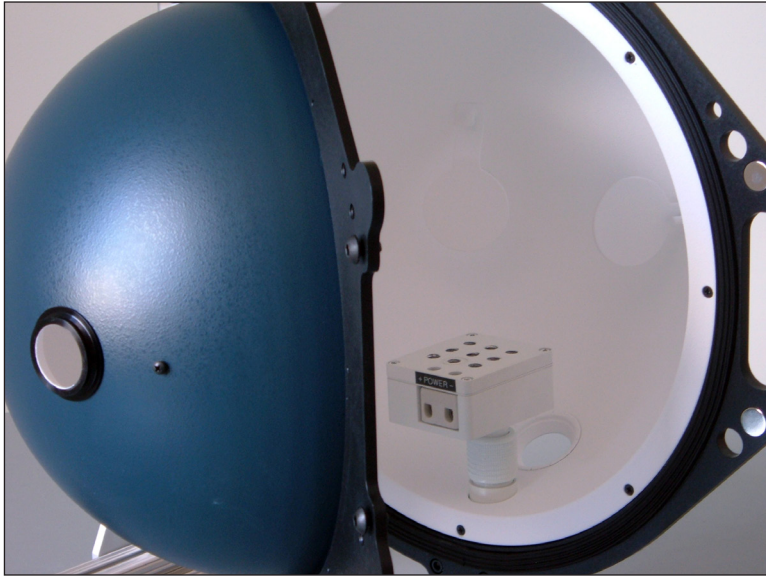


# Light Measurement Spheres

Designed to measure total and forward flux of LEDs, lamps and other light sources



## VALUE

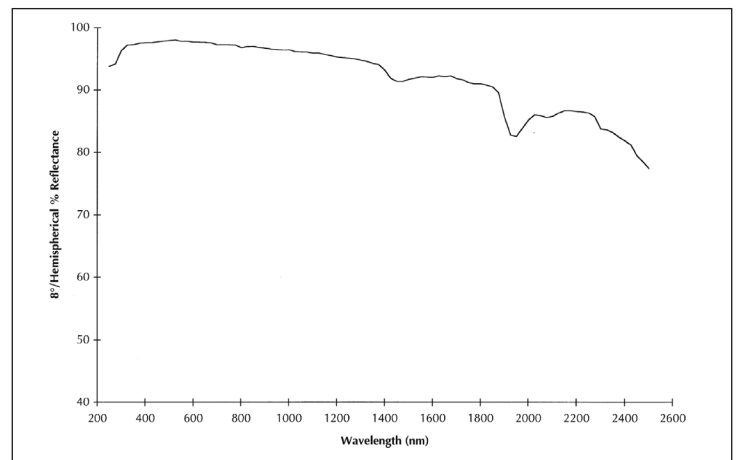
- Light tight closure
- Base-up or Base-down lamp mounting
- Socket mounting plate
- Adjustable fluorescent lamp holder
- Variable height electrical supply tube
- Interchangeable baffle
- Temperature sensor mounting port
- 50 mm directional light source or LED port
- Absorption correction lamp port
- Absorption correction lamp baffle

## Accurate and flexible

The LMS Light Measurement Spheres are integrating spheres designed for the measurement of the total flux of lamps. The total flux of an unknown lamp is not measured directly; instead this measurement is based on comparison to a NIST traceable standard lamp. Labsphere's Light Measurement Spheres range in size from 10 to 76 inches in diameter. Six different sphere diameters accommodate lamp sizes from miniature incandescent to 52 inch fluorescent lamps, and packaged or clustered LEDs. The sphere interior is coated with Spectrafect<sup>®</sup>, a diffuse white reflectance coating specifically formulated for light measurement spheres.

Labsphere offers an 80% reflectance coating for spheres used in photopically filtered applications. The integrating sphere design conforms to recommendations of CIE Publication 84 and CIE 127, providing an easy-to-operate, highly accurate measurement component.

An electrical feed-through to connect the lamp to a power supply terminates at the lamp socket mounting plate in the sphere. The design of the sphere makes sources considered difficult to measure easier to do so with accessible ports and framing. The LMS spheres are equipped with a near cosine that consists of a three inch diameter sphere with two detector ports. The 10 inch spheres incorporate a diffuser based near cosine receiver. This reduces errors associated with baffle shadow and improves spatial collection, uniformity and accuracy. The in-port Cosine receiver offers a wide field-of-view, necessary for accurate total flux measurements. The spheres provide measurement data that depends only on the light source's true power and not the shape, size, spectral or spatial light distribution. All light measurement spheres are compatible with Labsphere's photometers, spectrometers and CCD array.



