



RAZR MODULAR

Configurable Components

Designed for high-performance vertical farms, Fluence's award winning RAZR Modular System illuminates your crops from propagation to harvest, yielding remarkable savings on energy and maintenance.

FLEXIBLE PERFORMANCE

Fluence's proven PhysioSpec™ BROAD R3a is the optimal spectrum for propagation and full-cycle cultivation of a multitude of leafy greens, microgreens, herbs and other vegetables. In addition to the BROAD R3a white spectrum, RAZR Modular Fixtures is available in a range of 75-450 $\mu\text{mol}/\text{m}^2\cdot\text{s}^2$, with seven different spectra, three system lengths and an IP67 enclosed version for harsh environments.

FLEXIBLE MOUNTING

With a large selection of mounting accessories and plug & play cables, the RAZR Modular System features low profile, highly configurable fixtures for simple, seamless integration into a variety of vertical racks. Each individual light bar and all mounting accessories are field replaceable, reducing grower's maintenance and cost of ownership over years of farm operations.



SYSTEM SPECIFICATION

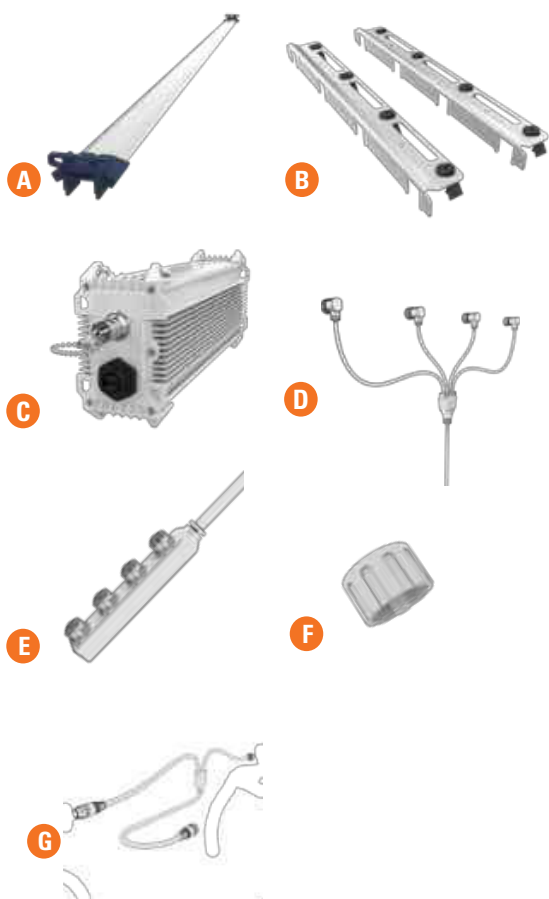
Mounting Height Above Canopy	>6" [15 cm]
AC Input Power	215-620 W @ 277 V AC
AC Input Voltage	120-277 V, 277-480 V AC, 50/60 Hz
Power Factor*	> 0.97 (16-24 bars) and >0.92 (8-12 bars)
Total Harmonic Distortion (THD)*	< 10% (16-24 bars) and <20% (8-12 bars)
Dimming	Source Signal Driver, 0/1-10 V, OFF/10-100%
Max. Ambient Temperature	104°F / 40°C (95°F / 35°C @ 120 V AC)
Relative Humidity	85%
Driver Lifetime at 40°C Ambient	> 50,000 hrs
Warranty	5 Year Limited
IP Rating per IEC 60598-1	IP66
Certifications	cETLus UL 8800, CE, Wet Location, DLC
DLC Reported Application and Use case	Indoor (Non-stacked), Indoor (Stacked) Top light/Sole-Source

