

Project:	Catalogue #:	Type:
Notes:		

### Product Description

The **MSUi** series provides supplemental lighting for the surgical / operating room. Commonly located above the table perimeter using Symmetric or Asymmetric distributions. It is UL Listed for wet locations, cleanroom ISO-3, certified dust tight and water resistant to IP65 for frequent rigorous cleaning practices. MSUi is Mil-Std-461G certified and designed for recessed mounting in surgical ceiling systems as well as grid and flanged installations.

### Features

- SPEEDShip in 5 days (limited quantity of 25 units)
- Dimming to 1% (0-10v)<sup>1</sup>
- Triple gasketed cleanroom construction
- Mil-Std-461G certified
- Smooth lens for easy cleaning
- Room side access to all electrical components<sup>2</sup>.

### Applications

- Medical Surgical Suites

5-Day

### Housing

Precision formed; hole-free seam welded 20 gauge cold rolled steel housing. Flattened, sealed knockout(s). See options for additional material choices and row mounting. Closed cell neoprene gasket provided to seal flange to ceiling.

### Door Frame

Inset one-piece door frame, fabricated from 18 gauge, cold rolled steel with TIG welded corners. Countersunk flat head, stainless steel, captive fasteners with integral silicone o-rings. Door frame is removable, reversible, and hinged by stainless steel aircraft cables. High performance Poron™ gasket seals door frame to housing.

### Lens

High diffusion, impact resistant 0.125" thick acrylic lens provides symmetric distribution. Smooth external surface for easy cleaning. Radiated emissions (RE101) mitigated below Mil Std 461G limits by use of special filters and secondary circuit design elements. (This makes a metalized RFI grid no longer necessary.) Lens sealed to door frame with silicone sealant.

### LED

LED board modules are high efficiency and closely regulated to maintain CRI, color consistency, lumen performance, and efficacy. Select from 3500K, 4000K, and 5000K color temperatures with a color consistency of 3 SDCM, standard 80 CRI, optional 90 CRI. Optional 525nm Green LEDs arrays available alone or in combination with white LEDs. Lifetime L70 is greater than 60,000 hrs. Modules are field replaceable and commercially available.

### Electrical

The standard electronic driver is constant current, programmable and dimmable to 1%<sup>1</sup> using a 0-10V protocol. High efficiency (>85%) and low THD (<10%). Certified to Mil-Std-461G for conducted emissions as well as FCC Part 15. 120-277Vac or 347Vac, 50/60hz.

### Mounting/Installation

Flange installation is supported by swing style mounting brackets. Grid installation suitable for 1" and 1.5" T-Bar ceilings. Ambient operating temperature: -4°F (-20°C) to 104°F (40°C).

### Finish

Anti-microbial gloss white polyester powder coat finish with 5-stage pre-treatment.

### Certifications

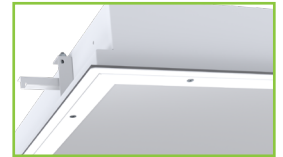
UL listed (CAN & USA) for wet locations under covered ceiling. Recessed Type IC for insulated ceilings. NSF2 for Non-food zone, Splash Zone. IEC60598 IP65 Certified. Mil-Std-461G certified. Cleanroom classified ISO3-8.

<sup>1</sup> Standard for 100L, 120L, 180L & 240L is 5% dimming. Add option code "B03(01)" for 1% dimming for these lumen order codes.

<sup>2</sup> Standard emergency battery pack options are internal and serviced from the room side. The exception is for some 2x2 wattages may have remote battery packs. Consult factory for details.

