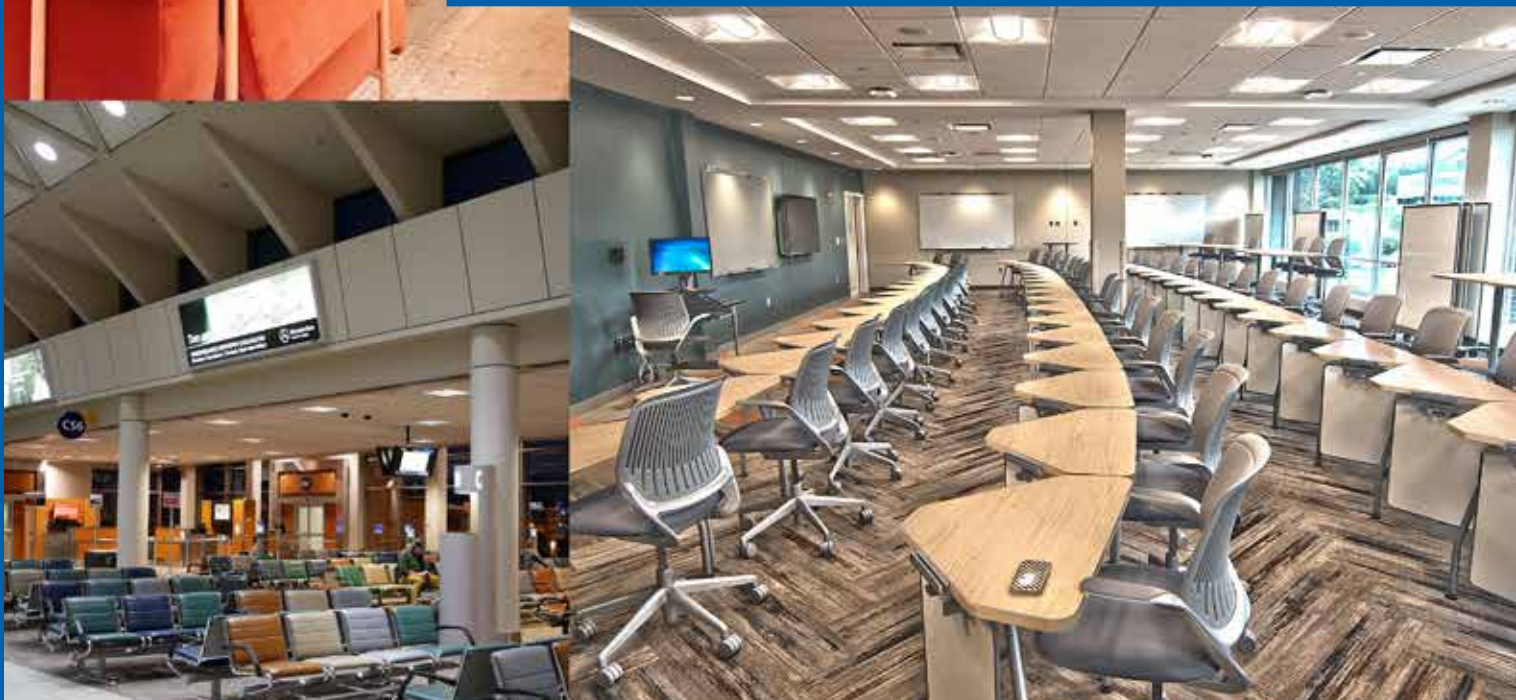




the Power to Create Better Light™



OEM PRODUCT & TECHNICAL GUIDE



www.espentech.com

INTRODUCTION

LED
MODULES

Who is Espen Technology?

LED
DRIVERS

We at Espen Technology focus on transforming how our world uses light. As a manufacturer we are dedicated to delivering **sustainable** and **environmentally** progressive lighting solutions. Our product reflect an emphasis on sustainability, quality and reliability.

LED
DRIVER CASES

With over **30 years** of manufacturing experience and knowledge, our engineers understand the importance of producing reliable products. From stringent component qualification standards to the extensive testing done to all our products before shipping, quality is our top priority. Our products are complemented by an industry-leading warranty policy.

LED
LAMPS

Headquartered in Southern California, our customer service and technical support teams provide full service. With manufacturing facilities and R&D teams across the world, we are committed to developing innovative products with reliability, utility and efficiency in mind.

VERSALINEAR™
RETROFIT KITS

Finding the **perfect balance of innovation and practicality is Espen's forte.**

LED EMERGENCY
BATTERY BACKUP

MISSION STATEMENT

Commitment to Value

To proliferate high performance lighting products and solutions at an unbeatable value. Become the market leader by delivering reliable and high quality LED products and System solutions.

Ultimately our mission is to give our customers, contractors and end-users the power to create better light through quality, value, and energy-saving technology.

STEP-DOWN
TRANSFORMERS

CONTROL
OPTIONS

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CERTIFICATION INFORMATION

LED
MODULES

UL-P Certification from UL allowing for Lighting Fixture Manufacturers to directly replace similar LED drivers into fixtures previously certified through UL without having to re-submit the fixture to UL for certification. Max power ratings of the fixture cannot be exceeded. Allows for greater flexibility for fixture manufacturers to source component parts.

cUL The cUL mark applies to products intended for the Canadian market that have been tested and found to comply with the requirements of CAN/CSA 22.1-12, which is the Canadian Electrical Code issued by the Canadian Standards Association.

LED
DRIVERS

UL UL stands for Underwriters Laboratories in the United States, and the initials UL represent their mark of approval. The UL label on electrical products indicates that the products have been tested to be in accordance with safety standards by Underwriters Laboratories.

UR The UL Recognized Component Mark means that the product has been tested as a component. These components will later be used in complete end-products or systems.

CSA Now CSA Group is a Canadian Certification that basically serves North America and includes testing to American National Standards Institute (ANSI), Underwriters Laboratories (UL), CSA Group (CSA), NSF International (NSF) and other global standards as required.

LED
DRIVER CASES

ETL Electrical Testing Laboratories (ETL), ETL does not publish their own safety standards. ETL tests products to the standards published by other NRTLs. Products are held to the same standards as UL and are also recognized by OSHA.

UL8750 ANSI/UL 8750 covers LED equipment that is an integral part of a luminaire or other lighting equipment. The standard also applies to the component parts of LED equipment, including LED drivers, controllers, arrays, modules, and packages.

LED
LAMPS

SAM The Sign Component Manual (also known as the SAM) contains all the major components associated with the construction of electric signs including LED modules, LED power supplies (drivers) and controllers. Components and accessories in the SAM are evaluated to comply with UL879, Standard for Electric Sign Components. The SAM is designed to be a buyer's guide for electric signs. Any manufacturer who wants to build signs and streamline their UL certification process will pick from components already included in the SAM.

IP Ratings Ingress Protection determines to what level an electrical product's exterior case or enclosure will protect the working parts from water, dust or solid object intrusion, keeping the product electrically safe and lasting longer. Ingress protection testing, or IP testing, provides a repeatable test standard to compare the enclosure protection; IP testing should always be performed at an accredited test laboratory.

LED
RETROFIT KITS

L70 Measurement of the time it takes a light source to degrade to 70% of its original light output. The light is usually measured in hours and refers to the degradation of total light.

LM79 An LM79 report measures the performance (light) of LED-based luminaires based on specific and collective components which include drive current (mA), CCT (color temperature), watts, efficiency and distribution. LM79 requires complete luminaire testing. It does not cover external operating circuits or external heat sinks (e.g. LED chips, LED packages and LED modules). Uses absolute photometry rather than relative photometry.

LED EMERGENCY
BATTERY BACKUP

LM80 An LM-80 report measures the first 6000-10000 hours of LED life. It is the IES-approved method of measuring the lumen maintenance of LED packages and modules. Lumen maintenance refers to the number of hours that a light source remains "useful" before its output diminishes to 70%.

TM21 TM-21 establishes a standard way to use LM-80 data to make consistent lifetime projections beyond the testing period. TM-21 dictates which values can be used in the calculation based on the sample size, number of hours and intervals tested, and test suite temperature. TM21 helps in choices between LED retrofit options.

STEP-DOWN
TRANSFORMERS

DLC The DesignLights Consortium (DLC) is similar to the Energy Star program. The goal of the DLC is to promote energy efficient lighting in the building sector by influencing public policy and specifying product performance

TITLE 24 The California Energy Commission's Title 24 regulations outline energy efficiency standards for residential and non-residential buildings. Title 24, also known as the California Building Standards Code, is a broad set of requirements for "energy conservation, green design, construction and maintenance, fire and life safety, and accessibility" that apply to the "structural, mechanical, electrical, and plumbing systems" in a building.

CEC TITLE 20 California Energy Commission Title 20. Mandates efficiency requirements for many items including LED Lamps and LED Emergency BBU Systems

CONTROL
OPTIONS

versaLinear™

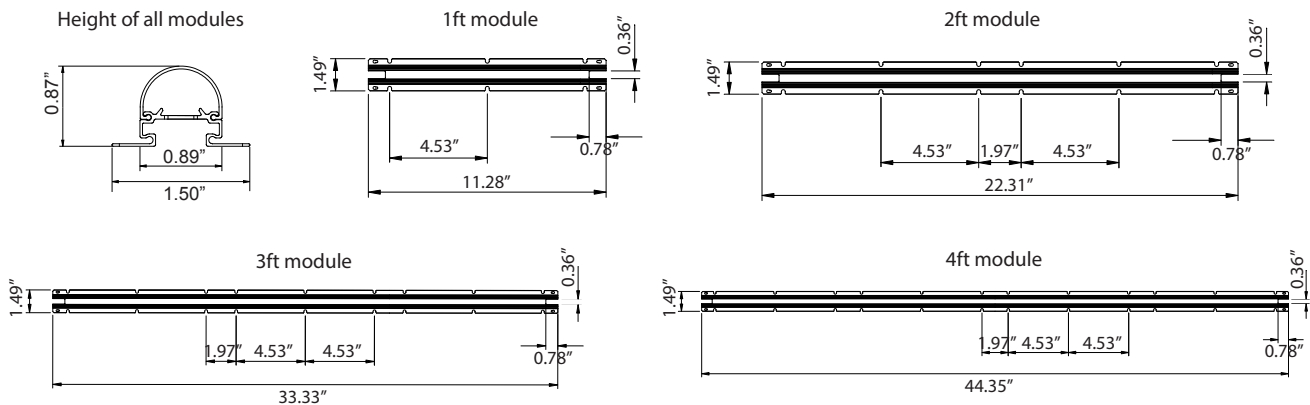
LED Modules - Aluminum Base Part Number Break Down

Example part number:
VLM4824CVHO850

VLM	48	24	C	VHO	8	50
↓	↓	↓	↓	↓	↓	↓
Espen Linear LED Module	Length 24 = 22" 36 = 33" 48 = 44"	Wattage 09 - 9W 12 - 12W 13 - 13W 24 - 24W 48 - 48W	Lens type C-Clear F-Frosted	None = Standard Output HO = High Output VHO = Very High Output	CRI 8 - 80 9 - 90	Color Temp 30 - 3000K 35 - 3500K 40 - 4000K 50 - 5000K

FEATURES AND BENEFITS

- Light output from 540 to 1940 lm/ft
- Easy mounting with magnets
- High efficacy up to 162 lm/W
- Long life min. 50000 hours
- Quick connectors underneath
- Fully lit without dark spots on the ends
- UL Recognized components
- UL Classified and DLC listed with drivers in **versaKits™**
- Optional clear or frosted lens



versaLinear™ ALUMINUM BASE LED MODULES

LED MODULES

11" MODULES

MODEL #	COLOR TEMP	NOMINAL POWER (W)	MAX POWER (W)	vF	NOMINAL CURRENT (mA)	MAX CURRENT (mA)	NOMINAL LUMENS	NO LENS (CALC)(NOM)	MAX LUMENS	NO LENS (CALC)(MAX)	CRI	NOMINAL EFFICACY (LPW)	NO LENS (CALC)(NOM EFF)	MAX EFFICACY (LPW)	NO LENS (CALC)(MAX EFF)	STOCK STATUS
VLM1209F/830	3000K	9	10.8	30	300	360	990	1156	1242	1451	80	110	128	115	134	SO
VLM1209F/835	3500K	9	10.8	30	300	360	1000	1168	1255	1466	80	111	130	116	136	Stock
VLM1209F/840	4000K	9	10.8	30	300	360	1055	1232	1325	1548	80	117	137	122	143	Stock
VLM1209F/850	5000K	9	10.8	30	300	360	1100	1425	1380	1612	80	122	158	128	149	Stock

LED DRIVERS

11" HO MODULES

MODEL #	COLOR TEMP	NOMINAL POWER (W)	MAX POWER (W)	vF	NOMINAL CURRENT (mA)	MAX CURRENT (mA)	NOMINAL LUMENS	NO LENS (CALC)(NOM)	MAX LUMENS	NO LENS (CALC)(MAX)	CRI	NOMINAL EFFICACY (LPW)	NO LENS (CALC)(NOM EFF)	MAX EFFICACY (LPW)	NO LENS (CALC)(MAX EFF)	STOCK STATUS
VLM1214F/830	3000K	14.2	18.2	40.6	350	450	2112	2467	2623	3064	80	149	174	144	168	SO
VLM1214F/835	3500K	14.2	18.2	40.6	350	450	2158	2521	2679	3129	80	152	178	147	172	SO
VLM1214F/840	4000K	14.2	18.2	40.6	350	450	2226	2600	2764	3228	80	157	183	152	177	SO
VLM1214F/850	5000K	14.2	18.2	40.6	350	450	2272	2654	2821	3295	80	160	187	155	181	SO

LED DRIVER CASES

22" MODULES

MODEL #	COLOR TEMP	NOMINAL POWER (W)	MAX POWER (W)	vF	NOMINAL CURRENT (mA)	MAX CURRENT (mA)	NOMINAL LUMENS	NO LENS (CALC)(NOM)	MAX LUMENS	NO LENS (CALC)(MAX)	CRI	NOMINAL EFFICACY (LPW)	NO LENS (CALC)(NOM EFF)	MAX EFFICACY (LPW)	NO LENS (CALC)(MAX EFF)	STOCK STATUS
VLM2409F/830	3000K	9	10.8	30	300	360	1098	1282	1273	1487	80	122	142	118	138	SO
VLM2409F/835	3500K	9	10.8	30	300	360	1110	1296	1287	1503	80	123	144	119	139	Stock
VLM2409F/840	4000K	9	10.8	30	300	360	1171	1368	1357	1585	80	130	152	126	147	Stock
VLM2409F/850	5000K	9	10.8	30	300	360	1220	1425	1414	1652	80	135	158	131	153	Stock

LED LAMPS

22" HO MODULES

MODEL #	COLOR TEMP	NOMINAL POWER (W)	MAX POWER (W)	vF	NOMINAL CURRENT (mA)	MAX CURRENT (mA)	NOMINAL LUMENS	NO LENS (CALC)(NOM)	MAX LUMENS	NO LENS (CALC)(MAX)	CRI	NOMINAL EFFICACY (LPW)	NO LENS (CALC)(NOM EFF)	MAX EFFICACY (LPW)	NO LENS (CALC)(MAX EFF)	STOCK STATUS
VLM2428F/830	3000K	28.4	42.6	40.6	700	1050	4231	4820	6134	7060	80	149	170	144	166	SO
VLM2428F/835	3500K	28.4	42.6	40.6	700	1050	4316	4970	6262	7200	80	152	175	147	169	Stock
VLM2428F/840	4000K	28.4	42.6	40.6	700	1050	4458	5130	6475	7450	80	157	181	152	175	Stock
VLM2428F/850	5000K	28.4	42.6	40.6	700	1050	4544	5230	6603	7600	80	160	184	155	178	Stock

LED RETROFIT KITS

33" MODULES

MODEL #	COLOR TEMP	NOMINAL POWER (W)	MAX POWER (W)	vF	NOMINAL CURRENT (mA)	MAX CURRENT (mA)	NOMINAL LUMENS	NO LENS (CALC)(NOM)	MAX LUMENS	NO LENS (CALC)(MAX)	CRI	NOMINAL EFFICACY (LPW)	NO LENS (CALC)(NOM EFF)	MAX EFFICACY (LPW)	NO LENS (CALC)(MAX EFF)	STOCK STATUS
VLM3612F/830	3000K	12.6	15.1	42	300	360	1530	1787	1780	2079	80	121	142	118	138	SO
VLM3612F/835	3500K	12.6	15.1	42	300	360	1547	1807	1800	2102	80	123	143	119	139	Stock
VLM3612F/840	4000K	12.6	15.1	42	300	360	1632	1906	1899	2218	80	130	151	126	147	Stock
VLM3612F/850	5000K	12.6	15.1	42	300	360	1700	1986	1978	2310	80	135	158	131	153	Stock