LIGHT BAR SPECIFICATION

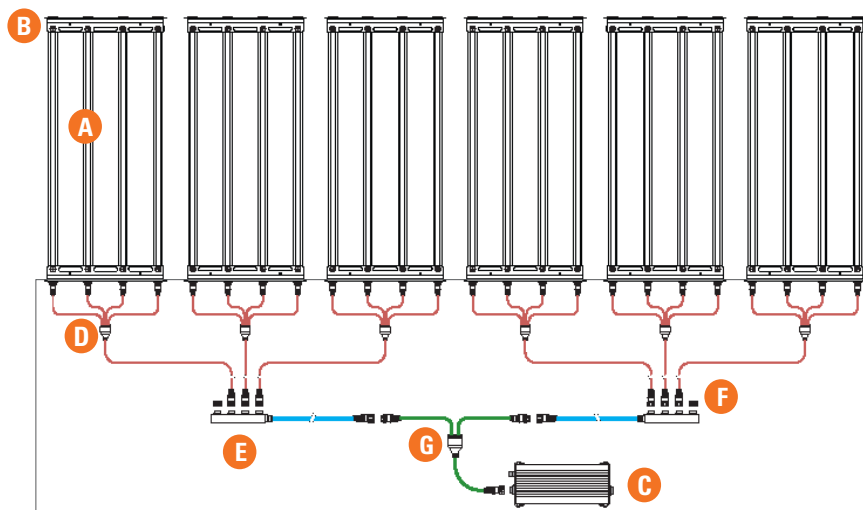
Light Output PPF (per bar)	63 $\mu\text{mol/s}$
Efficacy (Spectrum)	2.6 $\mu\text{mol/J}$
Nominal DC Wattage/Bar	24-50 W
Light Distribution (Beam Angle)	120° Lambertian
Thermal Management	Passive
Lifetime LED Q90 (L90B50)	> 50,000 hrs
Thermal Management	Passive
IP Rating IEC 60598-1	IP67

* @ 100% output. Contact Fluence for values over dimming range

SYSTEM COMPONENTS



SYSTEM DIAGRAM

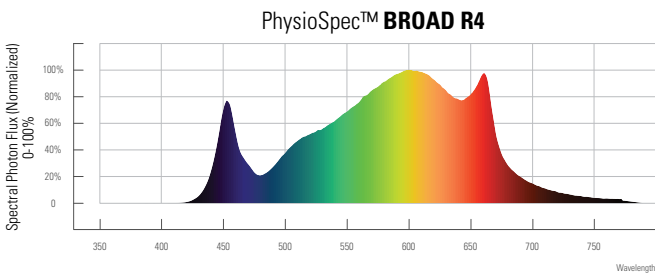
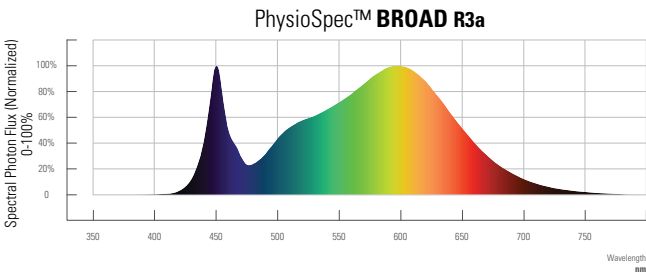


SYSTEM TOPOLOGY

- Nominal power; 12 bars on 300W system, 24 bars on 600W system
- Max 24 bars per system; 300W system 12-24 bars, distributing power evenly across bars (suitable for low PPFD applications)
- For custom bar configurations at nominal power, a power set driver is available for 6, 8, 9, 15, 16, 18, 20 and 24 bars

For correct configurations and cabling, please contact your Fluence representative or choose from the selected pre-configured designs

SPECTRA



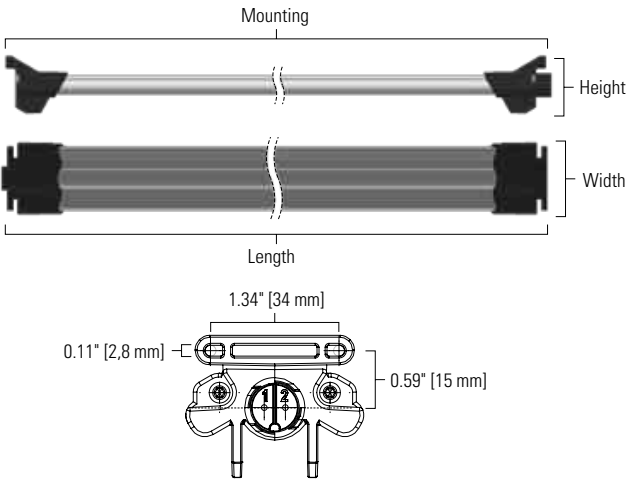
PhysioSpec™ Spectrum	Enclosure Type	Light Bar Output (μmol/s)	Efficacy (μmol/J)	SKU Abbreviation
BROAD R3a	Enclosed	64	2.5	RM-48-SL-BW3
BROAD R4	Enclosed	62	2.7	RM-48-SL-BW4

Disclaimer: Performance values are from representative tests performed in accordance industry standards listed. Actual application performance may vary due to component tolerances and installation, environmental, and field measurements conditions.

