



V COATING ANTI REFLECTIVE AR

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Our **V-Coatings** offer some of the most efficient and laser resistant properties in the industry. They are designed to provide low reflection over one or more discrete lines, or as a combination of broadband and discrete wavelengths. In our standard production we have a number of single, dual, and multiple band AR coatings.

V-Coatings centered at wavelengths, ranging from 121.6nm to 14μ all have reflectivity less than 0.1%. Extra efficient V-Coatings, specified, at less than 0.05% are also available upon request. In laser applications it is important to achieve high anti-reflection over a narrow bandwidth and over a wide angular cone. Implementing the correct choice of materials, substrate, coating parameters, surface quality, and the overall coating design guarantee the best possible laser resistance.

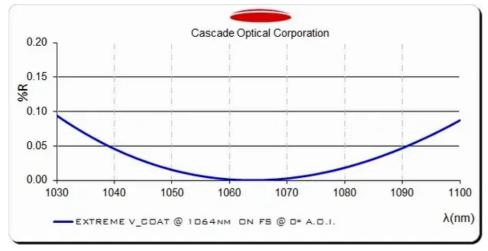
Some of the worlds leading Laser Labs have utilized our facilities such as **Lawrence Livermore**National Laboratory, Naval Research Laboratory, and National Energetics. These Labs
have lasers that reach the **Peta Watt** level.

All Cascade Optical Corporation's Dielectric coatings pass MIL-C-48497 and can be made to pass even the severe abrasion requirements of MIL-C-675. We have a Environmental test Lab department to qualify each and every coating run.

EXAMPLES OF V COATING ANTI REFLECTIVE AR

Discrete, Single Line V-Coating HIGH POWER LASER AR @ 1064nm @ 0°±15°

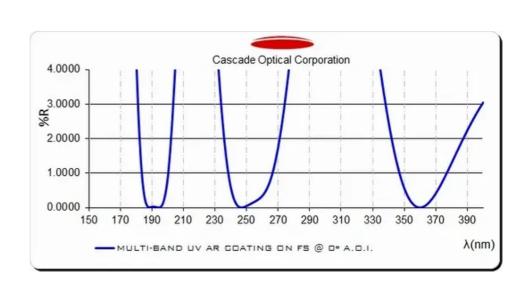
Although this simple V-Coat may not seem particularly exciting it has generated a lot of interest in the Ontical



Community. We were one of the first companies to withstand Laser Powers greater than 10GW/cm2 Tested and Certified. Several Government Institutions such as NRL, and LLNL have utilized our services, time and again, indicating other Coating Labs failed their requirements. Of particular interest is our ability to deposit this High LIDT at low temperatures on Fiber Optics and other delicate temperature sensitive devices.

Extreme Multiple V Line R<0.25% 193nm;R<0.25% 248nm; R<0.25% 360nm;R<1% 633nm @0°

Micro-machining, photolithographic systems, and a variety of medical equipment use UV lasers with emissions at 193, 248, and 360 nm. In addition, most of these systems require a visible laser for alignment at 633nm. By targeting a four V coating design we eliminated our customers need for three separate UV windows



Cascade Optical Corporation 0.40 0.40 0.20 0.10 0.00 450 550 650 750 850 950 1050 1150 1250 1350 1450 1550 1650 RAV -D.5% @ 6DD-7DD NM & 145D-165D NM @ D°-15° DN BK7 λ(nm)

Double V For 633nm And 1550nm R<0.25% @ 633nm; R<0.25% @ 1550 nm @0°

With Some Laser systems it has been extremely helpful to the Optical Designer to align their windows with a visible 633nm HeNe laser while the actual application was at 1550nm

SUBMIT SPECIFICATIONS BELOW:

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