LED EMERGENCY BATTERY BACKUP

44" MODULES

MODEL #	COLOR TEMP	NOMINAL POWER (W)	MAX POWER (W)	vF	NOMINAL CURRENT (mA)	MAX CURRENT (mA)	NOMINAL LUMENS	NO LENS (CALC)(NOM)	MAX LUMENS	NO LENS (CALC)(MAX)	CRI	NOMINAL EFFICACY (LPW)	NO LENS (CALC)(NOM EFF)	MAX EFFICACY (LPW)	NO LENS (CALC)(MAX EFF)	STOCK STATUS
VLM4813F/830	3000K	13.5	16.2	45	300	360	1638	1913	1910	2231	80	122	142	118	138	SO
VLM4813F/835	3500K	13.5	16.2	45	300	360	1656	1934	1931	2255	80	123	143	119	139	Stock
VLM4813F/840	4000K	13.5	16.2	45	300	360	1747	2040	2037	2379	80	130	151	126	147	Stock
VLM4813F/850	5000K	13.5	16.2	45	300	360	1820	2126	2122	2478	80	135	157	131	153	Stock

STEP-DOWN TRANSFORMERS

44" HO MODULES

MODEL #	COLOR TEMP	NOMINAL POWER (W)	MAX POWER (W)	vF	NOMINAL CURRENT (mA)	MAX CURRENT (mA)	NOMINAL LUMENS	NO LENS (CALC)(NOM)	MAX LUMENS	NO LENS (CALC)(MAX)	CRI	NOMINAL EFFICACY (LPW)	NO LENS (CALC)(NOM EFF)	MAX EFFICACY (LPW)	NO LENS (CALC)(MAX EFF)	STOCK STATUS
VLM4824F/HO/830	3000K	25.2	SAME AS NOMINAL	42	600	SAME AS NOMINAL	3078	3595	SAME AS NOMINAL	SAME AS NOMINAL	80	122	143	SAME AS NOMINAL	SAME AS NOMINAL	SO
VLM4824F/HO/835	3500K	25.2	SAME AS NOMINAL	42	600	SAME AS NOMINAL	3112	3635	SAME AS NOMINAL	SAME AS NOMINAL	80	123	144	SAME AS NOMINAL	SAME AS NOMINAL	Stock
VLM4824F/HO/840	4000K	25.2	SAME AS NOMINAL	42	600	SAME AS NOMINAL	3283	3835	SAME AS NOMINAL	SAME AS NOMINAL	80	130	152	SAME AS NOMINAL	SAME AS NOMINAL	Stock
VLM4824F/HO/850	5000K	25.2	SAME AS NOMINAL	42	600	SAME AS NOMINAL	3420	3995	SAME AS NOMINAL	SAME AS NOMINAL	80	136	159	SAME AS NOMINAL	SAME AS NOMINAL	Stock

44" VHO MODULES

MODEL #	COLOR TEMP	NOMINAL POWER (W)	MAX POWER (W)	vF	NOMINAL CURRENT (mA)	MAX CURRENT (mA)	NOMINAL LUMENS (CALC) W/LENS	NO LENS LUMENS	MAX LUMENS	NO LENS (CALC)(MAX)	CRI	NOMINAL EFFICACY (LPW)	NO LENS NOMINAL EFFICACY	MAX EFFICACY (LPW)	NO LENS (CALC)(MAX EFF)	STOCK STATUS
VLM4848C/VHO/830	3000K	50.4	SAME AS NOMINAL	42	1200	SAME AS NOMINAL	5914	7108	SAME AS NOMINAL	SAME AS NOMINAL	80	117	122	SAME AS NOMINAL	SAME AS NOMINAL	SO
VLM4848C/VHO/835	3500K	50.4	SAME AS NOMINAL	42	1200	SAME AS NOMINAL	5970	7176	SAME AS NOMINAL	SAME AS NOMINAL	80	118	123	SAME AS NOMINAL	SAME AS NOMINAL	Stock
VLM4848C/VHO/840	4000K	50.4	SAME AS NOMINAL	42	1200	SAME AS NOMINAL	6254	7517	SAME AS NOMINAL	SAME AS NOMINAL	80	124	130	SAME AS NOMINAL	SAME AS NOMINAL	Stock
VLM4848C/VHO/850	5000K	50.4	SAME AS NOMINAL	42	1200	SAME AS NOMINAL	6481	7790	SAME AS NOMINAL	SAME AS NOMINAL	80	129	135	SAME AS NOMINAL	SAME AS NOMINAL	Stock

*SO = Special Order
+90 CRI available 50 & MOQ

CONTROL OPTIONS

STANDARD LED MODULES

LED
MODULES

LED
DRIVERS

LED
DRIVER CASES

LED
LAMPS

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RETROFIT KITS

LED
EMERGENCY
BATTERY BACK UP

STEP-DOWN
TRANSFORMERS

CONTROL
OPTIONS

LED Modules - Standard Part Number Break Down

Example part number:

VLM4824L850

VLM	48	24	L	8	50
↓	↓	↓	↓	↓	↓
Espen Linear LED Module	Length 06 = 5.375" 12 = 11" 24 = 22" 44 = 44"	Wattage 5 = 5W 7 = 7W 12 = 12W 24 = 24W	L: Standard Module	CRI 8 - 80 9 - 90	Color Temp 30 - 3000K 35 - 3500K 40 - 4000K 50 - 5000K

FEATURES AND BENEFITS

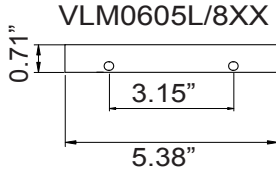
- Light output up to 1300 lm/ft
- High efficacy up to 208 lm/W
- Long life min. 50000 hours
- Low profile quick push in connectors
- UL Recognized components
- Class 2



STANDARD LED MODULES

LED
MODULES

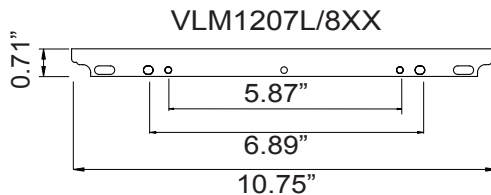
5.375" MODULES							
MODEL #	COLOR TEMP	MAX POWER (W)	VF	MAX CURRENT (mA)	MAX LUMENS	CRI	MAX EFFICACY (LPW)
VLM0605L/830	3000K	5	33	150	845	80	169
VLM0605L/835	3500K	5	33	150	845	80	169
VLM0605L/840	4000K	5	33	150	860	80	172
VLM0605L/850	5000K	5	33	150	873	80	174



LED
DRIVERS

LED
DRIVER CASES

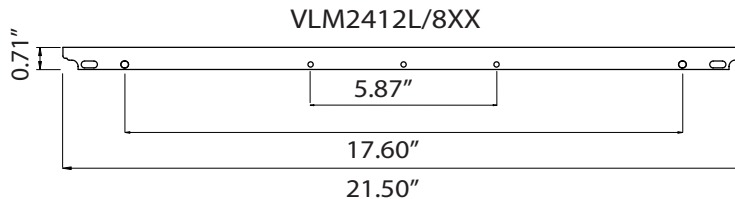
11" MODULES							
MODEL #	COLOR TEMP	MAX POWER (W)	VF	MAX CURRENT (mA)	MAX LUMENS	CRI	MAX EFFICACY (LPW)
VLM1207L/830	3000K	7	34	210	1316	80	188
VLM1207L/835	3500K	7	34	210	1316	80	188
VLM1207L/840	4000K	7	34	210	1340	80	191
VLM1207L/850	5000K	7	34	210	1360	80	194



LED
LAMPS

LED
RETROFIT KITS

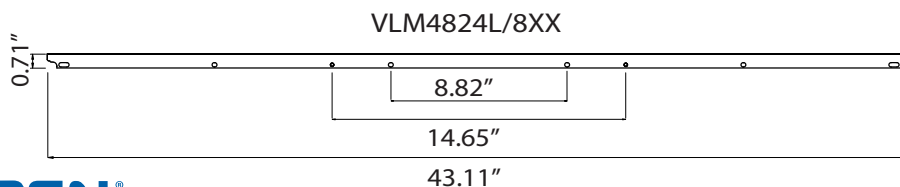
22" MODULES							
MODEL #	COLOR TEMP	MAX POWER (W)	VF	MAX CURRENT (mA)	MAX LUMENS	CRI	MAX EFFICACY (LPW)
VLM2412L/830	3000K	12	35	350	2419	80	201
VLM2412L/835	3500K	12	35	350	2419	80	201
VLM2412L/840	4000K	12	35	350	2463	80	205
VLM2412L/850	5000K	12	35	350	2500	80	208



LED
EMERGENCY
BATTERY BACK UP

STEP-DOWN
TRANSFORMERS

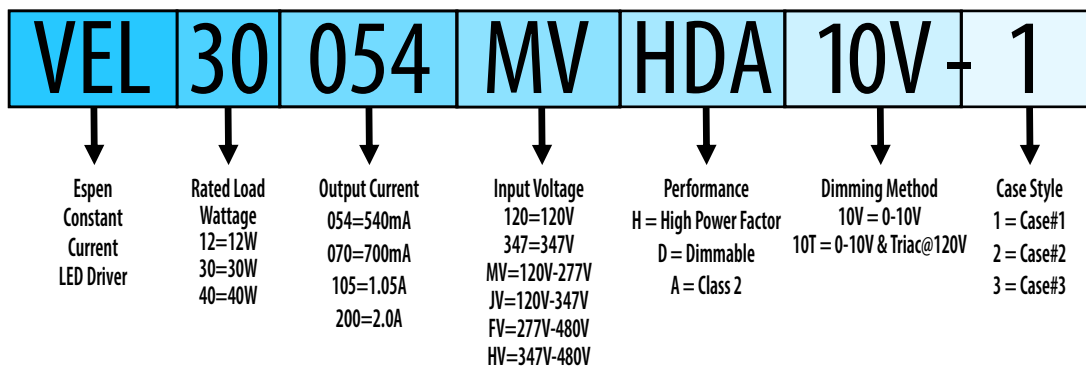
44" MODULES							
MODEL #	COLOR TEMP	MAX POWER (W)	VF	MAX CURRENT (mA)	MAX LUMENS	CRI	MAX EFFICACY (LPW)
VLM4824L/830	3000K	24.5	35	700	4616	80	188
VLM4824L/835	3500K	24.5	35	700	4616	80	188
VLM4824L/840	4000K	24.5	35	700	4700	80	192
VLM4824L/850	5000K	24.5	35	700	4770	80	195



CONTROL
OPTIONS

LED Drivers - Constant Current Part Number Break Down

Example part number:
VEL30054MVHDA-10V-1



FEATURES AND BENEFITS

- Multiple constant current output configurations
- Wide range of wattages available
- High efficiency
- MV models with active power factor correction
- 100% full load burn in test
- 5 year warranty



LED DRIVERS - CONSTANT CURRENT

CONSTANT CURRENT

MODEL #	MAX POWER	INPUT VOLTAGE	DIMMING	EFFICIENCY AT NOMINAL LOAD	OUTPUT VOLTAGE MAX RANGE	OUTPUT CURRENT RANGE	MIN START TEMP °C	IP RATING
VEL12XXX120H-1	12	120	N/A	85	6-40	200-1050	-25	Damp
VEL12XXX120H-2	12	120	N/A	85	6-40	200-1050	-25	Damp
VEL12XXX120H-3	12	120	N/A	85	6-40	200-1050	-25	Damp
VEL12XXX120HDA-1	12	120	Triac	85	10-34	200-1050	-25	Damp
VEL12XXX120HDA-1v1	12	120	Triac	85	6-50	200-1050	-25	Damp
VEL12XXX120HDA-2	12	120	Triac	85	10-34	200-1050	-25	Damp
VEL12XXX120HDA-2v1	12	120	Triac	85	6-50	200-1050	-25	Damp
VEL12XXX120HDA-3	12	120	Triac	85	10-34	200-1050	-25	Damp
VEL12XXX120HDA-3v1	12	120	Triac	85	6-50	200-1050	-25	Damp
VEL12XXXMVH-1	12	120-277	N/A	85	6-40	200-1050	-25	Damp
VEL12XXXMVH-2	12	120-277	N/A	85	6-40	200-1050	-25	Damp
VEL6700120H(10.50)V2 H-4	18	120	N/A	85	18-33	500	-25	Damp
VEL19XXX120H-1	19	120	N/A	85	10-40	200-1050	-25	Damp
VEL19XXX120H-2	19	120	N/A	85	10-40	200-1050	-25	Damp
VEL19XXX120HDA-1	19	120	Triac	83	10-52	200-1200	-25	Damp
VEL19XXX120HDA-1v1	19	120	Triac	85	7-55	200-1500	-25	Damp
VEL19XXX120HDA-2	19	120	Triac	83	10-52	200-1200	-25	Damp
VEL19XXX120HDA-2v1	19	120	Triac	85	7-55	200-1500	-25	Damp
VEL19XXXMVH-1	19	120-277	N/A	85	10-36	200-1050	-25	Damp
VEL19XXXMVH-2	19	120-277	N/A	85	10-36	200-1050	-25	Damp
VELP24XXXMVHDA-10V-1	24	120-277	0-10V	85	15-50	240-800	-25	Damp
VEL25XXX120HDA-1	25	120	Triac	85	10-52	200-1200	-25	Damp
VRL25XXXMVHDA-10V-P-1	25	120-277	0-10V/PWM	85	15-45	280-800	-30	Damp
VRL50XXXMVHDA-10V-P-1	26-50	120/277/24V	0-10V	85	55	300-1600	-30	Damp
VEL29XXXMVH-1	30	DC	N/A	85	12-55	200-2500	-25	Damp
VEL30XXX120H-1	30	120-277	N/A	85	9-30	500-1700	-25	Damp
VEL30XXX120H-2	30	120-277	N/A	85	9-30	500-1700	-25	Damp
VEL30XXX120HDA-1	30	120	Triac	83	17.7-36	700-1700	-20	Damp
VEL30XXXMVH-1	30	120-277	N/A	85	9-30	500-1700	-25	Damp
VEL30XXXMVH-2	30	120-277	N/A	85	9-30	500-1700	-25	Damp
VEL30XXXMVH-4	30	120-277	N/A	85	13-60	250-1200	-20	Damp
VEL30XXXMVHDA-10T	30	120-277	0-10V / Triac @ 120V	85	15-32	1000-1400	-25	Damp
VEL30XXXMVHDA-10V-P-1	30	120-277	0-10V	83	12-55	200-2500	-30	Damp
VEL40XXX120H-1	40	120	N/A	85	8-22.2	900-2500	-25	Damp
VEL40XXX120H-2	40	120	N/A	85	8-22.2	900-2500	-25	Damp
VEL40XXX120HA-1	40	120	N/A	85	8-55	364-2500	-25	Damp
VEL40XXX120HA-2	40	120	N/A	85	8-55	364-2500	-25	Damp
VEL40XXX120HA-4	40	120	N/A	83	16-55	650-2500	-25	Damp
VEL40XXX120HDA-1	40	120	Triac	83	16-28	1400-2500	-25	Damp
VEL40XXXMVH-1	40	120-277	N/A	85	22.2	2500	-25	Damp
VEL40XXXMVH-2	40	120-277	N/A	85	22.2	2500	-25	Damp
VEL40XXXMVH-4	40	120-277	N/A	85	20-60	334-1000	-20	Damp
VEL40XXXMVHA-1	40	120-277	N/A	85	55	2500	-25	Damp
VEL40XXXMVHA-2	40	120-277	N/A	85	55	2500	-25	Damp
VEL40XXXMVHDA-10T	40	120-277	0-10V / Triac @ 120V	85	20-56	1000-1400	-20	Damp
VPL40-XXX-MVHDA-10V-1	40	120-277	0-10V	85	13-50	500-1600	-35	IP54
VPL40-XXX-MVHDA-10V-P-1	40	120-277	0-10V	85	13-50	500-1600	-40	Damp
VELP40XXXMVHDA-10V-1	40	120-277	0-10V	85	19-50	400-1100	-25	Damp
VEL45XXXMVH-4	45	120-277	N/A	85	19-60	375-1200	-20	Damp
VEL45XXXMVHDA-10V-4	45	120-277	0-10V	83	19-50	450-1200	-25	Damp
VEL50XXX347HDA-10V-27	50	347	0-10V	85	14-55	300-1800	-30	Damp
VEL50XXX347HDA-10V-49	50	347	0-10V	85	16-55	455-1600	-30	Damp
VEL50XXXHVHDA-10V-27	50	347-480	0-10V	85	14-55	300-1800	-30	Damp
VEL50XXXJVHDA-10V-1	50	120-347	0-10V	85	16-48	1000-1600	-30	Damp

*Please check with factory or individual specification sheets for actual voltage for each current as this number is a maximum range