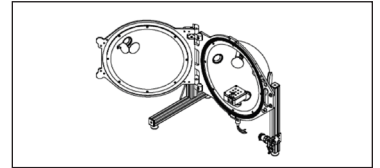
Spectralect Reflectance Coating

# Specifications

Model Number	LMS-100	LMS-200	LMS-400	LMS-650	LMS-760
Order Number:	AS-02477-000	AS-02478-000	AS-02479-000	AS-02480-000	AS-02481-000
Sphere Diameter:	10 inch (0.25 m)	20 inch (0.5 m)	40 inch (1 m)	65 inch (1.5 m)	76 inch (2 m)
Sphere Coating:	Spectrafect®	Spectrafect®	Spectrafect®	Spectrafect®	Spectrafect®
Maximum Lamp Length:	5 inches (13 cm)	10 inchse (25 cm)	24 inchse (61 cm)	34 inches (86 cm)	52 inches (1.3 m)
Maximum Lamp Wattage:	100 W	400 W	1500 W	4000 W	5000 W
Minimum Lamp Luminous Flux:	0.01 lumens	0.04 lumens	0.5 lumens	3 lumens	6 lumens
Sphere Assembly Frame:	Bench-top	Bench-top	On casters	On casters	On casters

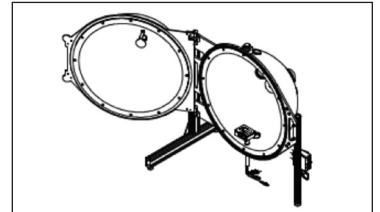
## LMS-100 10 inch Light Measurement Sphere

Labsphere's LMS-100 Light Measurement Sphere has a 10 inch diameter for the measure of miniature and subminiature lamps with maximum lamp wattage up to 100 watts and high brightness LEDs. The sphere is designed to accommodate rail mounted heat sinked LEDs measurements as well as other forward flux measurements without having to open the sphere.



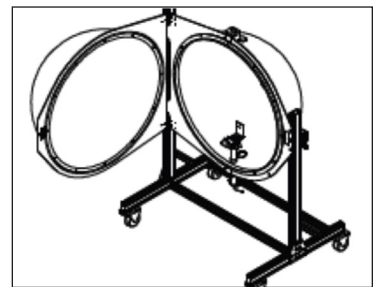
## LMS-200 20 inch Light Measurement Sphere

Labsphere's LMS-200 Light Measurement Sphere has a 20 inch diameter integrating sphere mounted on a hinged frame designed for bench-top use. The hinged configuration allows the sphere to be easily opened and closed to change lamps or perform a measurement. The sphere is designed for measurement of miniature and small lamps with a maximum lamp wattage up to 400 watts.



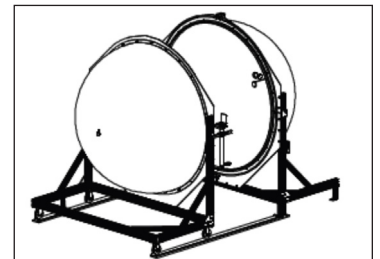
## LMS-400 40 inch Light Measurement Sphere

Labsphere's LMS-400 Light Measurement Sphere has a 40 inch diameter and is mounted on a hinged frame equipped with rugged locking casters to allow the sphere to be rolled and locked into position. The hinged configuration allows the sphere to be easily opened and closed to change lamps or perform a measurement. The sphere contains a lamp mounting bracket designed to accept a variety of sockets for single contact and double contact lamps and accommodates small and medium lamps with a maximum length of 24 inches and a maximum lamp wattage up to 1500 watts.



## LMS-650 65 inch Light Measurement Sphere

Labsphere's LMS-650 Light Measurement Sphere has a 65 inch diameter integrating sphere mounted on rails to allow the non-stationed hemisphere to be rolled open for interior access. The dual, rail-mounted configuration of the two hemispheres allows the sphere to be opened and closed easily to change lamps or perform a measurement. The sphere contains a lamp mounting bracket designed to accept a variety of sockets for single contact and double contact lamps and accepts medium to large lamps with a maximum length of 48 inches, and a maximum lamp wattage up to 4000 watts.



## LMS-760 76 inch Light Measurement Sphere

Labsphere's LMS-760 Light Measurement Sphere has a 76 inch diameter integrating sphere mounted on rails to allow the non-stationed hemisphere to be rolled open for interior access. Each hemisphere is mounted to a separate carriage, allowing the sphere to be easily opened and closed to change lamps or perform a measurement. The sphere contains a lamp mounting bracket designed to accept a variety of sockets for single contact and double contact lamps and accepts medium to large lamps with a maximum length of 52 inches and a maximum lamp wattage up to 5000 watts.

