



**OMEGA**  
OPTICAL HOLDINGS

## EXTEND INTO DeepUV™ FOR ANALYSIS INSTRUMENTATION AT A REASONABLE COST

**A revolutionary and proprietary way  
to manufacture highly efficient DUV  
Gratings for High Volume**

### **DeepUV™ GRATINGS OFFER**

- Great performance from 190-400nm
- Environmental stability
- Good solarization resistance
- Available in standard or custom sizes from 4x4mm to 30x30mm and larger
- Sawtooth and holographic grating structures available

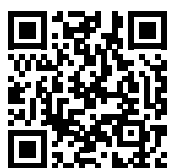


## “Optometrics is known for designing and manufacturing precise, repeatable diffraction gratings with a rapid turnaround.”

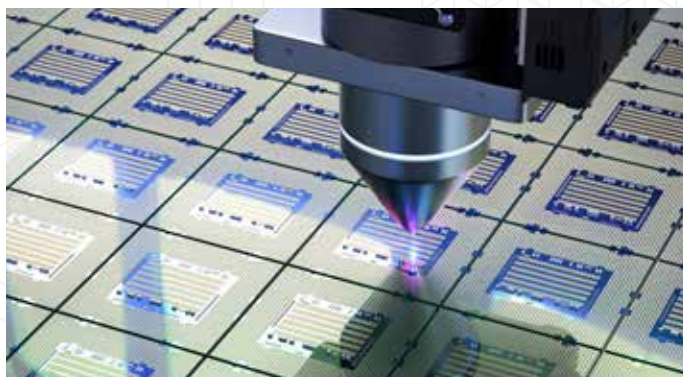
“With the need for more miniaturized, field-use spectrometer instrumentation or medical applications such as capillary analysis and HPLC, R&D engineers now have options other than etched fused silica gratings to attain better margins without sacrificing performance and field durability,” states John Bangrazi, Director of Business Development.

The resolution of the DeepUV™ products is on par with the original Optometrics transmission UV TX gratings which typically cutoff below 240nm.

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*Measurement in UV wavelengths for semiconductor manufacturing*



*Analysis in UV for life science applications.*

| FEATURES                                          | DEEPUV™ TX GRATINGS            | CURRENT REPLICATED UV TX GRATINGS | ETCHED FUSED SILICA GRATINGS |
|---------------------------------------------------|--------------------------------|-----------------------------------|------------------------------|
| <b>Diffraction Efficiency (Grating Dependent)</b> | 190>20%:<br>200-240>50%        | 190-230, 0%<br>240-300>50%        | 190-400>50%                  |
| <b>Efficiency over large range</b>                | Good                           | Good                              | Excellent                    |
| <b>Resolution/Spacing g/mm</b>                    | 300-1200 Custom g/mm available | 300-1200                          | 150-3800                     |
| <b>Laser Damage Threshold</b>                     | Fair                           | Fair                              | Excellent                    |
| <b>Solarization Resistance</b>                    | Good                           | Fair                              | Excellent                    |
| <b>Environmental Stability</b>                    | Very Good                      | Fair                              | Excellent                    |
| <b>Chemical Resistance</b>                        | Fair                           | Good                              | Excellent                    |
| <b>Price per part</b>                             | \$\$                           | \$                                | \$\$\$\$                     |

**“Optometrics proudly offers superior polarization resistance compared to other replicated optics.”**

## BENEFIT FROM OUR AGILITY

### Close relationship between divisions

- One Company, 4 distinct competencies
- Filters, Gratings, IR Optics, Meter-class coatings

### Superior Performance

- Custom filters maximize signal-to-noise
- Custom fabrication optimized to your instrument, not a catalog

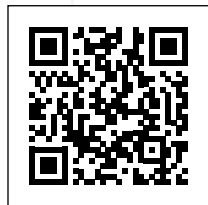
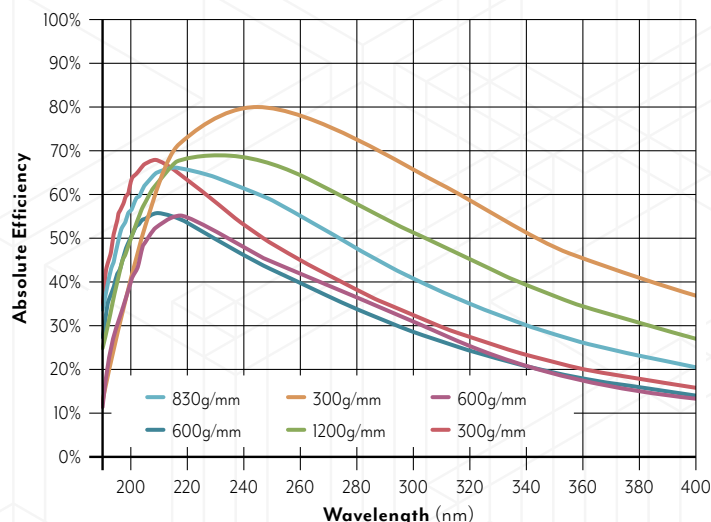
### Reduced Time-to Market

- Strong engineer to engineer collaboration streamlines the design process
- Over 30,000 optical designs and >30M shipments

### A full Spectrum of solutions

- 190 – 20,000 nm
- Sizes range from sub-mm to meter-class

## 1<sup>ST</sup> Order Transmission Curves Measured at 0° AOI



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| ENVIRONMENTAL TEST                               | STANDARD/METHOD                                                                       | PASS/FAIL |
|--------------------------------------------------|---------------------------------------------------------------------------------------|-----------|
| <b>Temperature and Relative Humidity Testing</b> | Mil 810 for Temperature & Relative Humidity: 50°C & 95% Relative Humidity for 10 days | Pass      |
| <b>DI Water Submersion at Room Temperature</b>   | 15 days in De-ionized water at room temperature.                                      | Pass      |
| <b>Thermal Cycling</b>                           | Mil 810: -39°C to 80°C for 10 days                                                    | Pass      |
| <b>Constant Thermal</b>                          | 100°C for 1 week                                                                      | Pass      |