



# LinearHO DC Modules and Kits

*Efficient, easy-to-install modules and retrofit kits for high lumen linear applications*



Fulham's new LinearHO DC LED modules and retrofit kits use the latest high-efficacy, high-brightness LEDs to provide a cost-competitive alternative to traditional T5HO lamps. These constant current, high lumen density modules are ideal for use in linear highbays, vapor tights, troffers, and other linear luminaires. The boards are mounted on an aluminum extrusion to eliminate the need for additional heatsinking, with positioning magnets to simplify alignment and installation. Retrofit kits include drivers and wiring harnesses and appear on the DLC® Qualified Products List, providing a simple, flexible solution for LED retrofit projects.



# Linear High Output DC Modules



- Constant current, high-efficacy, 3 SDCM LEDs
- Up to 198 lm/W; output range 2,200 lm to 13,610 lm (@4000K/80CRI)
- Push-in connectors allow boards to be joined with equal LED spacing across the entire length
- Multiple color temperatures: 3000K, 3500K, 4000K, 5000K
- Optimized for use with Fulham programmable drivers and HotSpot LED emergency systems
- Optional snap on lenses and endcaps. See back cover for details.



Specifications	
Operating Temperature Range	-40°C to +60°C / -40°F to 140°F
Lumen Maintenance @105°C	L70: >60,000Hrs / L90: 40,000Hrs (meets DLC Premium and Standard requirements)
Color Consistency	Binning per ANSI C78.377-2015 @ 25°C; 3 SDCM
PCB Material / Thermal Conductivity	CEM3 (CCP-308) High Thermal Conductive / 1.5W/mK
Connector Type	WAGO double pin push-in connectors
Warranty	5 years @ Max Tc from the date of manufacture
Safety/compliance	cURus (File # E351548), Class 2 Lighting System, RoHS Compliant
See product specification sheets for details and latest updates.	

LinearHO DC Modules								
Model Number / Dimension	Number of LED	Input Current (mA)	Nom. Fwd. Voltage (VDC)	Nom. Rated Power (W)	Max. Fwd. Voltage (V)	Max. Rated Power (W)	Nom. Lum. @4000K/80CRI (lm)	Nom. Efficacy @4000K/80CRI (lm/W)
<b>TMU125050CL8xxA</b> 22" x 1.73" x 0.39" 560mm x 44mm x 10mm	96	350	33	12	35	12	2245	195
		700	34	24	36	26	4350	182
		1050	35	37	38	40	6210	169
		1250*	36	44	39	49	7130	161
<b>TMU140055CL8xxA</b> 44.1" x 1.73" x 0.39" 1120mm x 44mm x 10mm	108	350	33	11	34	12	2255	196
		700	34	24	36	25	4385	185
		1050	35	36	38	39	6340	174
		1400*	36	50	39	55	8015	161
<b>TMU240095CL8xxA</b> 44.1" x 1.73" x 0.39" 1120mm x 44mm x 10mm	180	350	32	11	34	12	2230	198
		700	33	23	35	24	4480	194
		1050	34	35	36	37	6605	187
		1400	34	48	37	52	8640	180
<b>TMU240095CL8xxC</b> 58" x 1.73" x 0.52" 1473mm x 44mm x 13mm (Made-to-order)	180	2400*	36	85	39	94	13,610	159

\* Indicates maximum rated current. Modules may be operated at a current less than or equal to this value, below the Tc rating.

Model Number Matrix	
	<b>Color Temperature</b> 30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K

# Linear High Output LED Retrofit Kits



- Complete LED retrofit kit: modules, driver, wiring harness, installation hardware, and UL labels
- Universal voltage (120V-277V) with high power factor and low THD
- Multiple color temperatures: 3000K, 3500K, 4000K, 5000K
- Modules feature aluminum extrusion heatsink with positioning magnets
- UL Classified for field installation: 5-10 minutes per kit installation
- Optimized for use with Fulham HotSpot LED Emergency backup systems
- 0-10V dimmable
- 5-year warranty
- Listed on DLC Qualified Product List for utility rebate eligibility.  
Visit [www.fulham.com/utilityrebates](http://www.fulham.com/utilityrebates) to learn more.