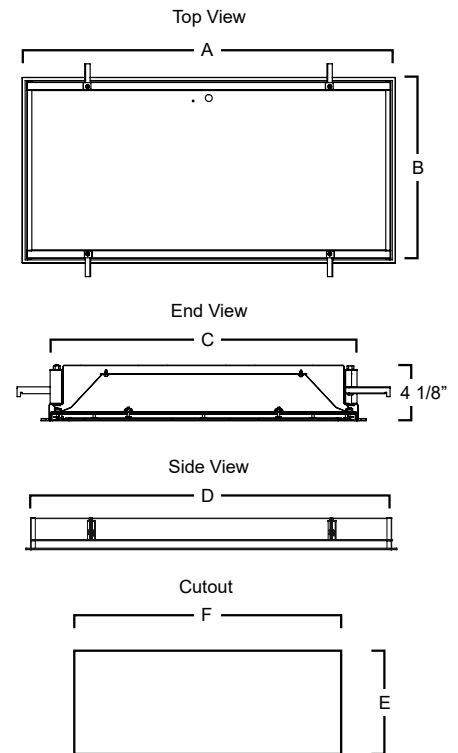
### Approvals

- UL listed to CSA and UL standards for insulated ceilings and wet location
- Certified IP65 & Certified NSF2
- MIL STD 461G Certified
- Cleanroom class ISO3-8



MSUi with Inset Door

### Dimensions



	A	B	C	D	E	F
2x2	23 3/4"	23 3/4"	22 11/16"	22 7/8"	22 11/16"	22 7/8"
2x4	47 3/4"	23 3/4"	22 11/16"	46 3/4"	22 11/16"	46 3/4"

Consult installation guide for exact dimensions.

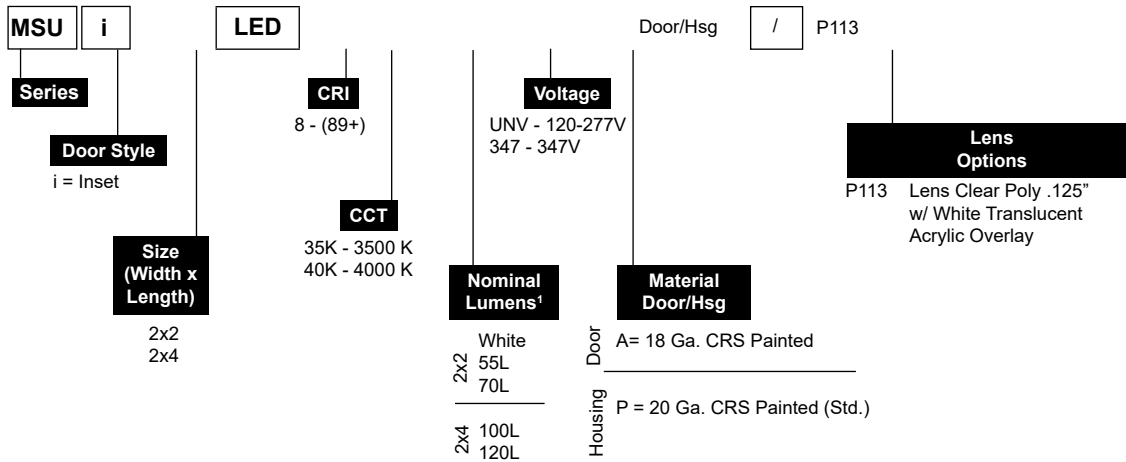
### Warranty

5 year limited warranty. For complete warranty terms visit:  
[https://www.viscor.com/en/docs/VISCOR\\_LED\\_WARRANTY.PDF](https://www.viscor.com/en/docs/VISCOR_LED_WARRANTY.PDF)

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## Order Key

EXAMPLE: MSUi2x4-LED840K100LUNVP/P



White LED Performance*				
Size	Nominal Lumens Order Code	Lumens	Watts	Efficacy
2x2	55L	5571	50	111
	70L	7035	65	108
2x4	100L	10093	80	126
	120L	12096	99	122

	CCT	Lumen Multipliers
80 CRI	3500K	0.98
	4000K	1.00

\* Lumen values are based on 4000K, 80 CRI performance. See Lumen Multipliers below for other CCT or CRI performance data.

