



## 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

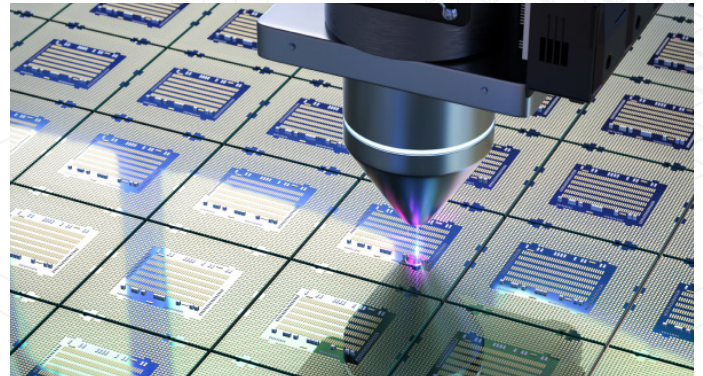


# “Omega Optical is known for designing and manufacturing precise, repeatable diffraction gratings with a rapid turnaround.”

“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/Omega Optical 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.



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FEATURES	DEEPUV™ TX GRATINGS	CURRENT REPLICATED UV TX GRATINGS	ETCHED FUSED SILICA GRATINGS
<b>Diffraction Efficiency (Grating Dependent)</b>	190>20%: 200-240>50%	190-230, 0% 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>	\$\$	\$	\$\$\$

**“Omega Optical 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

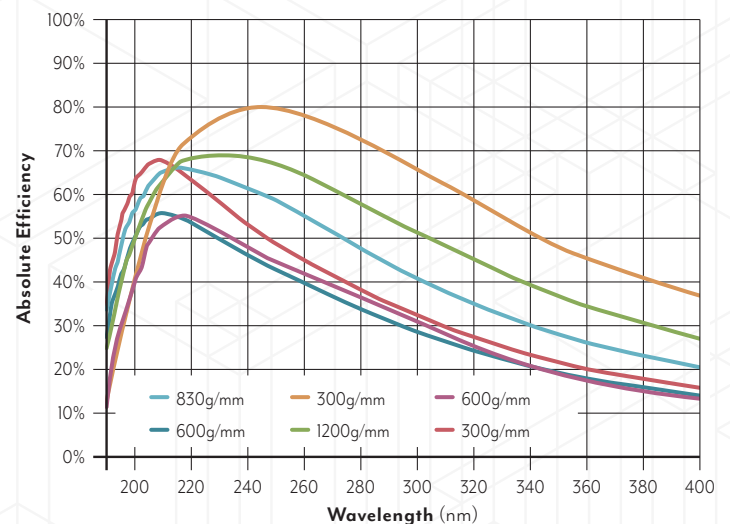
### Reduced Time-to-Market

- 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