LIGHT BAR DIMENSIONS AND WEIGHT

Light Bar	Regional Commercial Code	Length	Width	Height	Mounting	Weight
48" enclosed	RM-48-SL-[Spectra]	46" [116 cm]	1.9" [4,7 cm]	1.5" [3,8 cm]	45.8" [116 cm]	0.93 lb [0,42 kg]
53" enclosed	RM-53-SL-BW3/RM-53-RL-BW3	52.1" [132 cm]	1.9" [4,7 cm]	1.5" [3,8 cm]	52.0" [132 cm]	1.04 lb [0,47 kg]

LIGHT BAR (ENCLOSED SL/RL)

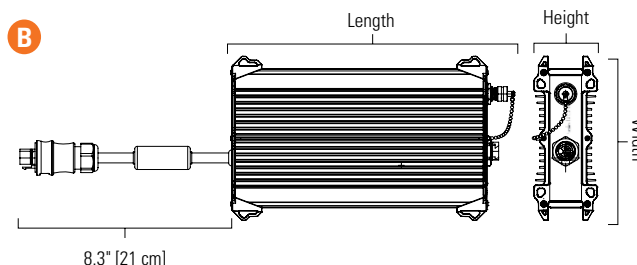
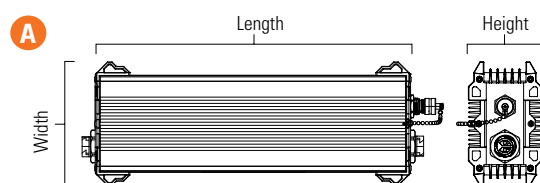


LIGHT BAR ORDERING PART NUMBERS

Description	Regional Commercial Code	Ordering PN 12NCs Single Pack (-S)	Ordering PN 12NCs Bulk Pack (-B)	Bulk Pack Quantity
RAZRm, Light Bar, 48", STD, Enclosed, BW3	RM-48L-BW3	9124 017 02052	9124 017 02062	234
RAZRm, Light Bar, 48", STD, Enclosed, BW4	RM-48L-BW4	9124 017 02053	9124 017 02063	234
RAZRm, Light Bar, 53", STD, Enclosed, BW3	RM-53L-BW3	9124 017 02059	9124 017 02069	234
RAZRm, Light Bar, 53", Ridistributed, Enclosed, BW3	RM-53-RL-BW3	9124 017 02060	9124 017 02070	234

POWER SUPPLY DIMENSIONS AND WEIGHT

Power Supply	Regional Commercial Code	Length	Width	Height	Weight	Figure
120-277V AC PSU 365/438/511/584 W DC	PLMG-V3A-600-xxx	12.9" [32,9 cm]	5.3" [13,4 cm]	2.6" [6,7 cm]	8.1 lb [3,7 kg]	A
277-480V AC PSU 365/438/511/584 W DC	PHWG-V2C-600-xxx	10" [25,4 cm]	6.4" [16,3 cm]	2.4" [6,3 cm]	7.5 lb [3,4 kg]	B
120-277 V AC PSU 146/219/292 W DC	PLMG-V3B-320-xxx	11.3" [28,8 cm]	4.3" [10,9 cm]	2.9" [7,3 cm]	5.8 lb [2,6 kg]	A
277-480V AC PSU 146/219/292 W DC	PHMG-V3B-320-xxx	11.3" [28,8 cm]	4.3" [10,9 cm]	2.9" [7,3 cm]	5.8 lb [2,6 kg]	A



POWER SUPPLIES ORDERING PART NUMBERS (120-277V)