LED DRIVERS - CONSTANT CURRENT

CONSTANT CURRENT								
UL-P	UL	FCC CLASS	CLASS2	LENGTH (L) IN INCHES	WIDTH (W) IN INCHES	HEIGHT (H) IN INCHES	CASE #	MODEL #
	✓	B	✓	2.56	1.73	1.10	5	VEL12XXX120H-1
	✓	B	✓	R1.38	R1.38	1.38	2	VEL12XXX120H-2
	✓	B	✓	2.54	1.68	1.00	3	VEL12XXX120H-3
	✓	B	✓	2.56	1.73	1.10	5	VEL12XXX120HDA-1
	✓	B	✓	2.56	1.73	1.10	5	VEL12XXX120HDA-1v1
	✓	B	✓	R1.38	R1.38	1.38	2	VEL12XXX120HDA-2
	✓	B	✓	R1.38	R1.38	1.38	2	VEL12XXX120HDA-2v1
	✓	B	✓	2.54	1.68	1.00	3	VEL12XXX120HDA-3
	✓	B	✓	2.54	1.68	1.00	3	VEL12XXX120HDA-3v1
	✓	B	✓	2.56	1.73	1.10	5	VEL12XXXMVH-1
	✓	B	✓	R1.38	R1.38	1.38	2	VEL12XXXMVH-2
	✓	B	✓	2.40	2.40	1.10	4	VEL6700120H(10.50) V2 H-4
	✓	B	✓	2.56	1.73	1.10	5	VEL19XXX120H-1
	✓	B	✓	R1.38	R1.38	1.38	2	VEL19XXX120H-2
	✓	B	✓	2.56	1.73	1.10	5	VEL19XXX120HDA-1
✓		B	✓	2.56	1.73	1.10	5	VEL19XXX120HDA-1v1
	✓	B	✓	R1.38	R1.38	1.38	2	VEL19XXX120HDA-2
		B		R1.38	R1.38	1.38	2	VEL19XXX120HDA-2v1
	✓	B	✓	2.56	1.73	1.10	5	VEL19XXXMVH-1
	✓	B	✓	R1.38	R1.38	1.38	2	VEL19XXXMVH-2
✓	✓	B	✓	8.27	3.41	1.26	82	VLP24XXXMVHDA-10V-1
✓	✓	B	✓	2.56	1.73	1.10	5	VEL25XXX120HDA-1
✓		B	✓	2.56	2.40	1.10	5	VRL25XXXMVHDA-10V-P-1
✓		B		9.50	1.70	1.20	35	VRL50XXXMVHDA-10V-P-1
	✓	B	✓	4.67	1.25	1.20	43	VEL29XXXMVH-1
	✓	B	✓	2.56	1.73	1.10	4	VEL30XXX120H-1
	✓	B	✓	9.50	1.30	1.00	42	VEL30XXX120H-2
	✓	B		5.20	1.70	1.20	25	VEL30XXX120HDA-1
	✓	B	✓	2.56	1.73	1.10	4	VEL30XXXMVH-1
		A		9.50	1.30	1.00	42	VEL30XXXMVH-2
		B	✓	7.20	1.18	0.83	81	VEL30XXXMVH-4
	✓	A		3.37	1.64	0.97	83	VEL30XXXMVHDA-10T
✓		B	✓	4.67	1.25	1.20	43	VEL30XXXMVHDA-10V-P-1
	✓	B	✓	2.56	2.40	1.10	4	VEL40XXX120H-1
	✓	B	✓	9.50	1.30	1.22	47	VEL40XXX120H-2
	✓	B	✓	2.56	2.40	1.10	4	VEL40XXX120HA-1
	✓	B	✓	9.50	1.30	1.22	47	VEL40XXX120HA-2
	✓	B	✓	7.20	1.18	0.83	81	VEL40XXX120HA-4
	✓	B	✓	5.20	1.70	1.20	25	VEL40XXX120HDA-1
	✓	B	✓	2.56	2.40	1.10	4	VEL40XXXMVH-1
	✓	B	✓	9.50	1.30	1.22	47	VEL40XXXMVH-2
	✓	B	✓	7.20	1.18	0.83	81	VEL40XXXMVH-4
	✓	B	✓	2.56	2.40	1.10	4	VEL40XXXMVHA-1
	✓	B	✓	9.50	1.30	1.22	47	VEL40XXXMVHA-2
	✓	B	✓	5.11	2.37	1.02	84	VEL40XXXMVHDA-10T
	✓	B	✓	9.50	1.30	1.00	27	VPL40-XXX-MVHDA-10V-1
✓	✓	B	✓	9.50	1.30	1.00	27	VPL40-XXX-MVHDA-10V-P-1
✓	✓	B	✓	8.27	3.41	1.26	82	VLP40XXXMVHDA-10V-1
	✓	B	✓	7.20	1.18	0.83	81	VEL45XXXMVH-4
		A		7.20	1.18	0.83	81	VEL45XXXMVHDA-10V-4
	✓	A	✓	9.50	1.30	1.00	27	VEL50XXX347HDA-10V-27
	✓	A	✓	11.03	1.16	1.00	49	VEL50XXX347HDA-10V-49
∅	✓	A	✓	9.50	1.30	1.00	27	VEL50XXXHVHDA-10V-27
∅	✓	A	✓	9.50	1.30	1.00	27	VEL50XXXJVHDA-10V-1

*Please check with factory or individual specification sheets for actual voltage for each current as this number is a maximum range

LED DRIVERS - CONSTANT CURRENT

CONSTANT CURRENT

MODEL #	MAX POWER	INPUT VOLTAGE	DIMMING	EFFICIENCY AT NOMINAL LOAD	OUTPUT VOLTAGE MAX RANGE	OUTPUT CURRENT RANGE	MIN START TEMP °C	IP RATING
VEL50XXXMVH-1	50	120-277	N/A	85	21-60	417-1200	-30	Damp
VEL50XXXMVHDA-10T	50	120-277	0-10V / Triac @ 120V	85	21-43	1000-1400	-25	Damp
VEL50XXXMVHDA-10V-80	50	120-277	0-10V	85	21-42	600-1200	-30	Damp
VPL50-XXX-MVHDA-10V-1	50	120-277	0-10V	85	16-50	500-1600	-35	Damp
VPL50-XXX-MVHDA-10V-P-1	50	120-277	0-10V	85	16-50	500-1600	-35	Damp
VELP50XXXMVHDA-10V-1	50	120-277	0-10V	85	21-50	500-1200	-25	Damp
VEL60XXXMVHDA-10V-1	60	120-277	0-10V	87	20-36	1670-3000	-20	Damp
VEL60XXXMVHDA-10V-P-1	60	120-277	0-10V	87	11-50	1000-2800	-30	Damp
VPL60-XXX-MVHDA-10V-27	60	120-277	0-10V	85	19-55	300-1600	-25	Damp
VEL75XXXMVHDA-10V-1	75	120-277	0-10V	87	12-50	1000-2800	-30	Damp
VEL75XXXMVHDA-10V-P-1	75	120-277	0-10V	87	14-50	1000-2800	-30	Damp
VEL80XXXHVHDA-10V-35	80	347-480	0-10V	85	23-55	300-1800	-30	Damp
VEL80XXXMVHDA-10V-P-1	80	120-277	0-10V	85	15-50	1000-2800	-25	Damp
VEL100XXX347HDA-10V-50	100	347	0-10V	87	12-55	1000-4200	-30	Damp
VEL100XXX347HDA-10V-P-35	100	347	0-10V	87	20-50	1000-2500	-25	Damp
VEL100XXXHVHDA-10V-1	100	347-480	0-10V	85	12-56	800-4200	-30	Damp
VEL100XXXHVHDA-10V-50	100	347-480	0-10V	87	12-55	1000-4200	-30	Damp
VEL100XXXJVHDA-10V-1	100	120-347	0-10V	87	19-48	2000-2700	-30	Damp
VEL100XXXMVHDA-10V-P-1	100	120-277	0-10V	87	20-50	1000-2800	-30	Damp
VPL600XXXMVHDA-YY	600	100/277	0-10V/PWM	95	24/30/36/42/48/54	5600-25000	-25	IP67
VPL1200XXXMVHDA-YY	1200	100/277	0-10V/PWM	94	24/30/36/42/48/54	11000-28000	-25	IP67

*Please check with factory or individual specification sheets for actual voltage for each current as this number is a maximum range

LED DRIVERS - CONSTANT CURRENT

CONSTANT CURRENT								
UL-P	UL	FCC CLASS	CLASS2	LENGTH (L) IN INCHES	WIDTH (W) IN INCHES	HEIGHT (H) IN INCHES	CASE #	MODEL #
	✓	B	✓	9.50	1.30	1.00	27	VEL50XXXMVH-1
		A		5.11	2.37	1.02	84	VEL50XXXMVHDA-10T
	✓	B		6.05	1.81	1.07	80	VEL50XXXMVHDA-10V-80
	✓	B	✓	9.50	1.30	1.00	27	VPL50-XXX-MVHDA-10V-1
✓		B	✓	9.50	1.30	1.00	27	VPL50-XXX-MVHDA-10V-P-1
✓	✓	B	✓	8.27	3.41	1.26	82	VELP50XXXMVHDA-10V-1
	✓	B	✓	9.50	1.70	1.20	35	VEL60XXXMVHDA-10V-1
✓		B	✓	9.50	1.70	1.20	35	VEL60XXXMVHDA-10V-P-1
		A		9.50	1.30	1.00	27	VPL60-XXX-MVHDA-10V-27
	✓	B	✓	9.50	1.70	1.20	35	VEL75XXXMVHDA-10V-1
✓		B	✓	9.50	1.70	1.20	35	VEL75XXXMVHDA-10V-P-1
	✓	A	✓	9.50	1.70	1.20	35	VEL80XXXHVHDA-10V-35
✓		B		9.50	1.70	1.20	35	VEL80XXXMVHDA-10V-P-1
	✓	A	✓	8.89	2.36	1.65	50	VEL100XXX347HDA-10V-50
✓		A		9.50	1.70	1.20	35	VEL100XXX347HDA-10V-P-35
	✓	A	✓	9.50	1.70	1.20	35	VEL100XXXHVHDA-10V-1
	✓	A	✓	8.89	2.36	1.65	50	VEL100XXXHVHDA-10V-50
	✓	A	✓	9.50	1.70	1.20	35	VEL100XXXJVHDA-10V-1
✓		B	✓	9.50	1.70	1.20	35	VEL100XXXMVHDA-10V-P-1
	✓	A		11.06	5.70	2.00		VPL600XXXMVHDA-YY
	✓	A		11.70	8.50	3.10		VPL1200XXXMVHDA-YY

*Please check with factory or individual specification sheets for actual voltage for each current as this number is a maximum range

LED
MODULES

LED
DRIVERS

LED
DRIVER CASES

LED
LAMPS

LED
RETROFIT KITS

LED EMERGENCY
BATTERY BACK UP

STEP-DOWN
TRANSFORMERS

CONTROL
OPTIONS

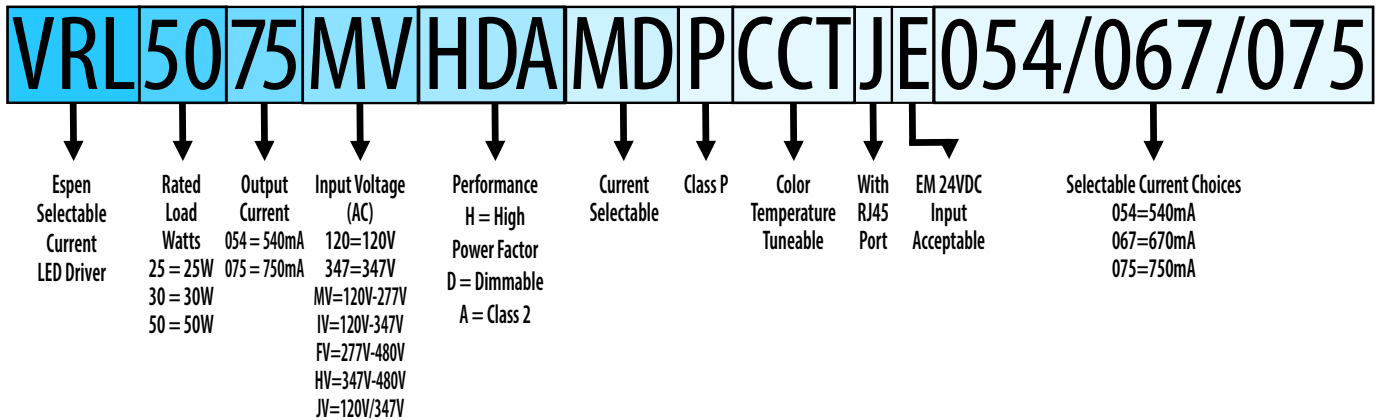


intelliLUX™ controllability.

LED Drivers - Selectable Current Part Number Break Down

Example part number:

VRL50075MVHDA-MD-P-CCT-JE054/067/075



FEATURES AND BENEFITS

- Selectable current
- Selectable CCT
- Factory program models available
- Inteliport available for control systems
- Multiple case designs
- Multiple channels



intelliLUX™ SELECTABLE CURRENT & CCT

LED MODULES

LED DRIVERS

LED DRIVER CASES

LED LAMPS

LED RETROFIT KITS

LED EMERGENCY BATTERY BACKUP

STEP-DOWN TRANSFORMERS

CONTROL OPTIONS

SELECTABLE CURRENT

MODEL #	RATED POWER (W)	Vin	DIMMING	DIM TO OFF	12V AUX	EFFICIENCY AT NOMINAL LOAD	OUTPUT VOLTAGE MAX RANGE	OUTPUT CURRENT RANGE	OUTPUT CURRENT OPTIONS
VEL24XXXMVHDA-10T-MD	24	120 - 277	0-10V/Triac @ 120V			85	21 - 42	200 - 550	Selectable Current (Toggle Switch)
VRL50XXXMVHDA-MD-P	26-50	120-277/24V DC	0-10V		✓	85	55	300 - 1600	Selectable Current (Toggle Switch)
VEL30XXXMVHDA-10T-MD	30	120 - 277	0-10V/Triac @ 120V			85	15 - 32	1000 - 1440	Selectable Current (Toggle Switch)
VPL30-XXX-MVHDA-10V-P-CCT	30	120 - 277	0-10V			85	55	200 - 1000	Fixed Current-with Selectable Color Temp
VRL30070MVHDA-MD-P	30	120 - 277	0-10V	✓		85	24 - 48	400/500/700	Selectable Current (Toggle Switch)
VRL30100MVHDA-MD-P	30	120 - 277	0-10V	✓		85	24 - 48	700/850/1000	Selectable Current (Toggle Switch)
VPL40-XXX-MVHDA-10V-P-CCT	40	120 - 277	0-10V			85	55	200 - 1000	Fixed Current-with Selectable Color Temp
VPL50-2C-030/036	45	120 - 277	0-10V			85	20-46	300 / 360	Selectable Current (Connector)
VELP24XXXMVHDA-MD	50	120 - 277	0-10V			85	24	800	Selectable Current (Dip Switch)
VELP40XXXMVHDA-MD	50	120 - 277	0-10V			85	40	1100	Selectable Current (Dip Switch)
VELP50XXXMVHDA-MD	50	120 - 277	0-10V			85	50	1200	Selectable Current (Dip Switch)
VPL50-140-MVHDA-MD-P	50	120 - 277	0-10V			85	26 - 35	1000-1400	Selectable Current (Dip Switch)
VPL50-XXX-MVHDA-10V-P-CCT	50	120 - 277	0-10V			85	55	200 - 1200	Fixed Current-with Selectable Color Temp
VPL50-XXX-MVHDA-MD-P	50	120 - 277	0-10V			85	50	500 - 1600	Selectable Current (Toggle Switch)
VPL50-xxx-MVHDA-PD-2C	50	120 - 277	0-10V / Dual Relay			85	25 - 50	300 - 600	Factory Set
VPL60-XXX-MVHDA-10V-P-CCT	60	120 - 277	0-10V			85	55	200 - 1700	Fixed Current-with Selectable Color Temp
VPL60-XXX-MVHDA-MD-27	60	120 - 277	0-10V			85	55	300 - 1600	Selectable Current (Toggle Switch)
VPL100-4C-030/036	66	120 - 277	0-10V			86	20 - 46	300 / 360	Selectable Current (Connector)
VPL100MVHUD-A-4C-XXX	80	120 - 277	0-10V / Dual Relay			87	25 - 50	200 - 500	Factory Set
VEL100XXXJVHDA-MD-P-35	100	120 - 347	0-10V			87	50	1000 - 2500	Selectable Current (Toggle Switch)
VEL100XXXMVHDA-MD-P-35	100	120 - 277	0-10V			87	50	1000 - 2500	Selectable Current (Toggle Switch)
VPL100-XXX-MVHDA-PD-4C-35	100	120 - 277	0-10V			87	20-52	400-700	Factory Set