22" Linear High Output LED Retrofit Kits									
Model Number	Number of LED Modules	Number of LED Drivers	Input Voltage (VDC)	Input Current (A)		Total System Power (W)	Driver Efficacy (%)	Total System Lumens (lm)	Total System Efficiency (lm/W)
				120V	277V				
VR22-MU-150-840-0350A	1	1	120~277	0.117	0.053	13.7	84	2245	164
VR22-MU-250-840-0350A	2	1	120~277	0.114	0.052	13.3	84	2266	170
VR22-MU-250-840-0700A	2	1	120~277	0.241	0.109	27.1	85	4490	166
VR22-MU-250-840-1050A	2	1	120~277	0.347	0.157	41.4	85	6634	160

44" Linear High Output LED Retrofit Kits									
Model Number	Number of LED Modules	Number of LED Drivers	Input Voltage (VDC)	Input Current (A)		Total System Power (W)	Driver Efficacy (%)	Total System Lumens (lm)	Total System Efficiency (lm/W)
				120V	277V				
VR44-MU-195-840-0700A	1	1	120~277	0.242	0.110	27.2	85	4480	165
VR44-MU-295-840-0700A	2	1	120~277	0.237	0.107	26.6	85	4460	168
VR44-MU-295-840-1050A	2	1	120~277	0.337	0.153	40.2	85	6756	168
VR44-MU-295-840-1400A	2	1	120~277	0.445	0.202	52.5	88	8960	171
VR44-MU-495-840-2100A	4	1	120~277	0.658	0.299	76.9	89	13,512	176
VR44-MU-495-840-2400A	4	1	120~277	0.746	0.339	87.1	90	15,404	177
VR44-MU-495-840-4200A	4	2	120~277	1.359	0.617	158.7	89	26,420	167

Values reflect performance at 277VAC unless otherwise specified.

Luminous Flux De-Rating: CCT and CRI Multipliers							
	2700K	3000K	3500K	4000K	5000K	5700K	6500K
CRI 80	0.92	0.95	0.97	1.00	1.01	1.01	1.00

### Model Number Matrix

**VRxxMUxxx8yyxxxxA**

<b>Module Length</b> 22 = 22" 44 = 44"	<b># of Modules</b> 1 2	<b>Module Nominal Power</b> 50 = 50W 95 = 95W	<b>Color Temperature</b> 30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K	<b>Driver Output Current</b> 0350 = 350mA 0700 = 700mA 1050 = 1050mA
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# cULus Classified Linear High Output LED Retrofit Kit Applications

Model Number	Troffer Recessed Luminaire (2x2)	Troffer Recessed Luminaire (1x4)	Troffer Recessed Luminaire (2x4)	Linear Highbay Luminaire (4 Lamp)	Vapor Tight Luminaire (1x2)	Vapor Tight Luminaire (1x4)	Vapor Tight Luminaire (2x4)
VR22-MU-150-8yy-0350A	✓				✓		
VR22-MU-250-8yy-0350A	✓				✓		
VR22-MU-250-8yy-0700A	✓				✓		
VR22-MU-250-8yy-1050A	✓				✓		
VR44-MU-195-8yy-0700A		✓	✓			✓	✓
VR44-MU-295-8yy-0700A		✓	✓			✓	✓
VR44-MU-295-8yy-1050A		✓	✓			✓	✓
VR44-MU-295-8yy-1400A		✓	✓			✓	✓
VR44-MU-495-8yy-2100A			✓	✓			✓
VR44-MU-495-8yy-2400A			✓				✓
VR44-MU-495-8yy-4200A				✓			

✓: cULus Classified for in-field installation

For DLC QPL listed models, visit <https://www.designlights.org/search/?search=fulham>



Troffer Luminaires



Highbay Luminaire



Vapor Tight Luminaire

## Linear High Output DC Modules and Kits Accessories

Model Number	Description
TLEOPT120-020	Module end caps, 2 pieces
TLEOPT120-004	22" snap-on lens, 82% transmissivity
TLEOPT120-013	44" snap-on lens, 82% transmissivity
TLC-HN02	22" wire harness for 2 modules in Parallel (included with VR22/VR44 kits)
TLC-HN04	22" wire harness for 3 or 4 modules in Parallel (included with VR22/VR44 kits)
Contact Fulham for recommended HotSpot LED emergency backup options	



TLEOPT120-020



TLEOPT120-004  
TLEOPT120-013



TLC-HN02



TLC-HN04

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North America • China • Europe • India • Latin America • Middle East

Fulham Headquarters: 12705 S. Van Ness Avenue, Hawthorne, CA 90250 Tel: +1 (323) 599-5000 Fax: +1 (323) 754-9060 • [order@fulham.com](mailto:order@fulham.com)

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