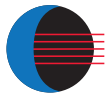


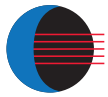
COLOSUS System Specifications - Albedo (A) Family

	Model #	USLR-A12F-C	USLR-A12L-C
OPTICAL PERFORMANCE SPECIFICATIONS			
UNIFORMITY (EACH LAMP OR COMBINED)			
Spatial Luminance Uniformity over Exit Port: (f/4) - All Lamps On		+/-1.0%	+/-1.0%
Angular Uniform FOV: (Full Angle) - Degrees / F# / NA - All Lamps On		+/-2.0% - 36 / 1.4 / 0.31	+/-2.0% - 36 / 1.4 / 0.31
QTH ONLY			
Expected Luminance Output: cd/m ²		14,000	16,000
Expected Illuminance at Port: lux		44,000	50,200
Peak Radiance: W/m ² -sr-um @ 0.95 um		350	400
Peak Irradiance @ Port: Photons/s-m ² -um @ 0.95um		1.50E+21	1.70E+21
Minimum Resolution: lux		4.40E-03	5.02E-03
Approximate Correlated Color Temperature: (QTH)		3000K +/-50K	3000K +/-50K
Typical Lamp Lifetimes: (hrs)		>500hrs	>500hrs
Est. Lamp Degradation Over Lifetime: (% & CCT Shift)		-10% & +/-200K	-10% & +/-200K
Est. Output Degradation over 50hrs: (% & CCT Shift)		-1.0% & +/-20K	-1.0% & +/-20K
PLASMA OR XENON ONLY			
Expected Luminance Output: cd/m ²		52,000	62,000
Expected Illuminance at Port: lux		160,000	190,000
Peak Radiance: W/m ² -sr-um @ 0.60um PI @ 0.47 Xe		700	830
Peak Irradiance @ Port: Photons/s-m ² -um @ 0.60um PI or 0.47 Xe		2.30E+21	2.70E+21
Minimum Resolution: lux		1.60E-02	1.90E-02
Approximate Correlated Color Temperature:		5100K +/-100K	5100K +/-100K
Plasma Rest Mode/Xenon Flicker: (Peak-Peak/RMS/Hz) - Typical		6%/1.5%/0.1Hz	6%/1.5%/0.1Hz
Plasma Test Mode: (Peak-Peak/RMS/Hz) - 30 minutes (Rest 5min)		0.6%/0.04%/DC	0.6%/0.04%/DC
Installed Cold Mirror: (330-750nm)		None	0.6%/0.06%/DC
Typical Lamp Lifetimes: (hrs)		>5000	>5000
Est. Lamp Degradation Over Lifetime: (% & CCT Shift)		-10% & -200K	-10% & -200K
Est. Output Degradation over 50hrs: (% & CCT Shift)		-0.2% & +-5K	-0.2% & +-5K
PLASMA/XENON & QTH (Both Full Open VA)			
Expected Luminance Output: cd/m ²		66,000	78,000
Expected Illuminance at Port: lux		204,000	240,200
Peak Radiance: W/m ² -sr-um @ 0.60um PI @ 0.47 Xe		900	1050
Peak Irradiance @ Port: Photons/s-m ² -um @ 0.60um PI @ 0.47 Xe		2.90E+21	3.40E+21
Approximate Correlated color Temperature: (Xenon & QTH)		4500K +/-300K	4500K +/-300K
ATTENUATORS			
Number of Steps in Attenuator Range:		2.00E+06	2.00E+06
Dynamic Range/Bits/dB - Full Range of System: (both lamps)		4.64E+07/25/152	4.78E+07/25/153
INTEGRATING SPHERE			
Coating/Material:		Spectrafect®	Spectralon®
Sphere Internal Diameter: Inches (Meters)		12 (0.3)	11.5 (0.29)
Frame Type:		COLOSUS Cage	COLOSUS Cage
Output Port Size: Inches (Meters)		4 (0.1)	4 (0.1)
SYSTEM COMPONENTS			
QTH Lamps External: (#, Wattage)		(1) 150	(1) 150
Plasma Lamp & Housing:		250W	250W
Power Supplies: (# - Model)		(2) - LPS-400	(2) - LPS-400
Variable Attenuator:		(2) VAA-220	(2) VAA-220
Monitor Detector(s):		SD-L1, EID-T1	SD-L1, EID-T1
TE Controller:		(1)	(1)
Detector Filters: (in Filter Holders)		Photopic, (2) 900nm, 1550nm, 1380nm	Photopic, (2) 900nm, 1550nm, 1380nm
Filter Wheels:		(2) HFW-1-8	(2) HFW-1-8
Detector Shutter/Pinholes:		(3)	(3)
Optical Bellows & Mount:		(1)	(1)
Spectral Radiance Monitor: (Type, Spectral Range)		CDS-610 (360-1000nm)	CDS-610 (360-1000nm)
System Software:		HELIOsense	HELIOsense
DIMENSIONAL INFORMATION			
Approximate Dimensions of Sphere System: (DxWxH)		14" x 38" x 23"	14" x 38" x 23"
Approximate Weight of Sphere System: (Kg)		19	19
Approximate Dimensions of 19" System Rack: (DxWxH)		24.5" x 21" x 12.75"	24.5" x 21" x 12.75"
Approximate Weight of System Rack: (Kg)		25	25