SELECTABLE CURRENT

MIN START TEMP	# OF CHANNELS	IP RATING	UL-P	UL	FCC CLASS	CLASS2	LENGTH (L) IN INCHES	WIDTH (W) IN INCHES	HEIGHT (H) IN INCHES	CASE #	MODEL #
-25	1	Damp		✓	A		3.37	1.64	0.97	83	VEL24XXXMVHDA-10T-MD
-30	1	Damp	✓		B	✓	9.50	1.70	1.20	35	VRL50XXXMVHDA-MD-P
-25	1	Damp			A		3.37	1.60	0.97	83	VEL30XXXMVHDA-10T-MD
-25	1	Damp	✓		B		9.50	1.30	1.00	27	VPL30-XXX-MVHDA-10V-P-CCT
-30	1	Damp	✓		B	✓	9.50	1.70	1.20	35	VRL30070MVHDA-MD-P
-30	1	Damp	✓		B	✓	9.50	1.70	1.20	35	VRL30100MVHDA-MD-P
-25	1	Damp	✓		B		9.50	1.30	1.00	27	VPL40-XXX-MVHDA-10V-P-CCT
-25	2	Damp		✓	A	✓	9.50	1.30	1.00	27	VPL50-2C-030/036
-25	1	Damp	✓		B		8.30	3.40	1.26	82	VELP24XXXMVHDA-MD
-25	1	Damp	✓		B		8.30	3.40	1.26	82	VELP40XXXMVHDA-MD
-25	1	Damp	✓		B		8.30	3.40	1.26	82	VELP50XXXMVHDA-MD
-30	1	Damp	✓		B	✓	9.50	1.30	1.00	27	VPL50-140-MVHDA-MD-P
-25	1	Damp	✓		B		9.50	1.30	1.00	27	VPL50-XXX-MVHDA-10V-P-CCT
-25	1	Damp	✓		B		9.50	1.30	1.00	27	VPL50-XXX-MVHDA-MD-P
-25	2	Damp	✓	✓	B	✓	9.50	1.30	1.00	27	VPL50-xxx-MVHDA-PD-2C
-25	1	Damp			B		9.50	1.30	1.00	27	VPL60-XXX-MVHDA-10V-P-CCT
-25	1	Damp			A		9.50	1.30	1.00	27	VPL60-XXX-MVHDA-MD-27
-25	4	Damp	✓	✓	A	✓	9.50	1.70	1.20	35	VPL100-4C-030/036
-30	4	Damp			B	✓	9.50	1.70	1.20	35	VPL100MVHUD-A-4C-XXX
-25	1	Damp			A		9.50	1.70	1.20	35	VEL100XXXJVHDA-MD-P-35
-25	1	Damp	✓		A		9.50	1.70	1.20	35	VEL100XXXMVHDA-MD-P-35
-20	4	Damp		✓	B	✓	9.50	1.70	1.20	35	VPL100-XXX-MVHDA-PD-4C-35

LED MODULES

LED DRIVERS

LED DRIVER CASES

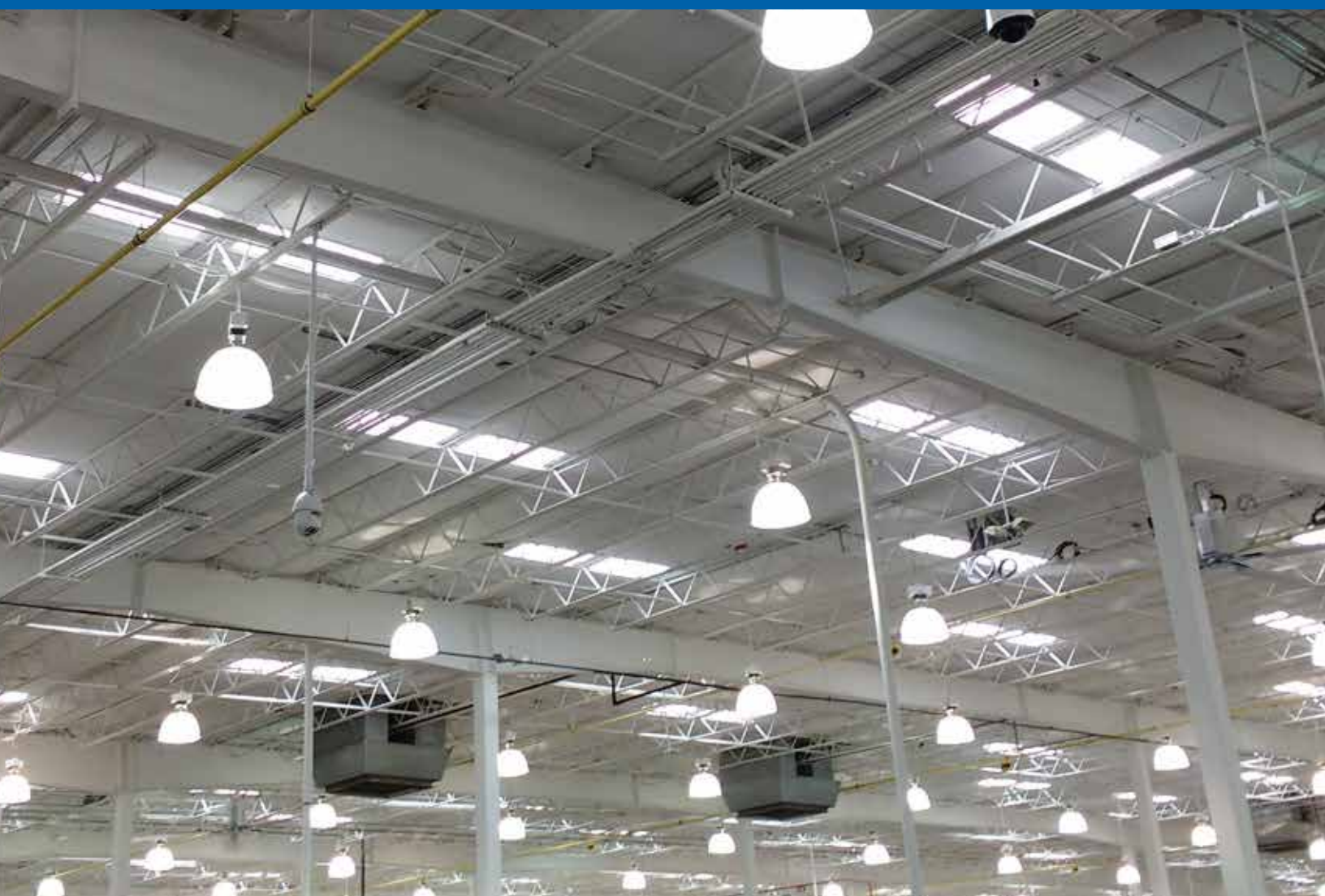
LED LAMPS

LED RETROFIT KITS

LED EMERGENCY BATTERY BACK UP

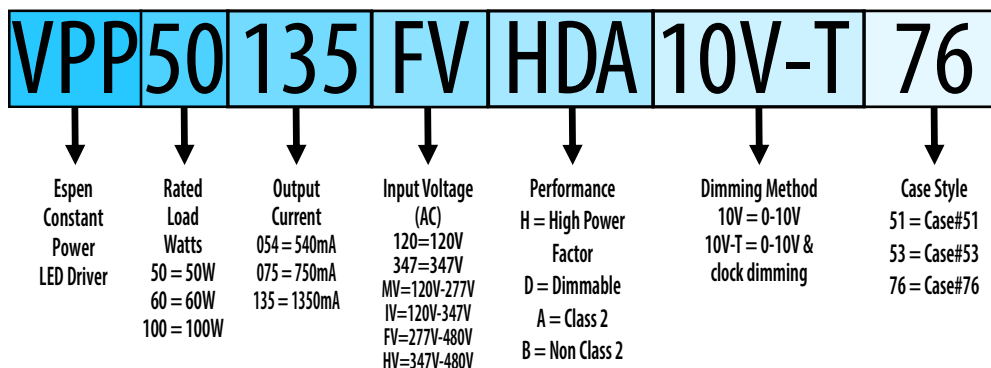
STEP-DOWN TRANSFORMERS

CONTROL OPTIONS



LED Drivers - Constant Power Part Number Break Down

Example part number:
VPP50135FVHDA10V-T-76



FEATURES AND BENEFITS

- Constant power design
- 0-10V/PWM & time-shared dimming available
- Waterproof case
- High efficiency
- Multiple output current configurations
- Active power factor correction
- 100% full load burn-in test
- 5 year warranty



LED DRIVERS - CONSTANT POWER

LED
MODULES

LED
DRIVERS

LED
DRIVER CASES

LED
LAMPS

LED
RETROFIT KITS

LED EMERGENCY
BATTERY BACKUP

STEP-DOWN
TRANSFORMERS

CONTROL
OPTIONS

CONSTANT POWER								
MODEL #	MAX POWER (W)	Vin	DIMMING	EFFICIENCY AT NOMINAL LOAD	OUTPUT VOLTAGE MAX RANGE	OUTPUT CURRENT RANGE	MIN START TEMP °C	IP RATING
VPP42XXXMVHDB-10V-Y	42	120-277	0-10V / PWM	86	24 - 140	1100 - 1400	-25	IP67
VPP50XXFVHDB-10V-T/C-76	50	277-480	0-10V/PWM/CLOCK DIMMING	85	29 - 143	350 - 2800	-40	IP67
VPP60XXFVHDB-10V-T-YY	60	277/480	0-10V/PWM/CLOCK DIMMING	86	18 - 90	100 - 2100	-25	IP67
VPP60XXXMVHDB-10V-Y	60	120-277	0-10V / PWM	87	24 - 180	140 - 1800	-25	IP67
VPP60XXXMVHDU-10V-YY	60	120-277	0-10V/PWM/dim to off	88	24 - 54	1000 - 1900	-25	IP65
VPP75XXXMVHDB-10V-T-AUX	75	120-277	0-10V/PWM/CLOCK DIMMING/dim to off/DALI (option)	87	20 - 141	110 - 2680	-25	IP67
VPP75XXXMVHDB-10V-Y	75	120-277	0-10V / PWM	87	20 - 270	50 - 2400	-25	IP67
VPP100XXFVHDB-10V-T-66	100	277-480	0-10V/PWM/CLOCK DIMMING	85	13 - 189	530 - 4800	-40	IP67
VPP100XXFVHDB-10V-T-68	100	277-480V	0-10V/PWM/Time Shared	89	21 - 189	530 - 4800	-40	IP67
VPP100XXXMVHDB-10V-T-66	100	120-277	0-10V/PWM/Time Shared	89	21 - 189	530 - 4800	-40	IP67
VPP105XXFVHDB-10V-T-YY	105	277-480	0-10V/PWM/CLOCK DIMMING	91	18 - 150	140 - 4200	-25	IP67
VPP105XXXMVHDB-10V-Y	105	120-277	0-10V / PWM	90	20 - 305	100 - 3300	-25	IP67
VPP120XXXMVHDB-10V-T-AUX	120	120-277	0-10V/PWM/CLOCK DIMMING/dim to off/DALI (option)	92	20 - 305	70 - 4290	-25	IP67
VPP120XXXMVHDU-10V-YY	120	120-277	0-10V/PWM/dim to off	89	20 - 68	1200 - 3750	-25	IP65
VPP150XXFVHDB-10V-T-67	150	277-480	0-10V/PWM/CLOCK DIMMING	85	15 - 283	530 - 6000	-40	IP67
VPP150XXFVHDB-10V-T-YY	150	277-480	0-10V/PWM/CLOCK DIMMING	91	18 - 214	110 - 5000	-40	IP66
VPP150XXXMVHDB-10V-T-AUX	150	120-277	0-10V/PWM/CLOCK DIMMING/dim to off/DALI (option)	90	20 - 335	70 - 5360	-25	IP67
VPP150XXXMVHDB-10V-Y	150	120-277	0-10V / PWM	90	20 - 335	70 - 490	-40	IP67
VPP160XXXMVHDU-10V-YY	160	120-277	0-10V/PWM/dim to off	88	24 - 68	1700 - 5000	-25	IP65
VPP200XXFVHDB-10V-T-YY	200	277-480	0-10V/PWM/CLOCK DIMMING	91	18 - 305	100 - 6600	-25	IP67
VPP200XXXMVHDB-10V-T-AUX	200	120-277	0-10V/PWM/CLOCK DIMMING/dim to off/DALI (option)	90	20 - 445	70 - 7000	-25	IP67
VPP200XXXMVHDB-10V-Y	200	120-277	0-10V / PWM	91	20 - 445	70 - 6300	-25	IP67
VPP200XXXMVHDU-10V-YY	200	120-277	0-10V/PWM/dim to off	88	24 - 68	2000 - 6250	-25	IP65
VPP240XXFVHDB-10V-T-Y	240	277-480	0-10V/PWM/CLOCK DIMMING	92	120 - 342	70 - 1050	-40	IP67
VPP240XXXMVHDB-10V-T-63	240	120-277	0-10V/PWM/Time Shared	93	20 - 453	530 - 12000	-40	IP67
VPP240XXXMVHDB-10V-T-AUX	240	120-277	0-10V/PWM/CLOCK DIMMING/dim to off/DALI (option)	91	20 - 368	110 - 7500	-25	IP67
VPP240XXXMVHDB-10V-Y	240	120-277	0-10V / PWM	92	20 - 368	110 - 7500	-25	IP67
VPP240XXXMVHDU-10V-YY	240	120-277	0-10V/PWM/dim to off	88	24 - 68	2000 - 7500	-25	IP65
VPP320XXFVHDB-10V-T-Y	320	277-480	0-10V/PWM/CLOCK DIMMING	93	183 - 457	70 - 1050	-25	IP67
VPP320XXXMVHDB-10V-Y	320	120-277	0-10V / PWM	93	20 - 457	110 - 13500	-40	IP67
VPL600XXXMVHDA-YY	600	120-277	0-10V / PWM	95	24/30/36/42/48/54	25000	-25	IP67
VPL1200XXXMVHDA-YY	1200	120-277	0-10V / PWM	94	24/30/36/42/48/54	50000	-25	IP67

LED DRIVERS - CONSTANT POWER

CONSTANT POWER							
UL-P	UL	FCC CLASS	CLASS2	LENGTH (L) IN INCHES	WIDTH (W) IN INCHES	HEIGHT (H) IN INCHES	MODEL #
✓		A		6.65	2.50	1.54	VPP42XXXMVHDB-10V-Y
	✓	A	✓	4.00	3.15	1.70	VPP50XXFVHDB-10V-T/C-76
	✓	A		8.15	2.70	1.54	VPP60XXXFVHDB-10V-T-YY
✓		A		6.65	2.50	1.54	VPP60XXXMVHDB-10V-Y
✓		A					VPP60XXXMVHDB-10V-YY
	✓	A		7.00	2.68	1.70	VPP75XXXMVHDB-10V-T-AUX
✓		A		6.46	2.68	1.54	VPP75XXXMVHDB-10V-Y
	✓	A	✓	8.70	2.70	1.40	VPP100XXFVHDB-10V-T-66
	✓	A		7.64	2.66	1.46	VPP100XXFVHDB-10V-T-68
	✓	A		6.18	2.66	1.46	VPP100XXXMVHDB-10V-T-66
	✓	A		8.90	2.70	1.70	VPP105XXFVHDB-10V-T-YY
✓		A		7.00	2.68	1.54	VPP105XXXMVHDB-10V-Y
	✓	A		8.50	2.68	1.70	VPP120XXXMVHDB-10V-T-AUX
		A					VPP120XXXMVHDB-10V-YY
	✓	A		9.50	1.30	1.00	VPP150XXFVHDB-10V-T-67
✓	✓	A		9.70	2.70	1.70	VPP150XXFVHDB-10V-T-YY
	✓	A		8.50	2.68	1.70	VPP150XXXMVHDB-10V-T-AUX
✓	✓	A		8.15	2.68	1.54	VPP150XXXMVHDB-10V-Y
✓		A					VPP160XXXMVHDB-10V-YY
	✓	A		10.00	2.70	1.70	VPP200XXFVHDB-10V-T-YY
	✓	A		9.72	2.68	1.70	VPP200XXXMVHDB-10V-T-AUX
✓		A		8.15	3.15	1.57	VPP200XXXMVHDB-10V-Y
✓		A					VPP200XXXMVHDB-10V-YY
	✓	B		8.78	3.54	1.75	VPP240XXFVHDB-10V-T-Y
	✓	B		8.82	2.66	1.57	VPP240XXXMVHDB-10V-T-63
	✓	A		9.72	2.68	1.70	VPP240XXXMVHDB-10V-T-AUX
		A		9.70	2.68	1.70	VPP240XXXMVHDB-10V-Y
✓		A					VPP240XXXMVHDB-10V-YY
	✓	B		9.88	3.54	1.75	VPP320XXFVHDB-10V-T-Y
	✓	A		9.20	3.86	1.57	VPP320XXXMVHDB-10V-Y
✓		A		11.06	5.70	2.00	VPL600XXXMVHDA-YY
		A		11.70	8.50	3.10	VPL1200XXXMVHDA-YY

