

172nm Excimer Light Applications

Over 20 years focused on lighting technology R&D and manufacturing

- Specialist in Excimer Lighting Application Solutions
- Postdoctoral Research Workstation
- Over 200 Patents Granted
- End-to-End Customized Solutions
- Experimental Commissioning Services
- Multi-Industry Application Validation

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COMPANY PROFILE



Founded in 1998 and headquartered in Jiangmen, Guangdong, China, GMV specializes in the research, development, and manufacturing of lighting technology applications. As a national high-tech enterprise, a "Specialized, Refined, Distinctive, and Innovative" small and medium-sized enterprise in Guangdong Province, and an "Innovative SME," the company relies on its post-doctoral research workstation and dedicated R&D team to deliver professional light source components and solutions across advanced manufacturing, medical health, medical disinfection and control, facility agriculture, and environmental purification.

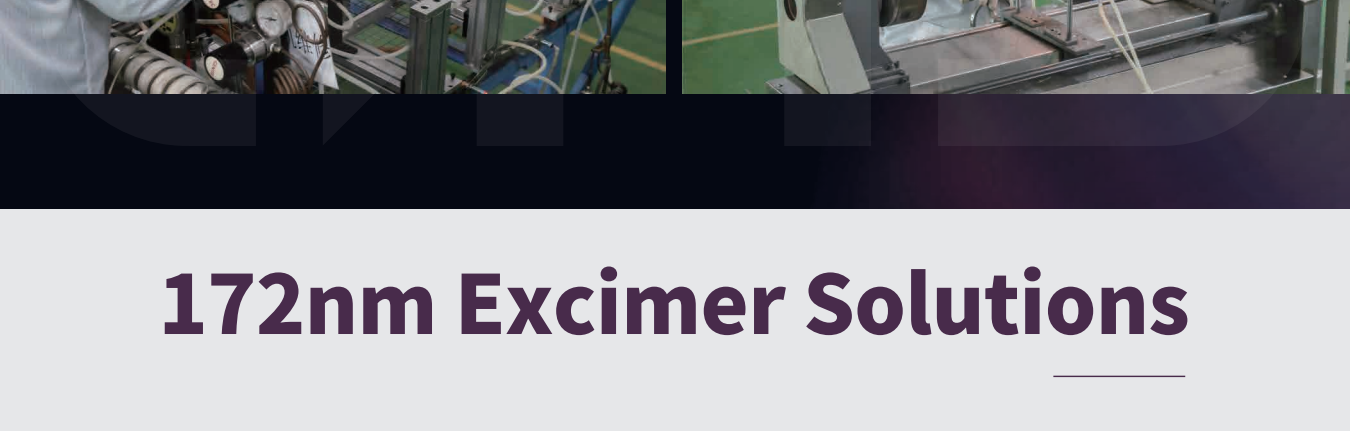
In the field of advanced manufacturing, GMV leverages its capabilities in the design and customization of professional production line equipment to deliver core light source components, modules, and equipment solutions that cover the entire process from experimental validation to large-scale production for advanced manufacturing sectors such as the semiconductor industry. The company focuses on addressing gaps in the supply chain and providing lighting application solutions that are better aligned with market needs and more cost-effective.



TECHNOLOGY R&D PARTNERSHIP

Institutions	Universities

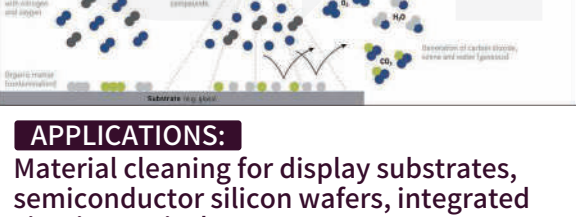
EXCIMER LAMP MANUFACTURING WORKSHOP



172nm Excimer Solutions

Photo-cleaning

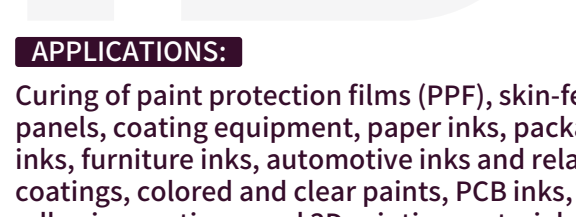
172nm excimer light excites free radicals on organic surfaces, which combine with oxygen radicals in an oxidation reaction to efficiently break down organics into water and CO₂, achieving atomic-level cleanliness.



APPLICATIONS: Material cleaning for display substrates, semiconductor silicon wafers, integrated circuits, optical components, LCDs, e-paper, AR lenses, and micro-nano manufacturing.

Photo-curing

172nm excimer light rapidly initiates polymerization reactions. Through innovative processing techniques, it ensures firm adhesion of inks with bright, long-lasting colors while providing a matte, smooth finish with anti-fingerprint properties.



