



# DUV Series Integrating Spheres

SphereOptics is pleased to introduce a series of integrating sphere assemblies featuring our new magnesium fluoride over aluminum (MgF-Al) coating process. The DUV series integrating spheres including 2-inch, 4-inch and, 6-inch diameter spheres with a choice of three (3) or four (4) ports. Each sphere assembly includes a baffle, SMA Adapter, TO5 Detector Adapter and port plugs coated with our new MgF-Al deep UV coating.

The sphere assemblies are provided with M4 or M6 (or 1/4-20) center mount plates for easy mounting to an optical bench. A selection of optional mounting posts and bases are available.

## TYPICAL APPLICATIONS

- Semiconductor Metrology
- Laser Power Measurement
- UV Uniform Source
- Reflectance
- UV Calibration Transfer Instrument

## DUV COATING ADVANTAGES

- High stability for UV applications ranging from 100 to 400 nm
- No Fluorescence
- >90% Reflectance from 1000 to 2500nm
- High power damage threshold
- Suitable for UV laser work
- Vacuum compatible

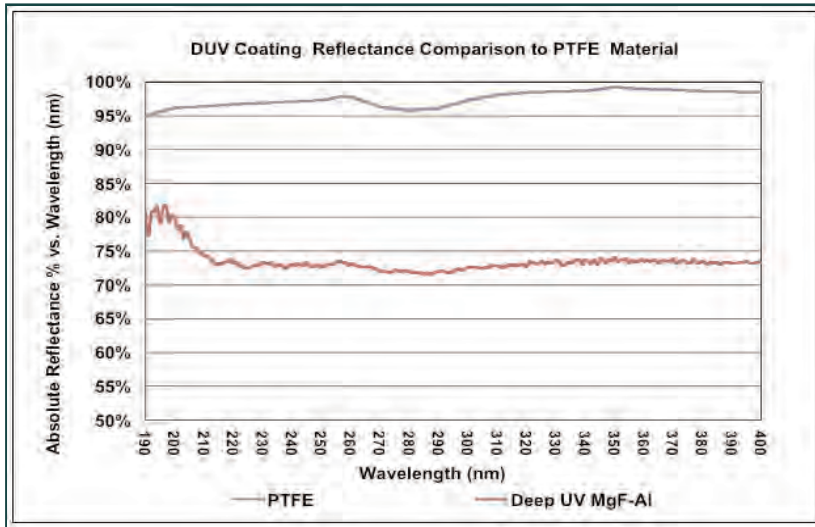
## About our MgF-Al Sphere Coating

Aluminum has a high intrinsic reflectance value in the UV region above 100 nm. The protective overcoat of magnesium fluoride helps protect the aluminum and optimizes its reflectivity. Our new MgF-Al coating is quickly becoming an industry and national laboratory choice of coating for applications in the UV wavelength regions. The coating is efficient for applications covering the 100 to 400 nm range and is more stable than PTFE materials in that region. Our deep UV coating provides three major advantages for use in the 100 to 400 nm region: *non-fluorescence, damage resistance, and high stability*. The coating has a reflectance of > 90% over the wavelength region from 1000 to 2500 nm, so may also be used effectively for many VIS and NIR applications.

SphereOptics provides detailed information on the care and handling of the DUV spheres to help extend their lifetime and to ensure you get accurate, repeatable measurement results.

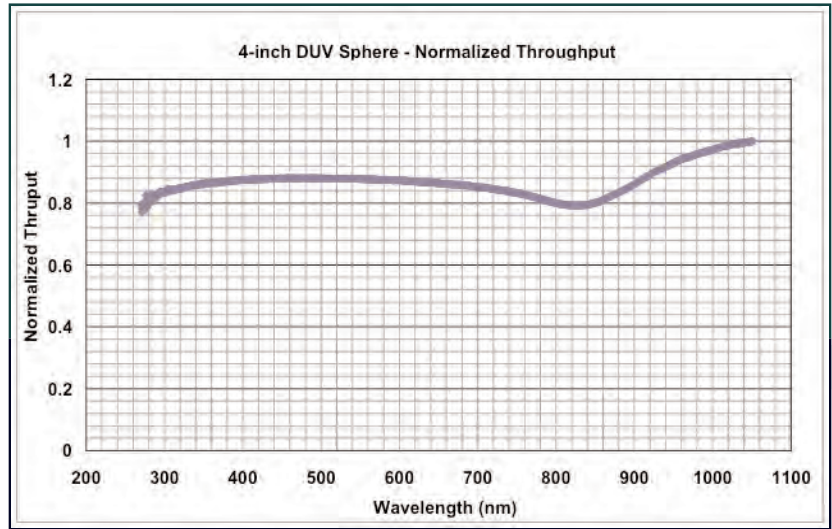


For more detailed technical information, please visit [www.sphereoptics.com](http://www.sphereoptics.com) or [www.sphereoptics.de](http://www.sphereoptics.de) to download a copy of our *Reflectance Coatings and Materials Technical Guide*.



Absolute % Reflectance vs Wavelength - comparison of DUV coating to PTFE reflectance material

Normalized Throughput results using 4-inch diameter DUV integrating sphere



## ORDERING INFORMATION

ORDER NUMBER	SPH-2UV-3K	SPH-2UV-4K	SPH-4UV-3K	SPHK-4UV-4K	SPH-6UV-3K	SPH-6UV-4K
Sphere size (inches)	2 inch	2 inch	4 inch	4 inch	6 inch	6 inch
Sphere size (cm)	5.08	5.08	10.2	10.2	15.2	15.2
Interior coating	MgF-Al	MgF-Al	MgF-Al	MgF-Al	MgF-Al	MgF-Al
Port locations	0,90 NP	0,90,270, NP	0,90 NP	0,90,270, NP	0,90 NP	0,90,270, NP
Port size (inches)	0.5	0.5	1	1	1.5	1.5
Port size (cm)	1.27	1.27	2.54	2.54	3.81	3.81
Baffle Placement	*	*	*	*	*	*
# Port Plugs included	1	2	1	2	1	2
Port Plug # 1 - size (inches)	PP-050-UV	PP-050-UV	PP-100-UV	PP-100-UV	PP-150-UV	PP-150-UV
SMA Adapter	SMA-050-UV	SMA-050-UV	SMA-100-UV	SMA-100-UV	SMA-150-UV	SMA-150-UV
TO5 Adapter	DA-TO5-050	DA-TO5-050	DA-TO5-100	DA-TO5-100	DA-TO5-150	DA-TO5-150
Sphere mounting boss	M4	M4	M6	M6	M6	M6
Converter/Center mounting Plate	M4-SPH-2	M4-SPH-2	M6-SPH-4	M6-SPH-4	M6-SPH-6	M6-SPH-6
Allen Wrench Set	AW -250	AW-250	AW -250	AW-250	AW -250	AW -250
* Baffle location-customer specified						

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