LED
MODULES

LED
DRIVERS

LED
DRIVER CASES

LED
LAMPS

LED
RETROFIT KITS

LED EMERGENCY
BATTERY BACK UP

STEP-DOWN
TRANSFORMERS

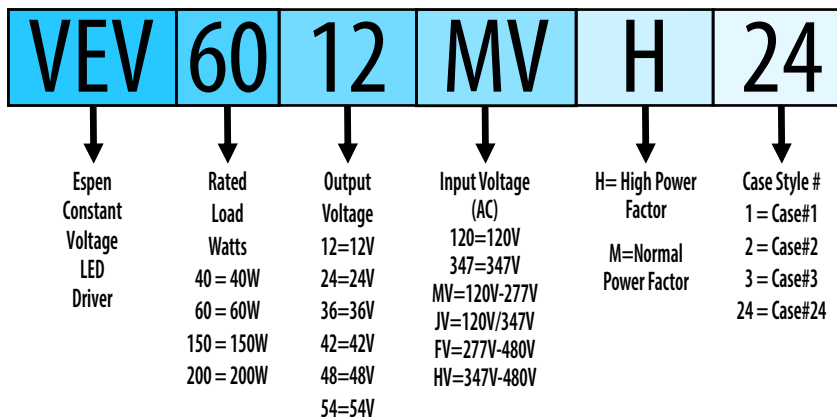
CONTROL
OPTIONS

LED DRIVERS - CONSTANT VOLTAGE

LED Drivers - Constant Voltage Part Number Break Down

Example part number:

VEV6012MVH-24



FEATURES AND BENEFITS

- Constant voltage design
- Active power factor correction on multi-volt models
- Dimming & non-dimming models
- Dimming & non-dimming models
- Dimming & non-dimming models
- 100% full load burn-in test
- 5 year warranty

CONSTANT VOLTAGE							
MODEL #	MAX POWER (W)	Vin	DIMMING	EFFICIENCY AT NOMINAL LOAD	OUTPUT VOLTAGE MAX RANGE	OUTPUT CURRENT RANGE	MIN START TEMP °C
VEV12XXXMVH-51	12	120-277	N/A	80	12/24/48	1000	-25
VEV40XXXMVH-53	40	120-277	N/A	83	9/12/18/24/36/48	4450	-25
VEV6012MVH-88-YY	60	120-277	N/A	89	12	5000	-25
VEV6012MVH-89-YY	60	120-277	N/A	84	12	5000	-40
VEV6024MVH-88-YY	60	120-277	N/A	90	24	2500	-25
VEV6012/24MVH-10T-YY	60	100-277	0-10V/Tria @ 120V/PWM	80	12/24	5000/2500	-30
VEV75XXXMVH-Y	78	120-277	N/A	87	12/24/36/48	6250	-25
VEV96XXMVH-57	96	120-277	N/A	87-89	24/28/36/42/48/54	1770-4000	-25
VEV9624MVH-10T-YY	96	100-277	0-10V/Tria @ 120V/PWM	83	24	4000	-25
VEV10024MVH-91-YY	100	120-277	N/A	88	24	4.15	-40
VEV100XXXMVH-Y	100	120-277	N/A	91	12/24/36/42/48/54/81/105	8330	-25
VEV120XXXMVH-59	120	120-277	N/A	87-89	24/28/36/42/48/54/81/105	1140-10000	-25
VEV150XXXMVH-Y	150	120-277	N/A	92	12/24/36/42/48/54/81/105	12500	-25
VEV200XXXMVH-Y	200	120-277	N/A	92	12/24/36/42/48/50/52/54/81/105	16670	-25
VEV320XXXMVH-Y	320	120-277	N/A	92	12/24/28/36/48/54	22000	-40

LED DRIVERS - CONSTANT VOLTAGE



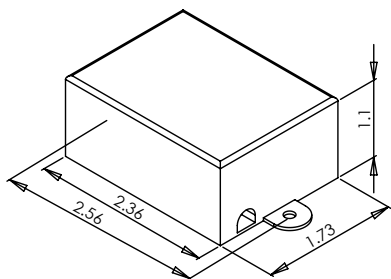
CONSTANT VOLTAGE

IP RATING	UL-P	UL	FCC CLASS	CLASS2	LENGTH (L) IN INCHES	WIDTH (W) IN INCHES	HEIGHT (H) IN INCHES	CASE#	MODEL #
IP67		P	A		3.35	1.42	0.91	51	VEV12XXXMVH-51
IP67		P	A		3.74	2.76	1.26	53	VEV40XXXMVH-53
damp	P	P	B	P	5.84	1.8	1	88	VEV6012MVH-88-YY
damp	P	P	A	P	5.51	1.71	1.18	89	VEV6012MVH-89-YY
damp	P	P	B	P	5.84	1.8	1	88	VEV6024MVH-88-YY
IP25		P	A	P	7.56	2.76	1.34	90	VEV6012/24MVH-10T-YY
IP67		P	A		6.46	2.68	1.54	92	VEV75XXXMVH-Y
IP67		P	A		7.91	2.66	1.46	57	VEV96XXXMVH-57
IP25		P	A		8.70	2.87	1.34	93	VEV9624MVH-10T-YY
damp	P	P	B	P	9.5	1.7	1	91	VEV10024MVH-91-YY
IP67		P	A		7.00	2.68	1.54	94	VEV100XXXMVH-Y
IP67		P			8.70	2.66	1.46	59	VEV120XXXMVH-59
IP67		P	A		8.15	2.68	1.54	95	VEV150XXXMVH-Y
IP67		P	A		9.13	2.68	1.70	96	VEV200XXXMVH-Y
IP67		P	A		9.20	3.86	1.57	97	VEV320XXXMVH-Y

