurements	8.24 x 4.90 x 3.83 mm
Color and Transparency	COLORLESS AND YELLOWISH GREEN, TRANSPARENT
Characteristics	NATURAL INCLUSION(S) PATTERN



**OPTICAL and PHYSICAL PROPERTIES**

Refractive Index	1.624 - 1.644
Birefringence	0.02
Optic Character	UNIAXIAL
Optic Sign	-
Specific Gravity	3.06

*Optical and physical properties are approximate values*



Photography is approximate

**Species & Variety**

Gems may be classified in different species, according to their basic chemical composition and crystal structure; within a certain species, small differences in composition may result in different colors, or varieties.

The way that light interacts with the gem may create some astonishing optical phenomena, such as a star, a cat's eye effect or change of color, in different varieties.

**Transparency**

As light passes through a gemstone, part of it, if not all, will be absorbed, and part will be transmitted. The more light that is absorbed the less transparent the stone will be.

**Characteristics**

Internal characteristics are the inclusions of a gemstone. Not only do they provide essential information about the formation but also the conditions in which the gemstone is grown.

**Refractive Index**

When light passes through air and enters a gemstone it slows down due to a difference in the medium. The ratio between the speed of light in air and in a particular medium is known as the Refractive Index.

**Optic Character**

Determining how light travels through the crystal. Using a range of specialized instruments, we will be able to establish if the stone is isotropic or anisotropic, uniaxial or biaxial.

**Specific Gravity**

Specific gravity is the ratio of the density of the gemstone to the density of an equal volume of water.

All IGI Laboratories employ a wide range of state-of-the-art equipment, which provides comprehensive and accurate assessment of different gemstones.

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