

When “Green” Turns Blue: Uncovering Hidden Laser Infringement

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PROBLEM STATEMENT

The client sought an infringement analysis for an invention that specifically claimed the use of a “Blue laser.”

The target product, however, utilized a “green laser,” creating an apparent mismatch. A deeper investigation was required to determine whether the product’s laser wavelength could still fall within the patented definition of a blue laser, based on technical interpretation and patent description.

KEY CHALLENGES

- ▶ No standardized industry definition for “blue” or “green” laser wavelength ranges.
- ▶ Product documentation only broadly referenced “green laser,” without precise wavelength details.
- ▶ Patent language required careful interpretation of allowable wavelength tolerance.
- ▶ High risk of false non-infringement conclusion without scientific deep-dive.

SOLUTION APPROACH — Deep-Dive Search Methodology

1

We first searched for standard definitions of blue and green laser wavelengths and found none. Industry ranges vary by manufacturer, largely because the visible spectrum transitions gradually rather than changing colors abruptly—making most such ranges approximate rather than fixed.

2

In the absence of any extrinsic standard, we relied on the patent’s intrinsic definition, which specified a blue-laser range ending at 500 nm, along with a 10% tolerance.

3

We then analyzed the product’s green-laser wavelength, which fell on the lower end of the green spectrum—within the 10% tolerance—resulting in an overlap with the patent-defined blue-laser range.



BREAKTHROUGH INSIGHT

By confirming that no industry-standard wavelength definitions exist for blue or green lasers, the patent’s own disclosure became the controlling reference. Its 10% tolerance on the 500 nm upper limit effectively extended the blue-laser range into the lower green spectrum. The product’s green-laser wavelength fell within this extended range, revealing an overlap that pointed to potential infringement despite the product being labeled as “green.”

IMPACT ON CLIENT

- Identified a previously overlooked infringement risk despite apparent “green laser” labeling.
- Enabled the client to pursue a stronger enforcement or licensing strategy backed by precise wavelength analysis.
- Prevented premature dismissal of a strong infringement case.
- Equipped the client with scientifically grounded evidence to support negotiations and future litigation decisions.

KEY TAKEAWAYS

- Deep technical scrutiny can reveal overlaps that are not apparent from product descriptions or marketing terminology.
- In the absence of standard definition, patent specification plays a key for interpreting technical claim terms.
- Tolerance allowances disclosed in the patent can significantly expand the effective scope of a claimed feature.
- Iterative refinement ensures no relevant avenue is left unexplored

VALUE DELIVERED

We provided the client with a scientifically validated interpretation of the patent-defined wavelength range, uncovering an overlap that was not apparent from product labeling alone. This analysis strengthened the client’s enforcement position, prevented an erroneous non-infringement assumption, and enabled informed, strategic decision-making backed by clear technical evidence.