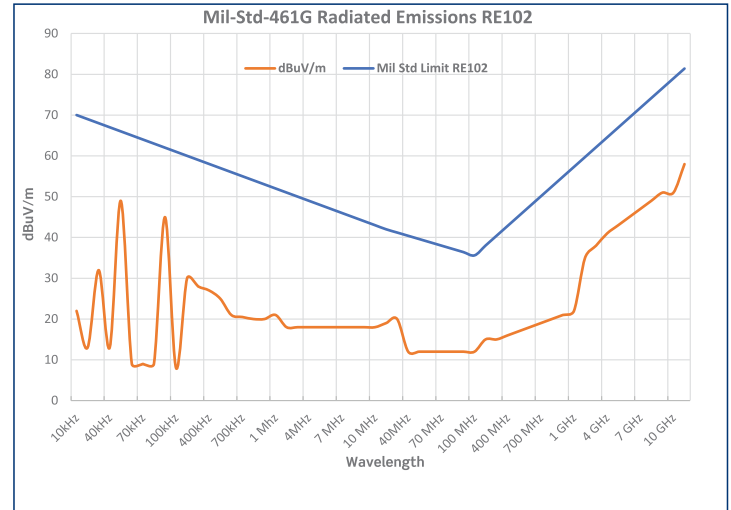
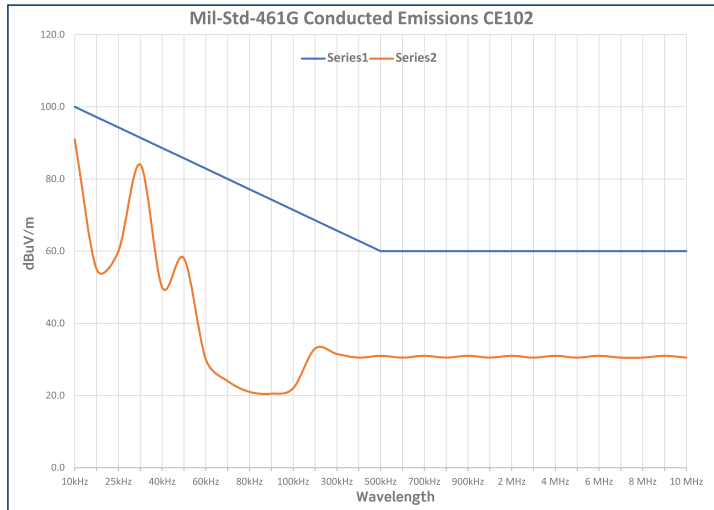
**For other sizes and a wide array of options see the standard, non-SpeedShip specifications page.**

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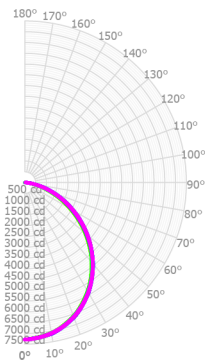
## Mil-Std-461G Testing- Conducted and Radiated



Conducted measurements are taken from the fixture power input leads in a laboratory. Radiated emissions are measured in an anechoic chamber designed to absorb indirect signals from the environment. The limits are shown in the red lines. Performance is shown on the yellow line. For more information on Mil-Std-461G see the Certolux Technical Brochure. [Click here](#)

## Photometrics

IES File: MSUi-2x4-LED840K180LUNV-P/P-DSA  
 Lumens: 18102  
 Wattage: 143  
 Efficacy: 127



## Zonal Lumen Summary

Zone	Lumens	%Fixture
0.0° - 30.0°	5522	30.5%
0.0° - 40.0°	8896	49.1%
0.0° - 60.0°	15053	83.2%
0.0° - 90.0°	18102	100.0%
0.0° - 110.0°	18102	100.0%
0.0° - 130.0°	18102	100.0%
0.0° - 150.0°	18102	100.0%
0.0° - 170.0°	18102	100.0%
0.0° - 180.0°	18102	100.0%

Average Luminance Table  
(cd/m2)

CP Summary	0.00	45.00°	90.00°
0.00°	10030	10030	10030
45.00°	8533	8358	8333
55.00°	7734	7459	7493
65.00°	6572	6116	6295
75.00°	4569	4058	4424
85.00°	1191	1822	2657

## Coefficients of Utilization

p c	80%			70%			50%		
	70%	50%	30%	70%	50%	30%	70%	50%	30%
p w									
0	119	119	119	116	116	116	111	111	111
1	110	105	101	107	103	99	102	99	96
2	100	92	86	98	91	85	93	87	82
3	92	82	74	89	80	73	85	77	71
4	84	73	64	82	71	63	78	69	62
5	78	65	56	76	64	56	72	62	55
6	72	59	50	70	58	50	66	56	49
7	67	54	45	65	53	45	62	51	44
8	62	49	41	61	48	40	58	47	40
9	58	45	37	57	44	37	54	43	36
10	55	42	34	53	41	34	51	40	33

Effective Floor Cavity Reflectance: 20%