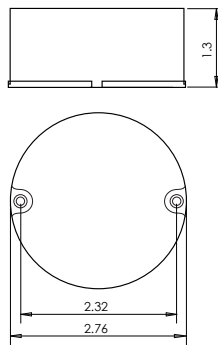
LED DRIVER CASES

LED MODULES

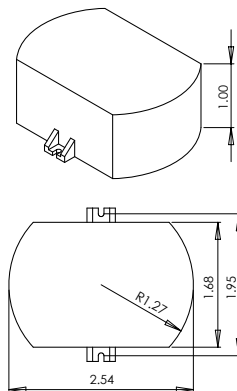
Case 1



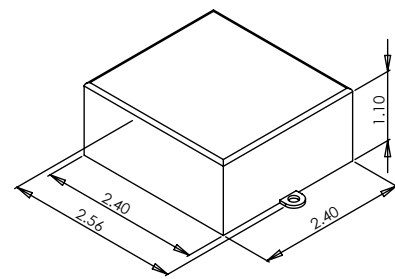
Case 2



Case 3



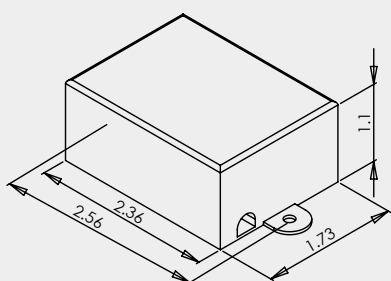
Case 4



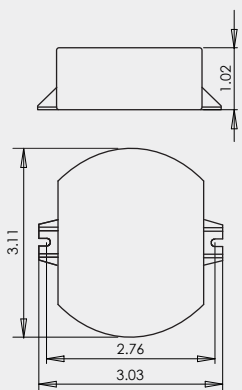
LED DRIVERS

LED DRIVER CASES

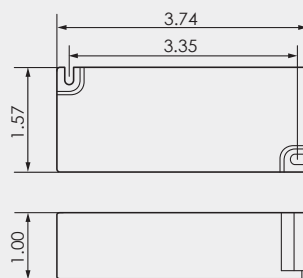
Case 5



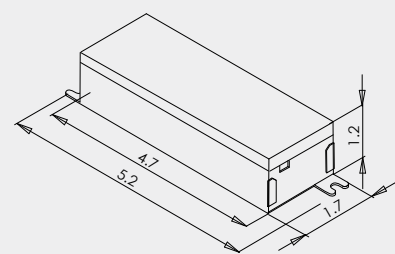
Case 11



Case 13



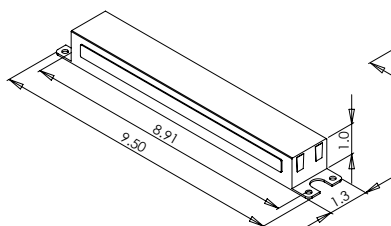
Case 25



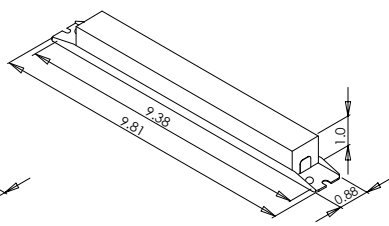
LED LAMPS

LED RETROFIT KITS

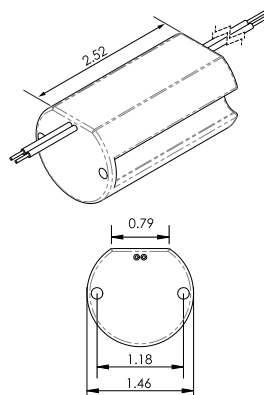
Case 27



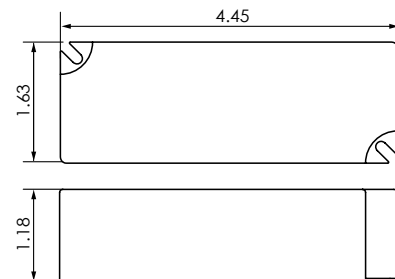
Case 29



Case 32



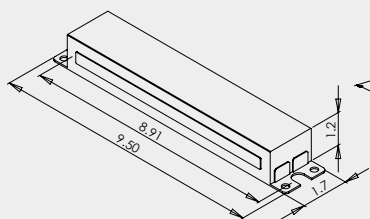
Case 33



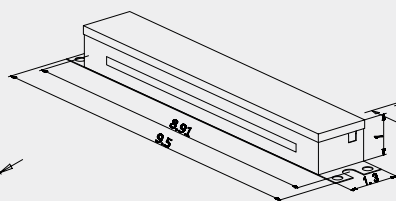
LED EMERGENCY BATTERY BACKUP

STEP-DOWN TRANSFORMERS

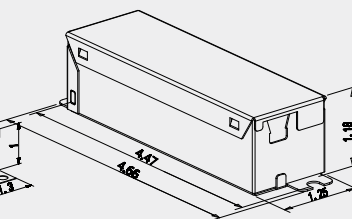
Case 35



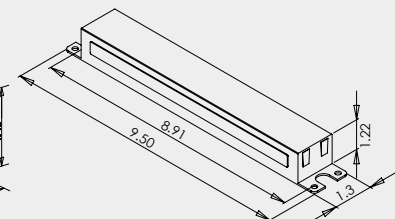
Case 42



Case 43



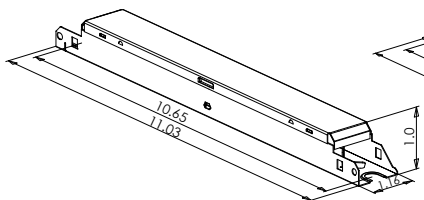
Case 47



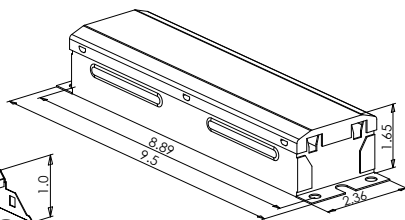
CONTROL OPTIONS

LED DRIVER CASES

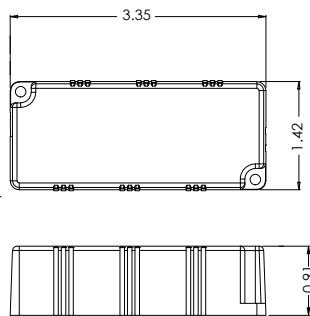
Case 49



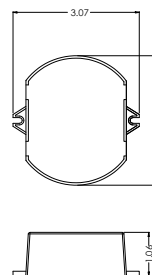
Case 50



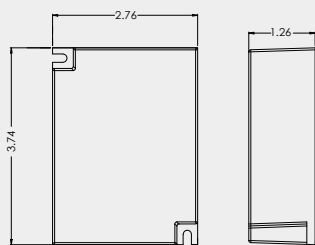
Case 51



Case 52



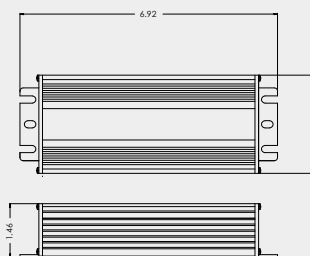
Case 53



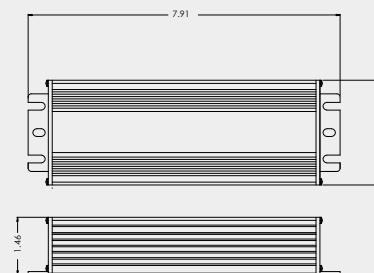
Case 54



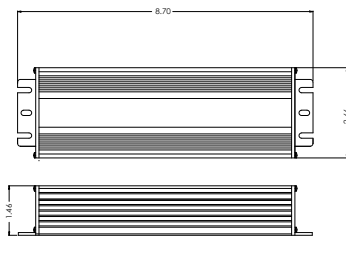
Case 55



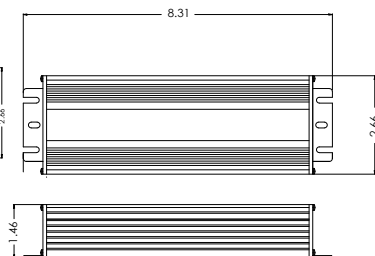
Case 57



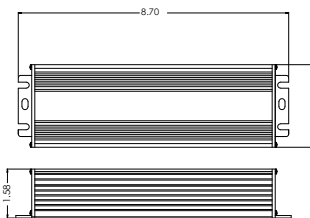
Case 58



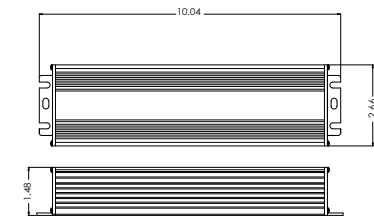
Case 59



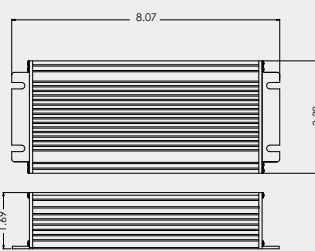
Case 62



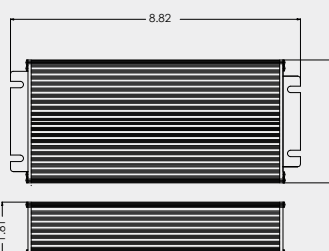
Case 63



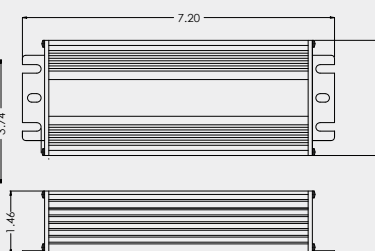
Case 64



Case 65



Case 66



Case 67



LED
MODULES

LED
DRIVERS

LED
DRIVER CASES

LED
LAMPS

LED
RETROFIT KITS

LED EMERGENCY
BATTERY BACK UP

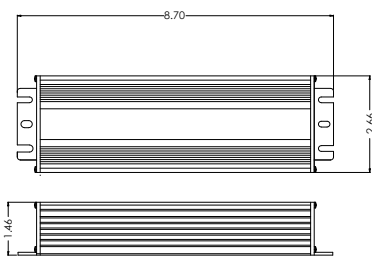
STEP-DOWN
TRANSFORMERS

CONTROL
OPTIONS

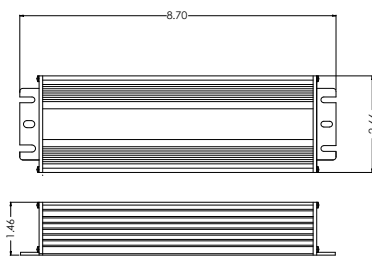
LED DRIVER CASES

LED MODULES

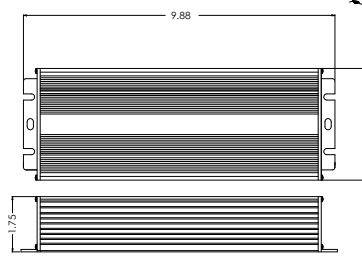
Case 68



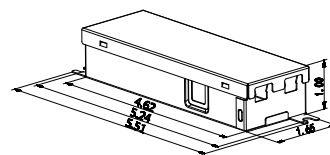
Case 69



Case 70



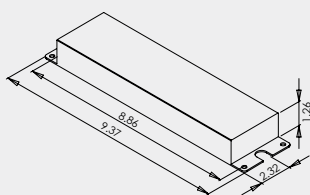
Case 71



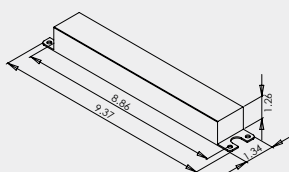
LED DRIVERS

LED DRIVER CASES

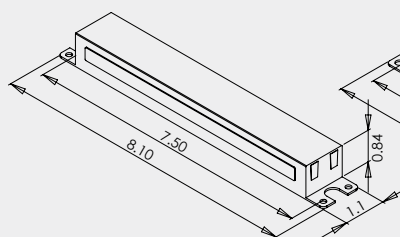
Case 72



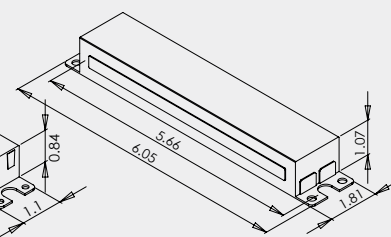
Case 73



Case 74



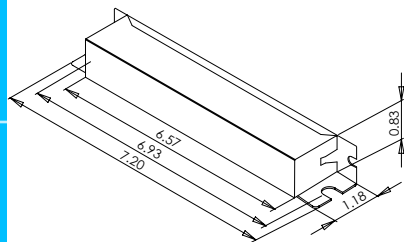
Case 80



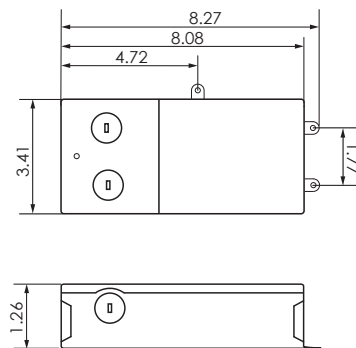
LED LAMPS

LED RETROFIT KITS

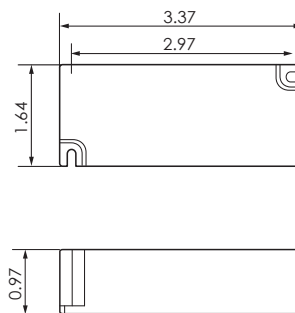
Case 81



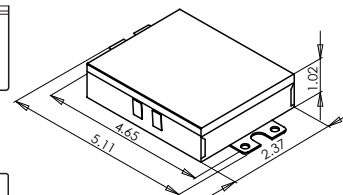
Case 82



Case 83



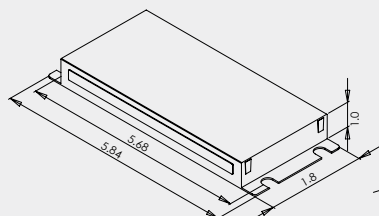
Case 84



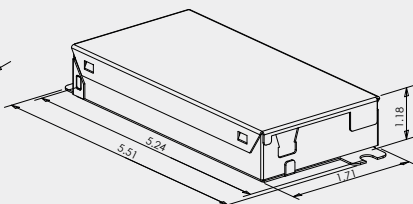
LED EMERGENCY BATTERY BACKUP

STEP-DOWN TRANSFORMERS

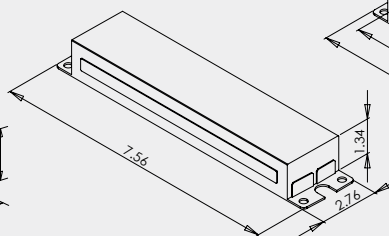
Case 88



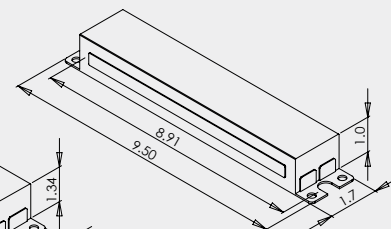
Case 89



Case 90



Case 91



CONTROL OPTIONS



LED LAMPS

LED
MODULES

Flex™

LED LAMPS WITH INTERNAL DRIVER | Type B

LED
DRIVERS

LED
DRIVER CASES

LED
LAMPS

LED
RETROFIT KITS

LED EMERGENCY
BATTERY BACK UP

STEP-DOWN
TRANSFORMERS

CONTROL
OPTIONS



compact LED

Internal Driver, Convenient Installation, Instant on with no delay or warm up time, High CRI, 5 year warranty



linear LED

Med. Bi-pin, Internal Driver, DLC Listed, Glass tube for superior optical performance, Utilizes unshunted (rapid start) sockets, Long Life *Also available in 0-10V dimming

8 ft lamps

360° Sign Lamps LED

Double-sided design. Rotatable endcaps, Compatible with sensors, Utilizes R17d sockets, Input from both ends



LED FT lamps LED

Utilizes current 2G11 sockets, Internal Driver, Compatible with controls and sensors, Instant On

Flex™ LED Solutions with Internal Driver

HID Lamps LED

Approved for totally enclosed fixture, 4KV Surge protection, IP65 for wet location, High efficiency



emergency inverter

90 Minute Illumination Time



accessories

PLL Brackets, PLL Lamp Sockets, Unshunted sockets, G13, CFQ sockets



Espen Flex LED Lamps

Espen Flex LED lamps have an internal driver that frees linear luminaires from old fluorescent ballasts and lamps. The lamp works directly off of line input voltage 120-277V. Flex lamps make convenient and effective retrofit solutions for any old T12 system, especially with magnetic ballasts. Simply remove the old fluorescent ballast and wire line voltage directly to one side of the unshunted lamp holder. Flex lamps can save you up to 50% of system power, while maintaining or increasing illumination levels. Flex lamps come in a range of sizes, including linear 2ft, 3ft, 4ft, 5ft, 6ft, and 8ft.

DIRECT WIRE (TYPE B) LED LAMPS DUAL END WIRING

Flex™ DE

AC Direct Input HO LED T5 Lamps | Double End Input

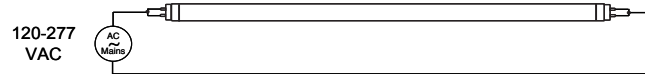


FEATURES AND BENEFITS

- Double Ended Bypass Connection
- Internal Driver
- Glass Tube for Optimal Light Output and Heat Dissipation
- -20° F to 130° F Ambient Operating Temperature
- Frosted to Prevent Glare
- Suitable for Damp Locations
- 240° Wide Beam Angle
- 5 Year Warranty



WIRING DIAGRAM



Model No.	Replaces	Length (in)	Lamp Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Voltage (V)	CCT (K)	CRI	Life (h)
HO Linear T5									
L48T5/830/25G-ID DE	F54T5HO	48	25	3500	140	120 - 277	3000+	80+	50000
L48T5/835/25G-ID DE	F54T5HO	48	25	3500	140	120 - 277	3500	80+	50000
L48T5/840/25G-ID DE	F54T5HO	48	25	3500	140	120 - 277	4000	80+	50000
L48T5/850/25G-ID DE	F54T5HO	48	25	3500	140	120 - 277	5000	80+	50000

+ 3000K CCT may be subject to lead times and availability.



DIRECT WIRE (TYPE B) LED LAMPS 0-10V DIMMING COMPATIBLE

LED MODULES

Flex™

AC Direct Input LED T8 Lamps | Single End Input 0-10V Dimming

LED DRIVERS



FEATURES AND BENEFITS

- Single Ended Bypass Connection with Non-Shunted Tombstones
- 0-10V Dimmable
- Internal Driver
- Glass Tube for Optimal Light Output and Heat Dissipation
- -20° F to 130° F Ambient Operating Temperature
- Frosted to Prevent Glare
- Suitable for Damp Locations
- 325° Wide Beam Angle
- 5 Year Warranty



NO
Shunted
Instant Start Socket



YES
Unshunted
Rapid Start Socket

WIRING DIAGRAM



LED LAMPS

LED RETROFIT KITS

Model No.	Replaces	Length (in)	Lamp Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Input Voltage (V)	CCT (K)	CRI	Life (h)
Linear T8									
L24T8/830/9G-ID-10V	F17T8	24	9	1100	122	120 - 277	3000+	83+	50000
L24T8/835/9G-ID-10V	F17T8	24	9	1100	122	120 - 277	3500	83+	50000
L24T8/840/9G-ID-10V	F17T8	24	9	1100	122	120 - 277	4000	83+	50000
L24T8/850/9G-ID-10V	F17T8	24	9	1100	122	120 - 277	5000	83+	50000
L36T8/830/12G-ID-10V ¹	F25T8	36	12	1400	117	120 - 277	3000+	83+	50000
L36T8/835/12G-ID-10V ¹	F25T8	36	12	1400	117	120 - 277	3500	83+	50000
L36T8/840/12G-ID-10V ¹	F25T8	36	12	1400	117	120 - 277	4000	83+	50000
L36T8/850/12G-ID-10V ¹	F25T8	36	12	1400	117	120 - 277	5000	83+	50000
L48T8/830/14G-ID-10V	F32T8	48	14	1800	129	120 - 277	3000+	83+	50000
L48T8/835/14G-ID-10V	F32T8	48	14	1800	129	120 - 277	3500	83+	50000
L48T8/840/14G-ID-10V	F32T8	48	14	1800	129	120 - 277	4000	83+	50000
L48T8/850/14G-ID-10V	F32T8	48	14	1800	129	120 - 277	5000	83+	50000
L48T8/830/17G-ID-10V	F32T8	48	18	2200	129	120 - 277	3000+	83+	50000
L48T8/835/17G-ID-10V	F32T8	48	18	2200	129	120 - 277	3500	83+	50000
L48T8/840/17G-ID-10V	F32T8	48	18	2200	129	120 - 277	4000	83+	50000
L48T8/850/17G-ID-10V	F32T8	48	18	2200	129	120 - 277	5000	83+	50000

¹ Not DLC listed. DLC does not regulate 3 foot lamps.
⁺ 3000K CCT may be subject to lead times and availability.

LED EMERGENCY BATTERY BACKUP

STEP-DOWN TRANSFORMERS

CONTROL OPTIONS

DIRECT WIRE (TYPE B) LED LAMPS DUAL END WIRING

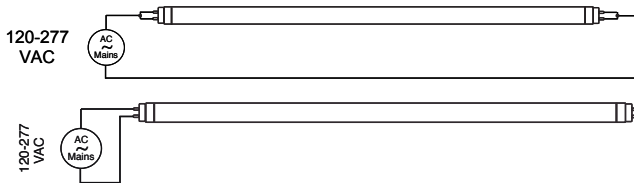
Flex™

Linear T8 Lamps | Double End Input



FEATURES AND BENEFITS

- Double Ended Bypass Connection with Shunted or Non-Shunted Tombstones
- Internal Driver
- Glass Tube for Optimal Light Output and Heat Dissipation
- -20° F to 130° F Ambient Operating Temperature
- Instant on, No delay
- Convenient and quick installation
- Frosted to Prevent Glare
- Suitable for Damp Locations
- 325° Wide Beam Angle
- 5 Year Warranty



Model No.	Replaces	Length (in)	Lamp Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Input Voltage (V)	CCT (K)	CRI	Life (h)
Linear T8									
L24T8/830/9G-ID DE	F17T8	24	9	1100	122	120 - 277	3000+	83+	50000
L24T8/835/9G-ID DE	F17T8	24	9	1100	122	120 - 277	3500	83+	50000
L24T8/840/9G-ID DE	F17T8	24	9	1100	122	120 - 277	4000	83+	50000
L24T8/850/9G-ID DE	F17T8	24	9	1100	122	120 - 277	5000	83+	50000
L36T8/830/12G-ID DE	F25T8	36	12	1400	117	120 - 277	3000+	83+	50000
L36T8/835/12G-ID DE	F25T8	36	12	1400	117	120 - 277	3500	83+	50000
L36T8/840/12G-ID DE	F25T8	36	12	1400	117	120 - 277	4000	83+	50000
L36T8/850/12G-ID DE	F25T8	36	12	1400	117	120 - 277	5000	83+	50000
L48T8/830/14G-ID DE	F32T8	48	14	1800	129	120 - 277	3000+	83+	50000
L48T8/835/14G-ID DE	F32T8	48	14	1800	129	120 - 277	3500	83+	50000
L48T8/840/14G-ID DE	F32T8	48	14	1800	129	120 - 277	4000	83+	50000
L48T8/850/14G-ID DE	F32T8	48	14	1800	129	120 - 277	5000	83+	50000
L48T8/830/17G-ID DE	F32T8	48	17	2200	122	120 - 277	3000+	83+	50000
L48T8/835/17G-ID DE	F32T8	48	17	2200	122	120 - 277	3500	83+	50000
L48T8/840/17G-ID DE	F32T8	48	17	2200	122	120 - 277	4000	83+	50000
L48T8/850/17G-ID DE	F32T8	48	17	2200	122	120 - 277	5000	83+	50000

+ May be subject to lead times and availability.

DIRECT WIRE (TYPE B) LED LAMPS DUAL END WIRING

LED MODULES

Flex™ ArmorCoat™

AC Direct Input Slimline LED T8 Lamps | Double End Input

LED DRIVERS



Anti-Rotation Bracket for 8ft

LED DRIVER CASES

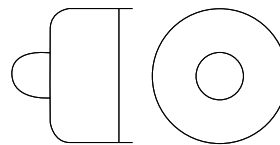
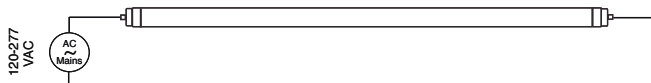
FEATURES AND BENEFITS

- Double Ended Bypass Connection
- Internal Driver
- **ArmorCoat™** Shatterproof Coating
- Glass Tube for Optimal Light Output and Heat Dissipation
- -20° F to 130° F Ambient Operating Temperature
- Bracket Included
- Frosted to Prevent Glare
- Suitable for Damp Locations
- 325° Wide Beam Angle
- 5 Year Warranty



LED LAMPS

WIRING DIAGRAM



Fa8 Base Single Pin

LED RETROFIT KITS

Model No.	Base Type	Replaces	Length (in)	Lamp Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Input Voltage (V)	CCT (K)	CRI	Life (h)
Slimline Linear T8										
L60T8SL/830/15G-ID DE	FA8	F60T8, F60T12	60	15	2200	147	120 - 277	3000+	83+	50000
L60T8SL/835/15G-ID DE	FA8	F60T8, F60T12	60	15	2200	147	120 - 277	3500+	83+	50000
L60T8SL/840/15G-ID DE	FA8	F60T8, F60T12	60	15	2200	147	120 - 277	4000+	83+	50000
L60T8SL/850/15G-ID DE	FA8	F60T8, F60T12	60	15	2200	147	120 - 277	5000+	83+	50000
L72T8SL/830/18G-ID DE	FA8	F72T8, F72T12	72	18	2700	150	120 - 277	3000+	83+	50000
L72T8SL/835/18G-ID DE	FA8	F72T8, F72T12	72	18	2700	150	120 - 277	3500+	83+	50000
L72T8SL/840/18G-ID DE	FA8	F72T8, F72T12	72	18	2700	150	120 - 277	4000+	83+	50000
L72T8SL/850/18G-ID DE	FA8	F72T8, F72T12	72	18	2700	150	120 - 277	5000+	83+	50000
L96T8/830/24G-ID DE	FA8	F96T8, F96T12	96	24	3500	146	120 - 277	3000+	83+	50000
L96T8/835/24G-ID DE	FA8	F96T8, F96T12	96	24	3500	146	120 - 277	3500	83+	50000
L96T8/840/24G-ID DE	FA8	F96T8, F96T12	96	24	3500	146	120 - 277	4000	83+	50000
L96T8/850/24G-ID DE	FA8	F96T8, F96T12	96	24	3500	146	120 - 277	5000	83+	50000
L96T8HO/830/42G-ID DE	FA8	F96T8, F96T12	96	42	5500	131	120 - 277	3000+	83+	50000
L96T8HO/835/42G-ID DE	FA8	F96T8, F96T12	96	42	5500	131	120 - 277	3500	83+	50000
L96T8HO/840/42G-ID DE	FA8	F96T8, F96T12	96	42	5500	131	120 - 277	4000	83+	50000
L96T8HO/850/42G-ID DE	FA8	F96T8, F96T12	96	42	5500	131	120 - 277	5000	83+	50000

+ May be subject to lead times and availability.