APPLICATIONS: Curing of paint protection films (PPF), skin-feel panels, coating equipment, paper inks, packaging inks, furniture inks, automotive inks and related coatings, colored and clear paints, PCB inks, adhesive coatings, and 3D printing materials.

Photo-modification

172nm excimer light sources are used for surface modification of materials to enhance properties such as surface hydrophilicity and adhesion.



APPLICATIONS: Surface modification for processes including pre-treatment for film deposition, MEMS packaging, 3D packaging, wafer bonding, as well as hydrophilic modification of dental implants, battery materials, titanium, aluminum foil, and other materials.

Ultrapure Water TOC Degradation

High-energy 172nm excimer light is used to efficiently and rapidly degrade total organic carbon (TOC) in water to ppb levels, meeting ultrapure water quality standards.



APPLICATIONS: TOC removal in ultrapure water production, treatment of trace organic pollutants in drinking water, degradation of pesticide residues, photocatalytic decoloration of textile dyeing wastewater, and high-purity ozone generation.

172nm Excimer Light Sources

Product Pic	Model	Power (w)	UV Irradiance	Size (mm)	Emission Length (mm)	Cooling Method	Dielectric Barrier Discharge Type	Power Supply Model	Application			
									Photo-cleaning	Photo-curing	Photo-modification	Ultrapure Water TOC Degradation
	172E1000D 40x1532	1000	> 100mW/cm ²	Ø40* 1532	1390	Water	Double Dielectric	MC	✓	✓	✓	
	172E860D 40x957	860	> 100mW/cm ²	Ø40* 957	860	Nitrogen	Double Dielectric	MC	✓	✓	✓	
	172E800D 40x1750	800	> 100mW/cm ²	Ø40* 1750	1598	Nitrogen	Single Dielectric	MC	✓	✓	✓	
	172E500D 40x495	500	> 100mW/cm ²	Ø40*495	353	Nitrogen	Single Dielectric	MC	✓	✓	✓	
	172E350D 40x495	350	> 100mW/cm ²	Ø40* 495	353	Water	Double Dielectric	MC	✓	✓	✓	
	172E 180D 26.5x460	180	> 100mW/cm ²	Ø26.5*460	350	Water	Double Dielectric	MC	✓	✓	✓	
	172E350D 26.5x730	350	> 100mW/cm ²	Ø26.5* 730	620	Water	Double Dielectric	MC	✓	✓	✓	
	172E150 16.5x80	15	> 30 mW/cm ²	Ø16.5* 80	55	/	Single Dielectric	ZX				✓
	172E20D 16.5x141	20	> 30 mW/cm ²	Ø16.5* 141	75	/	Single Dielectric	ZX				✓
	172E5D 9x85	5	> 10 mW/cm ²	Ø9* 85	50	/	Single Dielectric	ZX				✓

172nm Excimer Module and Equipment

Product Pic	Product	Model	Power (W)	Life	UV Irradiance	Processing Uniformity	Cooling Method	Nitrogen Inlet (Lprm)	Size	
									Irradiation window size(mm)	External device dimensions(mm)
	Photocleaning modules	MO-D330-6	<1350	≥1000hrs	>70mW/cm ²	±10%	Circulating water cooling (30°C)	45	365 (±1mm)	650*420*292 (±2mm)
	Wafer photo-cleaning module	EX-C500	<500	≥1000hrs	>30mW/cm ²	±10%	Circulating water cooling (25°C)	40	150*150 (±1mm)	450*300*250 (±2mm)
	Wafer photo-cleaning module	MO-D200-5-001	<800	≥1000hrs	>40mW/cm ²	±10%	Circulating water cooling (30°C)	45	170*170 (±1mm)	800*420*240 (±2mm)
	172nm high-energy UV instruments	EX-C300	<300	≥1000hrs	>55mW/cm ²	±10%	Circulating water cooling (30°C)	45	150*150 (±1mm)	720*420*480 (±2mm)
	photomodification module	172E 120D 60*120	120	≥20000 times	>6mW/cm ²	±10%	Under vacuum conditions	/	φ10*30 (±1mm)	73*140 (±2mm)
	Ultrapure water TOC degradation flow cells	TOC降解模块 (单电极)	25	≥1000hrs	>25mW/cm ²	±10%	Circulating water cooling (30°C)	/	φ3*200 (±1mm)	219.8*30 (±1mm)
	172nm MINI-Excimer Experimental Module	EX-D75-1	20	≥1000hrs	>10 mW/cm ²	±10%	/	/	75*50 (±1mm)	209*142*69 (±2mm)

Example of usage

应用实例 准分子光在半导体制造中的应用

Excimer light and semiconductor manufacturing

应用实例 准分子光技术与平板显示 (FPD) 制造

Excimer light and FPD manufacturing