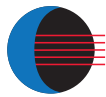
COLOSUS System Specifications - Dynamic (D) Family

Model #	USLR-D12F-C	USLR-D12L-C
OPTICAL PERFORMANCE SPECIFICATIONS		
Spatial Luminance Uniformity over Exit Port: (f/4) - All Lamps On	+/-1.0%	+/-1.0%
Angular Uniform FOV: (Full Angle) - Degrees / F# / NA - All Lamps On	+/-2.0% - 36 / 1.4 / 0.31	+/-2.0% - 36 / 1.4 / 0.31
Expected Luminance Output: cd/m ²	37,500	50,000
Expected Illuminance at Port: lux	117,750	157,000
Peak Radiance: W/m ² -sr-um @ 0.95 um	1,455	1819
Peak Irradiance @ Port: Photons/s-m ² -um @ 0.95um	7.00E+21	8.75E+21
Minimum Resolution: lux	1.37E-03	1.37E-03
Number of Steps in System Range: (#lamps*VA Steps)	6.60E+06	6.60E+06
Dynamic Range/Bits/dB:	8.63E+07/26/158	1.15E+08/26/160
Approximate Correlated Color Temperature: (QTH)	3000K +/-50K	3000K +/-50K
Typical Lamp Lifetimes: (hrs)	>500	>500
Est. Lamp Degradation Over Lifetime: (% & CCT Shift)	-10% & +/-200K	-10% & +/-200K
Est. Output Degradation over 50hrs: (% & CCT Shift)	-1.0% & +/-20K	-1.0% & +/-20K
INTEGRATING SPHERE		
Coating/Material:	Spectrafect	Spectralon
Sphere Internal Diameter: Inches (Meters)	12 (0.3)	11.5 (0.29)
Frame Type:	COLOSUS Cage	COLOSUS Cage
Output Port Size: Inches (Meters)	4 (0.1)	4 (0.1)
SYSTEM COMPONENTS		
QTH Lamps Internal: (# , Wattage)	(1) 35, (1) 75	(1) 35, (1) 75
QTH Lamps External: (#, Wattage)	(1) 150	(1) 150
Power Supplies: (# - Wattages)	(3) LPS-400	(3) LPS-400
Variable Attenuator:	VAA-220A	VAA-220A
Monitor Detector(s):	SD-L1, EID-T1	SD-L1, EID-T1
TE Controller:	(1)	(1)
Detector Filters: (in Filter Holders)	Photopic, (2) 900nm, 1550nm, 1380nm	Photopic, (2) 900nm, 1550nm, 1380nm
Filter Wheels:	(2) HFW-1-8	(2) HFW-1-8
System Software:	HELIOsense	HELIOsense
DIMENSIONAL INFORMATION		
Approximate Dimensions of Sphere System: (DxWxH)	14" x 20" x 24"	14" x 20" x 24"
Approximate Weight of Sphere System: (Kg)	20	23
Approximate Dimensions of 19" System Rack: (DxWxH)	24.5" x 21" x 12.75"	24.5" x 21" x 12.75"
Approximate Weight of System Rack: (Kg)	25	25