STEP-DOWN TRANSFORMERS

CONTROL OPTIONS

DIRECT WIRE (TYPE B) LED LAMPS DUAL END WIRING

Flex™ ArmorCoat™

AC Direct Input HO/VHO LED T8 Lamps | Double End Input

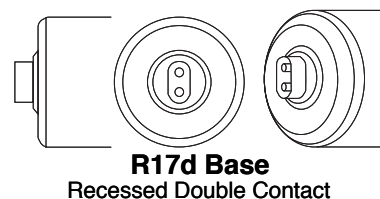
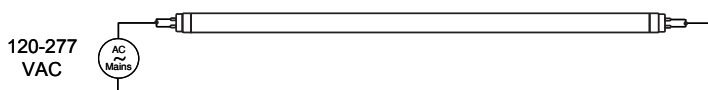


FEATURES AND BENEFITS

- Double Ended Bypass Connection
- Internal Driver
- **ArmorCoat™** Shatterproof Coating
- Glass Tube for Optimal Light Output and Heat Dissipation
- -20° F to 130° F Ambient Operating Temperature
- Integrated Thermal Fuse Protection
- Frosted to Prevent Glare
- Suitable for Damp Locations
- 325° Wide Beam Angle
- 5 Year Warranty



WIRING DIAGRAM



Model No.	Base Type	Replaces	Length (in)	Lamp Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Input Voltage (V)	CCT (K)	CRI	Life (h)
HO/VHO Linear T8										
L60T8HO/830/15G-ID DE	R17d	F60T12 HO/VHO	60	15	2200	147	120 - 277	3000+	83+	50000
L60T8HO/835/15G-ID DE	R17d	F60T12 HO/VHO	60	15	2200	147	120 - 277	3500+	83+	50000
L60T8HO/840/15G-ID DE	R17d	F60T12 HO/VHO	60	15	2200	147	120 - 277	4000+	83+	50000
L60T8HO/850/15G-ID DE	R17d	F60T12 HO/VHO	60	15	2200	147	120 - 277	5000+	83+	50000
L72T8HO/830/18G-ID DE	R17d	F72T12 HO/VHO	72	18	2700	150	120 - 277	3000+	83+	50000
L72T8HO/835/18G-ID DE	R17d	F72T12 HO/VHO	72	18	2700	150	120 - 277	3500+	83+	50000
L72T8HO/840/18G-ID DE	R17d	F72T12 HO/VHO	72	18	2700	150	120 - 277	4000+	83+	50000
L72T8HO/850/18G-ID DE	R17d	F72T12 HO/VHO	72	18	2700	150	120 - 277	5000+	83+	50000
L96T8HO/830/42G-ID DE	R17d	F96T8, F96T12 HO/VHO	96	42	5500	131	120 - 277	3000+	83+	50000
L96T8HO/835/42G-ID DE	R17d	F96T8, F96T12 HO/VHO	96	42	5500	131	120 - 277	3500	83+	50000
L96T8HO/840/42G-ID DE	R17d	F96T8, F96T12 HO/VHO	96	42	5500	131	120 - 277	4000	83+	50000
L96T8HO/850/42G-ID DE	R17d	F96T8, F96T12 HO/VHO	96	42	5500	131	120 - 277	5000	83+	50000

+ May be subject to lead times and availability.

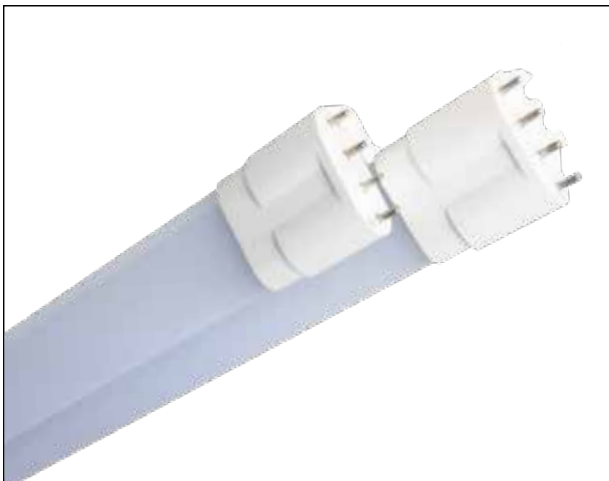
DIRECT WIRE (TYPE B) LED LAMPS

LED
MODULES

Flex™

LED FT Lamps

LED
DRIVERS



LED
DRIVER CASES

FEATURES AND BENEFITS

- Internal Driver
- Smooth, Consistent Light
- UL for Safety
- No UV, No Mercury
- Long Life
- High CRI
- Instant on, no delay or warm up time
- Convenient and quick installation
- Utilizes current lamp sockets
- Compatible with controls and sensors
- -20° F to 130° F Ambient Operating Temperature
- 5 Year Warranty

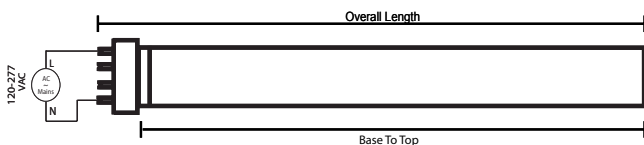


LED
LAMPS

Model No.	Replaces	Lamp Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Input Voltage (V)	CCT (K)	CRI	Life (h)
Compact LED Lamps								
LT18W/835-ID	FT18W	8	640	80	120 - 277	3500	83+	50000
LT18W/840-ID	FT18W	8	640	80	120 - 277	4000	83+	50000
LT18W/850-ID	FT18W	8	640	80	120 - 277	5000	83+	50000
LT24W/835-ID	FT24W	10	800	80	120 - 277	3500	83+	50000
LT24W/840-ID	FT24W	10	800	80	120 - 277	4000	83+	50000
LT24W/850-ID	FT24W	10	800	80	120 - 277	5000	83+	50000
LT36W/835-ID	FT36W	15	1200	80	120 - 277	3500	83+	50000
LT36W/840-ID	FT36W	15	1200	80	120 - 277	4000	83+	50000
LT36W/850-ID	FT36W	15	1200	80	120 - 277	5000	83+	50000
LT40W/835-ID	FT40W/FT55W	18	1800	80	120 - 277	3500	83+	50000
LT40W/840-ID	FT40W/FT55W	18	1800	80	120 - 277	4000	83+	50000
LT40W/850-ID	FT40W/FT55W	18	1800	80	120 - 277	5000	83+	50000

LED
RETROFIT KITS

WIRING DIAGRAM



LT series	Overall Length (mm)	Base Face to Top (mm)
Dimensions		
LT40	540	493
LT36	421	374
LT24	326	278
LT18	231	183

LED
EMERGENCY BATTERY BACKUP

STEP-DOWN
TRANSFORMERS

CONTROL
OPTIONS

DIRECT WIRE (TYPE B) LED LAMPS

Flex™

AC Direct Input Compact LED Lamps | Single End Input



FEATURES AND BENEFITS

- Compatible with 2-Pin and 4-Pin Sockets
- Internal Driver
- -20° F to 130° F Ambient Operating Temperature
- Frosted to Prevent Glare
- Suitable for Damp Locations
- 5 Year Warranty



Model No.	Replaces	Lamp Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Input Voltage (V)	CCT (K)	CRI	Life (h)
Compact LED Lamps								
CLD18WH/830-ID	18W, 26W, 32W, 42W CFQ	8	950	118	120 - 277	3000+	83+	50000
CLD18WH/835-ID	18W, 26W, 32W, 42W CFQ	8	950	118	120 - 277	3500	83+	50000
CLD18WH/840-ID	18W, 26W, 32W, 42W CFQ	8	950	118	120 - 277	4000	83+	50000
CLD18WH/850-ID	18W, 26W, 32W, 42W CFQ	8	950	118	120 - 277	5000	83+	50000
CLD18WV/830-ID	18W, 26W, 32W, 42W CFQ	8	950	118	120 - 277	3000+	83+	50000
CLD18WV/835-ID	18W, 26W, 32W, 42W CFQ	8	950	118	120 - 277	3500	83+	50000
CLD18WV/840-ID	18W, 26W, 32W, 42W CFQ	8	950	118	120 - 277	4000	83+	50000
CLD18WV/850-ID	18W, 26W, 32W, 42W CFQ	8	950	118	120 - 277	5000	83+	50000

+ May be subject to lead times and availability.



360° BEAM SPREAD SIGN LAMPS DUAL ENDED WIRING

LED MODULES

Flex™

360° Sign Lamps

LED DRIVERS



LED DRIVER CASES

FEATURES AND BENEFITS

- Double-sided Design Sign Light
- 360° Beam Angle
- Rotatable End Caps
- Internal Driver
- Compatible with Sensors
- Instant On, No Delay or Warm Up Time
- Convenient and Quick Installation
- Input from Both Ends
- Utilizes R17d Sockets
- Works in Cold Temperature Applications
- Plastic tube is shatterproof
- No UV, No Mercury
- UL for Safety
- High CRI
- 5 Year Warranty

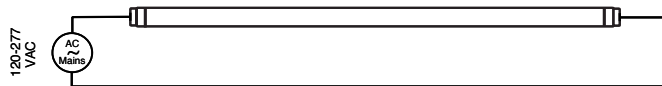


LED LAMPS

Model No.	Length	Base Type	Lamp Wattage	Input Voltage (V)	CCT (K)	Initial Lumens	CRI	Beam Angle	Lamp Efficacy (lm/W)	Power Factor	THD
360° Sign Lamps											
LS48T8HO/840/21P-ID DE	48	R17d	21	120 - 277	4000	2500	83+	360	120	>0.90	<20%
LS48T8HO/865/21P-ID DE	48	R17d	21	120 - 277	6500	2500	83+	360	120	>0.90	<20%
LS60T8HO/840/25P-ID DE	60	R17d	25	120 - 277	4000	3125	83+	360	120	>0.90	<20%
LS60T8HO/865/25P-ID DE	60	R17d	25	120 - 277	6500	3125	83+	360	120	>0.90	<20%
LS72T8HO/840/32P-ID DE	72	R17d	32	120 - 277	4000	3750	83+	360	120	>0.90	<20%
LS72T8HO/865/32P-ID DE	72	R17d	32	120 - 277	6500	3750	83+	360	120	>0.90	<20%
LS96T8HO/840/42P-ID DE	96	R17d	42	120 - 277	4000	5000	83+	360	120	>0.90	<20%
LS96T8HO/865/42P-ID DE	96	R17d	42	120 - 277	6500	5000	83+	360	120	>0.90	<20%

LED RETROFIT KITS

WIRING DIAGRAM



LED EMERGENCY BATTERY BACK UP

STEP-DOWN TRANSFORMERS

CONTROL OPTIONS

Flex™

HID Replacement Lamps



DAMP LOCATION



WET LOCATION

FEATURES AND BENEFITS

- High Efficiency, >130lm/w
- Damp location HID, 4KV Surge Protection
- Wet location HID, IP65, 4KV Surge Protection
- Approved for Totally Enclosed Fixture
- Excellent Thermal Design of Chimney Effect
- Voltage 120-277V
- Internal Driver
- Smooth, Consistent Light
- UL for Safety
- No UV, No Mercury
- Long Life
- High CRI
- Convenient and Quick Installation
- 5 Year Warranty
- Superior Wide View Angle



Damp Location HID Lamp						
Model No.	Watt	Equal to HID	Lumen	_s CRI	Base	Dimensions (mm)
HDE70/8XX/18W-ID	18	70	2300	80	E26E	26 dia. 60 X 173
HDE100/8XX/27W-ID	27	100	3510	80	E26/E39E	26 dia. 70 X 184
HDM100/8XX/27W-ID	27	100	3510	80	E26/E39E	26 dia. 70 X 193
HDE150/8XX/36W-ID	36	150	4680	80	E26/E39E	26 dia. 90 X 239
HDM150/8XX/36W-ID	36	150	4680	80	E26/E39E	39 dia. 90 X 239
HDE175/8XX/45W-ID	45	175	6000	80	E26/E39E	26 dia. 90 X 239
HDM175/8XX/45W-ID	45	175	6000	80	E26/E39E	39 dia. 90 X 239
HDE250/8XX/54W-ID	54	250	7020	80	E26/E39E	26 dia. 90 X 236
HDM250/8XX/54W-ID	54	250	7020	80	E26/E39E	39 dia. 90 X 245
HDM320/8XX/80W-ID	80	320	10400	80	E39E	39 dia. 124 X 259
HDM400/8XX/10W-ID	100	400	13000	80	E39E	39 dia. 150 X 269

Wet Location HID Lamps IP65						
Model No.	Watt	Equal to HID	Lumen	CRI	Base	Dimensions (mm)
HDE70/8XX/18W-ID WP	18	70	2300	80	E26E	26 dia. 70 X 175
HDE100/8XX/27W-ID WP	27	100	3510	80	E26E	26 dia. 70 X 190
HDE150/8XX/36W-ID WP	36	150	4680	80	E26/E39E	26 dia. 90 X 220
HDM150/8XX/36W-ID WP	36	150	4680	80	E26/E39E	39 dia. 70 X 229
HDE175/8XX/45W-ID WP	45	175	6000	80	E26/E39E	26 dia. 90 X 235
HDM175/8XX/45W-ID WP	45	175	6000	80	E26/E39E	39 dia. 70 X 244
HDE250/8XX/54W-ID WP	54	250	7020	80	E26/E39E	26 dia. 90 X 250
HDM250/8XX/54W-ID WP	54	250	7020	80	E26/E39E	39 dia. 90 X 259
HDM320/8XX/80W-ID WP	80	320	10400	80	E39E	39 dia. 110 X 269
HDE400/8XX/100W-ID WP	100	400	13000	80	E39E	39 dia. 130 X 278

TYPE C LED LAMPS EXTERNAL DRIVER



LED LAMP WITH EXTERNAL DRIVER | Type C



linear^{LED}

G13 or G5, External Driver
Dimmable, Long Life, Convenient Wiring



driver^{LED}

Constant Current
Multi-Channel 0-10V & power line dimming
Available in Programmable & Field Adjustable



emergency driver

Constant light output,
Auto LED load sensing



LED programmer

Adjusts drivers' power, current,
dimming levels and delay timer



module^{LED}

Safe Push-in Connection, Dimmable,
Long Life, Uniform Light Distribution,
Complete Thermal Solution, Suitable for
DLC applications



ESPEN CORETECH LED SYSTEM

LED lamps with external driver for full controllability Espen's CoreTech LED system consists of industry-leading LED lamps and programmable multi-channel drivers. The CoreTech system utilizes the exact same wiring diagram as fluorescent ballasts. The upgrade is handled the same as replacing an electronic ballast and lamps. Your facility can save up to 50% of system power while maintaining or increasing illumination levels.

The CoreTech multi-channel design permits all lamps to work independently to prevent total darkness when one lamp fails. The user-friendly programmability allows you to set the same system for normal output, high output, or low output, to match your application requirements.

TYPE C LED LAMPS EXTERNAL DRIVER



LED T5 HE & HO LAMP WITH EXTERNAL DRIVER | Type C



FEATURES AND BENEFITS

- No Polarity, Lamp Ends Can Be Reversed
- Compatible with Controls and Sensors
- Glass Tube for Optimal Light Output and Heat Dissipation
- 50,000 Hours Life with No Limitation on On/Off Cycles
- -20° F to 130° F Ambient Operating Temperature
- 1 or 2 Lamps Compatible with Espen VPL50 LED Driver¹
- 3 or 4 Lamps Compatible with Espen VPL100 LED Driver¹
- 240° Wide Beam Angle
- Dimmable
- 5 Year Warranty



Model No.	Length (in)	Driver Current	Replaces	Lamp Power (W)	System Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Lamp Voltage (V)	CCT (K)	CRI	Life (h)	Current Settings
Linear T8												
L24T5/830/11G-XT	24	Normal	F14TSHE	9	12	1300	144	120 - 277	3000+	82+	50000	360mA
		High	F24TSHO	12	15	1700	142					500mA
L24T5/835/11G-XT	24	Normal	F14TSHE	9	12	1300	144	120 - 277	3500	82+	50000	360mA
		High	F24TSHO	12	15	1700	142					500mA
L24T5/840/11G-XT	24	Normal	F14TSHE	9	12	1300	144	120 - 277	4000	82+	50000	360mA
		High	F24TSHO	12	15	1700	142					500mA
L24T5/850/11G-XT	24	Normal	F14TSHE	9	12	1300	144	120 - 277	5000	82+	50000	360mA
		High	F24TSHO	12	15	1700	142					500mA
L36T5/830/18G-XT	36	Normal	F21TSHE	13	16	1900	146	120 - 277	3000+	82+	50000	360mA
		High	F39TSHO	18	21	2500	139					500mA
L36T5/835/18G-XT	36	Normal	F21TSHE	13	16	1900	146	120 - 277	3500	82+	50000	360mA
		High	F39TSHO	18	21	2500	139					500mA
L36T5/840/18G-XT	36	Normal	F21TSHE	13	16	1900	146	120 - 277	4000	82+	50000	360mA
		High	F39TSHO	18	21	2500	139					500mA
L36T5/850/18G-XT	36	Normal	F21TSHE	13	16	1900	146	120 - 277	5000	82+	50000	360mA
		High	F39TSHO	18	21	2500	139					500mA
L48T5/830/24G-XT	48	Normal	F28TSHE	15	18	2300	153	120 - 277	3000+	82+	50000	360mA
		High	F54TSHO	24	27	3300	138					500mA
L48T5/835/24G-XT	48	Normal	F28TSHE	15	18	2300	153	120 - 277	3500	82+	50000	360mA
		High	F54TSHO	24	27	3300	138					500mA
L48T5/840/24G-XT	48	Normal	F28TSHE	15	18	2300	153	120 - 277	4000	82+	50000	360mA
		High	F54TSHO	24	27	3300	138					500mA
L48T5/850/24G-XT	48	Normal	F28TSHE	15	18	2300	153	120 - 277	5000	82+	50000	360mA
		High	F54TSHO	24	27	3300	138					500mA

¹ See VPL50 and VPL100 specifications.