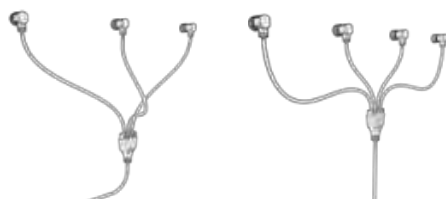
Number of Light Bars/ System	Wattage/ Bar	AC Connector Type	System DC Power	DC Current	Regional Commercial Code	Ordering PN 12NC Single Pack (-S)	Ordering PN 12NC Bulk Pack (-B)	Bulk Pack Pallet Quantity
6	24 W	M19	146 W DC	2.8 A	PLMG-V3B-320-028	9124 017 01918	9124 017 01992	30
8	24 W	M19	195 W DC	3.7 A	PLMG-V3B-320-037	9124 017 01917	9124 017 01991	30
9	24 W	M19	219 W DC	4.2 A	PLMG-V3B-320-042	9124 017 02023	9124 017 02024	30
12	24 W	M19	292 W DC	5.6 A	PLMG-V3B-320-056	9124 017 02021	9124 017 02022	30
15	24 W	M19	365 W DC	6.9 A	PLMG-V3A-600-069	9124 017 01916	9124 017 01990	24
16	24 W	M19	389 W DC	7.4 A	PLMG-V3A-600-074	9124 017 01915	9124 017 01989	24
18	24 W	M19	438 W DC	8.3 A	PLMG-V3A-600-083	9124 017 02015	9124 017 02016	24
20	24 W	M19	487 W DC	9.3 A	PLMG-V3A-600-093	9124 017 02001	9124 017 01999	24
21	24 W	M19	511 W DC	9.7 A	PLMG-V3A-600-097	9124 017 02013	9124 017 02014	24
24	24 W	M19	584 W DC	11.1 A	PLMG-V3A-600-111	9124 017 01914	9124 017 01988	24

POWER SUPPLIES ORDERING PART NUMBERS (277-480V)

Number of Light Bars/ System	Wattage/ Bar	AC Connector Type	System DC Power	DC Current	Regional Commercial Code	Ordering PN 12NC Single Pack (-S)	Ordering PN 12NC Bulk Pack (-B)	Bulk Pack Pallet Quantity
6	24 W	M19	146 W DC	2.8 A	PHMG-V3B-320-028	9124 017 02030	9124 017 02029	30
8	24 W	M19	195 W DC	3.7 A	PHMG-V3B-320-037	9124 017 02028	9124 017 02027	30
9	24 W	M19	219 W DC	4.2 A	PHMG-V3B-320-042	9124 017 02026	9124 017 02025	30
12	24 W	M19	292 W DC	5.6 A	PHMG-V3B-320-056	9124 017 01909	9124 017 01983	30
15	24 W	Wieland	365 W DC	6.9 A	PHWG-V2C-600-069	9124 017 02207	9124 017 02212	33
16	24 W	Wieland	389 W DC	7.4 A	PHWG-V2C-600-074	9124 017 01908	9124 017 01982	33
18	24 W	Wieland	438 W DC	8.3 A	PHWG-V2C-600-083	9124 017 02206	9124 017 02211	33
20	24 W	Wieland	487 W DC	9.3 A	PHWG-V2C-600-093	9124 017 02205	9124 017 02210	33
21	24 W	Wieland	511 W DC	9.7 A	PHWG-V2C-600-097	9124 017 02204	9124 017 02209	33
24	24 W	Wieland	584 W DC	11.1 A	PHWG-V2C-600-111	9124 017 02203	9124 017 02208	33

DC CABLE SPLITTERS ORDERING PART NUMBERS

Description	Regional Commercial Code	Ordering PN 12NC Single Pack (S)	Ordering PN 12NC Bulk Pack (B)	Bulk Pack Carton Quantity	Figure
3-Bar Right Angle DC Splitter, 4 ft [1,2 m] Trunk	CDG-RMU23AFP6M1.2	9124 017 02113	9124 017 02129	10	A
4-Bar Right Angle DC Splitter, 4 ft [1,2 m] Trunk	CDG-RMU24AFP6M1.2	9124 017 02114	9124 017 02130	10	B
3-Bar RT In Line DC Splitter, 4 ft [1,2 m] Trunk	CDG-RMU23RFP6M1.2	9124 017 02119	9124 017 02135	10	C
4-Bar RT In Line DC Splitter, 4 ft [1,2 m] Trunk	CDG-RMU24RFP6M1.2	9124 017 02120	9124 017 02136	10	D



A

B



C

D

DC CABLE SPLITTERS ORDERING PART NUMBERS

Description	Regional Commercial Code	Ordering PN 12NC Single Pack (-S)	Ordering PN 12NC Bulk Pack (-B)	Bulk Pack Pallet Quantity	Figure
Manifold Splitter Cable, 3 ft [0,9 m]	CDG-RMU2MSFP9M0.9	9124 017 02124	9124 017 02140	10	A
Manifold 4-Port Cable, 4 ft [1,2 m]	CDG-RMU24PFP9M1.4	9124 017 02125	9124 017 02141	10	B
RAZRm, Dust Cap, M16, Outer, Splitter Cables	RM-SDC	9124 017 02326	9124 017 02327	100	C
RAZRm, Dust Cap, M16, Inner, Manifold	RM-MDC	9124 017 02328	9124 017 02329	100	C