COLOSUS System Specifications - Low Level (L) Family

	Model #	USLR-L12F-C	USLR-L12L-C
OPTICAL PERFORMANCE SPECIFICATIONS			
Spatial Luminance Uniformity over Exit Port: (f/4) - All Lamps On		+/-1%	+/-1%
Angular Uniform FOV: (Full Angle) - Degrees / F# / NA - All Lamps On		+/-2.0% - 36 / 1.4 / 0.31	+/-2.0% - 36 / 1.4 / 0.31
Expected Luminance Output: cd/m ²		5,000	7,100
Expected Illuminance at Port: lux		15,700	0
Peak Radiance: W/m ² -sr-um @ 1.10 um		0	0
Peak Irradiance @ Port: Photons/s-m ² -um @ 1.10um		0.00E+00	0.00E+00
Minimum Resolution: lux		1.00E-06	1.00E-06
Number of Steps in System Range:		8.00E+06	8.00E+06
Dynamic Range/Bits/dB:		1.00E+10/32/199	1.00E+10/32/199
Approximate Correlated Color Temperature: (QTH)		2856K +/-50K	2856K +/-50K
Typical Derated Lamp Lifetimes @ 2856K: (hrs)		>500	>500
Est. Lamp Degradation Over Lifetime: (% & CCT Shift)		-10% & +/-200K	-10% & +/-200K
Est. Output Degradation over 50hrs: (% & CCT Shift)		-1.0% & +/-20K	-1.0% & +/-20K
INTEGRATING SPHERE			
Coating/Material:		Spectrafect	Spectralon
Sphere Internal Diameter: Inches (Meters)		12 (0.3)	11.5 (0.29)
Frame Type:		COLOSUS Cage	COLOSUS Cage
Output Port Size: Inches (Meters)		4 (0.1)	4 (0.1)
SYSTEM COMPONENTS			
QTH Lamps Internal: (# , Wattage)		(1) 5, (1) 10	(1) 5, (1) 10
Spectralon Satellite Sphere: (ID/OD)		3"/4"	3"/4"
Lamp & Tube: (#, Wattage) / Pinhole		(1) 5 / Yes	(1) 5 / Yes
Internal Satellite Lamp: (#, Wattage)		(1) 50	(1) 50
Power Supplies: (# - Model)		(4) LPS-400	(4) LPS-400
Variable Attenuator:		VAA-220B	VAA-220B
Monitor Detector(s):		SD-L1, SD-S1	SD-L1, SD-S1
Optional Monitor Detector:		EID-T1	EID-T1
TE Controller:		(1)	(1)
Filter Wheels:		(2) HFW-1-8	(2) HFW-1-8
Detector Filters: (in Filter Holders)		Photopic	Photopic
System Software:		HELIOsense	HELIOsense
DIMENSIONAL INFORMATION			
Approximate Dimensions of Sphere System: (DxWxH)		14" x 20" x 24"	14" x 20" x 24"
Approximate Weight of Sphere System: (Kg)		20	22
Approximate Dimensions of 19" System Rack: (DxWxH)		24.5" x 21" x 12.75"	24.5" x 21" x 12.75"
Approximate Weight of System Rack: (Kg)		30	30



COLOSUS System Specifications - Variable (M) Family

Model # ULSR-V12F-C

OPTICAL PERFORMANCE SPECIFICATIONS

Spatial Luminance Uniformity over Exit Port: (f/4) - All Lamps On	+/-1%
Angular Uniform FOV: (Full Angle) - Degrees / F# / NA - All Lamps On	+/-2.0% - 36 / 1.4 / 0.31
Expected Luminance Output: cd/m ²	14,000
Expected Illuminance at Port: lux	44,000
Peak Radiance: W/m ² -sr-um @ 0.95 um	350
Peak Irradiance @ Port: Photons/s-m ² -um @ 0.95um	1.50E+21
Minimum Resolution: lux	4.40E-03
Number of Steps in System Range:	2.20E+06
Dynamic Range/Bits/dB:	1.00E+07/23/140
Approximate Correlated Color Temperature: (QTH)	3000K +/-50K
Typical Lamp Lifetimes: (hrs)	>500
Est. Lamp Degradation Over Lifetime: (% & CCT Shift)	-10% & +/-200K
Est. Output Degradation over 50hrs: (% & CCT Shift)	-1.0% & +/-20K

INTEGRATING SPHERE

Coating/Material:	Spectrafect
Sphere Internal Diameter: Inches (Meters)	12 (0.3)
Frame Type:	COLOSUS Cage
Output Port Size: Inches (Meters)	4 (0.1)

SYSTEM COMPONENTS

QTH Lamps External: (#, Wattage)	(1) 150
Integrating Mirror Tube for External Source:	HES Version
Power Supplies: (# - Model)	(1) - LPS-400
Variable Attenuator:	(2) VAA-220
Monitor Detector(s):	SD-L1
Detector Filters: (in Filter Holder)	Photopic
Filter Wheels:	(2) HFW-1-8
System Software:	HELIOsense

DIMENSIONAL INFORMATION

Approximate Dimensions of Sphere System: (DxWxH)	14" x 20" x 24"
Approximate Weight of Sphere System: (Kg)	17
Approximate Dimensions of 19" System Rack: (DxWxH)	24.5" x 21" x 12.75"
Approximate Weight of System Rack: (Kg)	20



sales@labsphere.com www.labsphere.com



sales@sbir.com www.sbir.com