A



B



C

FIXTURE FRAMES

Description	Quantity per Fixture	Regional Commercial Code	Ordering PN 12NC Single Pack (-S)	Figure
3-Bar Fixture Frame Kit, 8" Bar Spacing	1 Kit (2 pcs)	FF-RM-8S-2F	9124 017 02102	A
4-Bar Fixture Frame Kit, 6" Bar Spacing	1 Kit (2 pcs)	FF-RM-6S-2F	9124 017 02103	B

A

B

FIXTURE HANGERS

Description	Length	QTY per Fixtures	Regional Commercial Code	Ordering PN 12NC Single Pack (-S)	Figure
Fixture Wire Hanger, Short - Baker's Rack	51 mm [2"]	1 Kit (4 pcs)	MR-RM-SH-XX	9124 017 02106	A



ADDITIONAL MOUNTING ACCESSORIES

Description	Regional Commercial Code	QTY per Light Bars	Ordering PN 12NC Single Pack (-S)	Ordering PN 12NC Bulk Pack (10 Kits)	Ordering PN 12NC Bulk Pack (100 Kits)	Figure
Universal Light Bar Clips	MR-RM-CU-XX	1 Kit (2 pcs)	9124 017 02098	9124 017 02099	9124 016 56023	A
Hanging Clip, 35 mm DIN Rail	MR-RM-CD-XX	1 Kit (2 pcs)	9124 017 02109	9124 017 02110	9124 017 02111	B



A



B

ACCESSORIES FOR POWER SUPPLY

Power Supply Mounting Hardware	Used with Power Supply	Regional Commercial Code	Ordering PN 12NC Single Pack (-S)	Ordering PN 12NC Bulk Pack (-B)	Bulk Pack Carton Quantity	Figure
PSU 292 W Power Supply Surface Mount Kit	PxMG-V3B-320-xxx	MS-PS-MB-3V	9124 016 56290	9124 016 56012	10 Kits	A
PSU LVG 584 W Power Supply Surface Mount Kit	PLMG-V3A-600-xxx	MS-PS-MB-LV	9124 016 56292	9124 016 56011	10 Kits	B
PSU HVG 584 W Power Supply Surface Mount Kit	PHxG-V2C-600-xxx	MS-PS-MB-HV	9124 016 56291	9124 016 56284	10 Kits	C



A



B



C

AC Power Cable - AMERICAS (Power Supply to AC Line)	Quantity per Power Supply	Regional Commercial Code	Ordering PN 12NC Single Pack (S)	Ordering PN 12NC Bulk Pack (B)	Bulk Pack Carton Quantity
6-FT (1.83 m) AC Cable, NEMA 5-15P Plug, M19 Push Lock, Max 125 V AC	1 Pc	CAA-XXU3P9FN5P1.8	9124 017 01611	9124 016 88454	10 Pcs
6-FT (1.83 m) AC Cable, NEMA L7-15P Plug, M19 Push Lock, Max 277 V AC	1 Pc	CAA-XXU3P9FL7P1.8	9124 017 01625	9124 016 55898	10 Pcs
6-FT (1.83 m) AC Cable, Pigtail, M19 Push Lock, Max 480 V AC	1 Pc	CAA-XXU3P9FL3X1.8	9124 017 01624	9124 016 55875	10 Pcs
Wieland AC Connector Adapter for Power Supply, STW PVC, M19 Push Lock, 18-IN (0.46 m), Wieland Part #: 96.032.0053.1 (Male)	1 Pc	AAA-XXU3P9FWGM0.5	9124 016 56089	9124 016 56090	20 Pcs

DC Dimming Signal Cable - AMERICAS (Power Supply to Dimming Control)	Quantity per Power Supply	Regional Commercial Code	Ordering PN 12NC Single Pack (S)	Ordering PN 12NC Bulk Pack (B)	Bulk Pack Carton Quantity
11-IN (0.28 m) Dimming Signal Cable, Pigtail, M12 Connector	1 Pc	CCA-XXU3T2FL3X0.3	9124 017 01621	9124 016 55902	10 Pcs
5-FT (1.52 m) Dimming Signal Cable, Pigtail, M12 Connector	1 Pc	CCA-XXU3T2FL3X1.5	9124 017 01622	9124 016 55881	10 Pcs