+ 3000K CCT may be subject to lead times and availability.

LED MODULES
LED DRIVERS
LED DRIVER CASES
LED LAMPS
LED RETROFIT KITS
LED EMERGENCY BATTERY BACK UP
STEP-DOWN TRANSFORMERS
CONTROL OPTIONS

TYPE C LED LAMPS EXTERNAL DRIVER



LED T8 LAMP WITH EXTERNAL DRIVER | Type C



FEATURES AND BENEFITS

- No Polarity, Lamp Ends Can Be Reversed
- -20° F to 130° F Ambient Operating Temperature
- Glass Tube for Optimal Light Output and Heat Dissipation
- 50,000 Hours Life with No Limitation on On/Off Cycles
- 1 or 2 Lamps Compatible with Espen VPL50 030/036 LED Driver¹
- 3 or 4 Lamps Compatible with Espen VPL100 030/036 LED Driver¹
- 325° Wide Beam Angle
- Dimmable
- 5 Year Warranty



Model No.	Length (in)	Driver Current	Replaces	Lamp Power (W)	System Power (W)	Lumens (lm)	Lamp Efficacy (lm/W)	Lamp Voltage (V)	CCT (K)	CRI	Life (h)	Current Settings
Linear T8												
L24T8/830/8G-XT	24	Normal	F17T8	8	11	1200	150	120 - 277	3000+	82+	50000	300mA
		High		10	13	1400	140					360mA
L24T8/835/8G-XT	24	Normal	F17T8	8	11	1200	150	120 - 277	3500	82+	50000	300mA
		High		10	13	1400	140					360mA
L24T8/840/8G-XT	24	Normal	F17T8	8	11	1200	150	120 - 277	4000	82+	50000	300mA
		High		10	13	1400	140					360mA
L24T8/850/8G-XT	24	Normal	F17T8	8	11	1200	150	120 - 277	5000	82+	50000	300mA
		High		10	13	1400	140					360mA
L36T8/830/11G-XT	36	Normal	F25T8	11	14	1600	145	120 - 277	3000+	82+	50000	300mA
		High		13	16	1900	146					360mA
L36T8/835/11G-XT	36	Normal	F25T8	11	14	1600	145	120 - 277	3500	82+	50000	300mA
		High		13	16	1900	146					360mA
L36T8/840/11G-XT	36	Normal	F25T8	11	14	1600	145	120 - 277	4000	82+	50000	300mA
		High		13	16	1900	146					360mA
L36T8/850/11G-XT	36	Normal	F25T8	11	14	1600	145	120 - 277	5000	82+	50000	300mA
		High		13	16	1900	146					360mA
L48T8/830/15G-XT	48	Normal	F32T8	12	15	1800	150	120 - 277	3000+	82+	50000	300mA
		High		15	18	2200	146					360mA
L48T8/835/15G-XT	48	Normal	F32T8	12	15	1800	150	120 - 277	3500	82+	50000	300mA
		High		15	18	2200	146					360mA
L48T8/840/15G-XT	48	Normal	F32T8	12	15	1800	150	120 - 277	4000	82+	50000	300mA
		High		15	18	2200	146					360mA
L48T8/850/15G-XT	48	Normal	F32T8	12	15	1800	150	120 - 277	5000	82+	50000	300mA
		High		15	18	2200	146					360mA

¹ See VPL50 030/036 and VPL100 030/036 specifications.

+ May be subject to lead times and availability.

TYPE C LED LAMPS EXTERNAL DRIVER



Programmable LED Driver for Type-C LED's | Type C



VPL50



VPL100

FEATURES AND BENEFITS

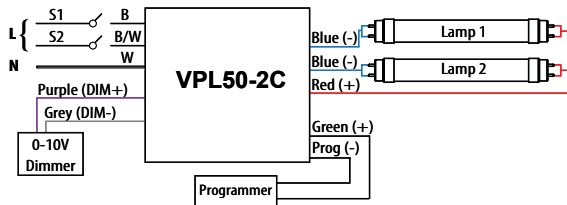
- Programmable Drive Current Range (300 - 360mA)
- For use with 1 or 2 Espen CoreTech™ LED T5 or T8 Lamps
- Constant Current | 2 Channels
- Output Voltage: 25-50V DC
- Universal Voltage (120 - 277V)
- Dimmable
- Suitable for Damp Locations
- 5 Year Warranty



- Programmable Drive Current Range (200 - 500mA)
- For use with 3 or 4 Espen CoreTech™ LED T5 or T8 Lamps
- Constant Current | 4 Channels
- Output Voltage: 25-50V DC
- Universal Voltage (120 - 277V)
- Dimmable
- Suitable for Damp Locations
- 5 Year Warranty



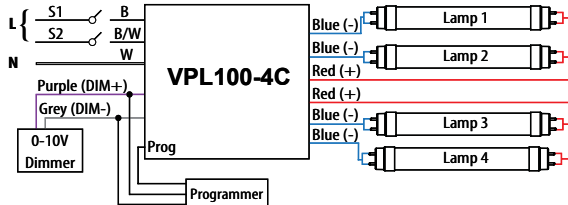
2 LAMP WIRING DIAGRAM



Light Level	S1	S2
100%	ON	ON
50%*	ON	OFF
25%*	OFF	ON
0%	OFF	OFF

*Programmable For Dual-Relay Dimming

4 LAMP WIRING DIAGRAM



Light Level	S1	S2
100%	ON	ON
50%*	ON	OFF
25%*	OFF	ON
0%	OFF	OFF

*Programmable For Dual-Relay Dimming

Model No.	Output Current	Driver Type	Max Wattage (W)	No. of Channels	Input Voltage (V)	Dimming
Programmable LED Driver						
VPL50-2C	300-600mA	Constant Current	50	2	120 - 277	0 - 10V or A/B
VPL100-4C	200-500mA	Constant Current	80	4	120 - 277	0 - 10V or A/B

See espentech.com for CoreTech™ and VersaLinear™ specifications.

LED MODULES
LED DRIVERS
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STEP-DOWN TRANSFORMERS
CONTROL OPTIONS

TYPE C LED LAMPS EXTERNAL DRIVER



Field Adjustable LED Driver for Type-C LED's | Type C



FEATURES AND BENEFITS

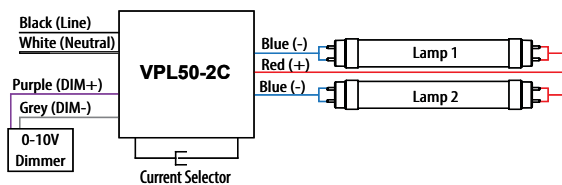
- Field Adjustable Drive Current Range (300/360mA)
- For use with 1 or 2 Espen CoreTech™ LED T5 or T8 Lamps
- Constant Current | 2 Channels
- Output Voltage: 20-46V DC
- Universal Voltage Input (120 - 277V)
- Dimmable
- Suitable for Damp Locations
- 5 Year Warranty



- Field Adjustable Drive Current Range (300/360mA)
- For use with 3 or 4 Espen CoreTech™ LED T5 or T8 Lamps
- Constant Current | 4 Channels
- Output Voltage: 20-46V DC
- Universal Voltage Input (120 - 277V)
- Dimmable
- Suitable for Damp Locations
- 5 Year Warranty

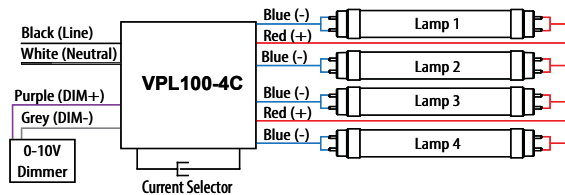


2 LAMP WIRING DIAGRAM



Current Selector Close = (300mA)

4 LAMP WIRING DIAGRAM



Current Selector Open = (360mA)

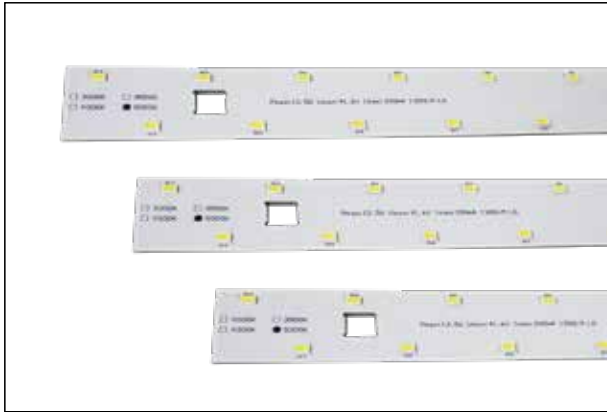
Model No.	Output Current	Driver Type	Max Wattage (W)	No. of Channels	Input Voltage (V)	Dimming
Programmable LED Driver						
VPL50-2C-030/036	Field Adjustable	Constant Current	33	2	120 - 277	0-10V
VPL100-4C-030/036	Field Adjustable	Constant Current	66	4	120 - 277	0-10V

See espentech.com for CoreTech™ and VersaLinear™ specifications.

CORETECH LED MODULES AND DRIVERS



LED Modules | Type C



FEATURES AND BENEFITS

- High Efficacy
- Push-In Connectors
- Long Life
- Consistent and Even Light Distribution
- Flexibility in Design
- Consistent and Even Light Distribution
- Thermally Independent
- Suitable for DLC Applications
- UL for Safety: UL1598C for LED Retrofit Kits
- 5 Year Warranty



Model No.	Lumen	CCT	CRI	SDCM	Driving Current (mA)	P (W) Module Tc 55°C	Im. W* Module Tc 55°C	L70 B50 (h)
VLM11L/250/830/2R/530X30	1800	3000	>80	6	250	11	150	50000
VLM11L/250/835/2R/530X30	1800	3500	>80	6	250	11	150	50000
VLM11L/250/840/2R/530X30	1800	4000	>80	6	250	11	150	50000
VLM11L/250/850/2R/530X30	1800	5000	>80	6	250	11	150	50000
VLM13L/500/830/2R/482X30	2400	3000	>80	6	500	18	130	50000
VLM13L/500/835/2R/482X30	2400	3500	>80	6	500	18	130	50000
VLM13L/500/840/2R/482X30	2400	4000	>80	6	500	18	130	50000
VLM13L/500/850/2R/482X30	2400	5000	>80	6	500	18	130	50000

* Eligible for DLC when built in a luminaire. Please contact Customer Service for more

Advance LED Drivers | CoreTech™

Espen's extensive range of advanced LED drivers offer:

- Constant current or constant voltage
- 0-10V or triac dimming options
- UL listed or recognized
- Advance thermal management for long life
- Multiple case options
- Protections: short circuit, open, circuit, overload, and overheat
- 5-Year warranty



FOR MORE DRIVER OPTIONS
PLEASE CHECK OUR ESPEN DRIVER CATALOG



LED LINEAR MODULES RETROFIT KITS

versaLinear™ LED Linear Module Retrofit Kits

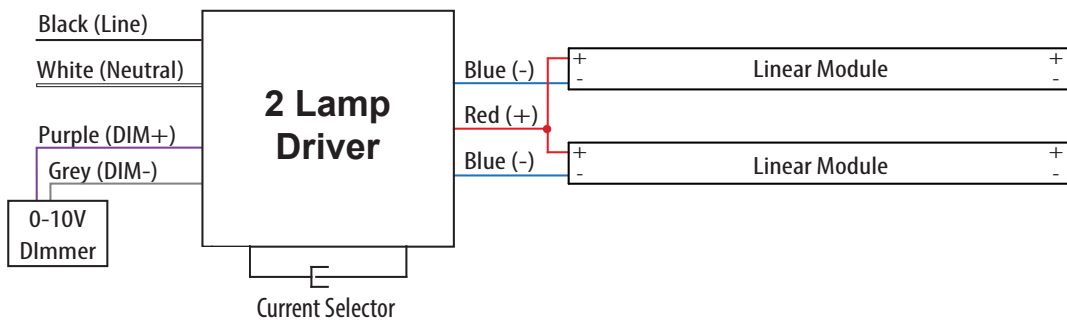


FEATURES AND BENEFITS

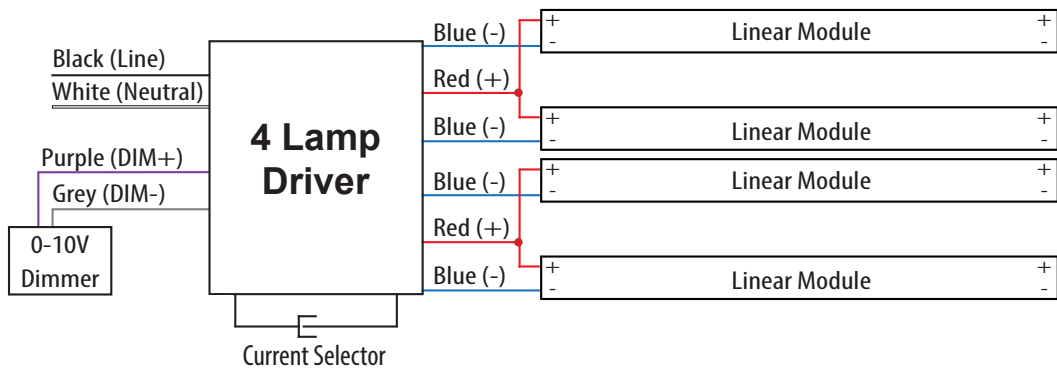
- Designed to Achieve High Lumen Output
- Each Kit Includes LED Modules Paired with an LED Driver
- LED Modules Feature Durable Aluminium Structures
- Magnetic Backing for Easier Installation
- Available with Frosted Diffuser Lens or No Diffuser Lens
- Kits Retrofit 2, 3 and 4 foot T5 and T8 Fixtures
- -20° F to 130° F Ambient Operating Temperature
- End-to-End Lighting with No Dark Spots
- 120 - 277V Input Voltage
- 80+ CRI
- 50,000 Hours Life
- Dimmable
- 5 Year Warranty



2 LAMP WIRING DIAGRAM



4 LAMP WIRING DIAGRAM



LED LINEAR MODULES RETROFIT KITS

versaLinear™ LED Linear Module Retrofit Kits

Espen Model No.	DLC Model No.	Replaces	Diffuser Lens	No. of Modules Included	Driver Included	Driver Current	System Power (W)	System Lumens (lm)	System Efficacy (lm/W)
2 Foot HE - High Efficiency									
VEKM-L21C/8XX ^{1,2}	D546-1M-302C	1 x F17T8	No	1	VPL50	High	12	1500	125
						Normal	10	1250	125
VEKM-L21F/8XX ^{1,2}	D546-1M-302F	1 x F17T8	Yes	1	VPL50	High	12	1250	104
						Normal	10	1050	105
VEKM-L22C/8XX ^{1,2}	D546-2M-302C	2 x F17T8	No	2	VPL50	High	24	3000	125
						Normal	20	2500	125
VEKM-L22F/8XX ^{1,2}	D546-2M-302F	2 x F17T8	Yes	2	VPL50	High	24	2550	105
						Normal	20	2100	105
VEKM-L23C/8XX ^{1,2}	D547-3M-302C	3 x F17T8	No	3	VPL100	High	34	4300	126
						Normal	28	3600	129
VEKM-L23F/8XX ^{1,2}	D547-3M-302F	3 x F17T8	Yes	3	VPL100	High	34	3550	104
						Normal	28	3000	107
VEKM-L24C/8XX ^{1,2}	D547-4M-302C	4 x F17T8	No	4	VPL100	High	43	5600	130
						Normal	36	4700	131
VEKM-L24F/8XX ^{1,2}	D547-4M-302F	4 x F17T8	Yes	4	VPL100	High	43	4600	107
						Normal	36	3900	108
3 Foot HE - High Efficiency									
VEKM-L31C/8XX ^{1,2}	D546-1M-303C	1 x F25T8	No	1	VPL50	High	16	2100	131
						Normal	13	1750	135
VEKM-L31F/8XX ^{1,2}	D546-1M-303F	1 x F25T8	Yes	1	VPL50	High	16	1700	106
						Normal	13	1400	108
VEKM-L32C/8XX ^{1,2}	D546-2M-303C	2 x F25T8	No	2	VPL50	High	32	4250	133
						Normal	26	3500	135
VEKM-L32F/8XX ^{1,2}	D546-2M-303F	2 x F25T8	Yes	2	VPL50	High	32	3400	106
						Normal	26	2800	108
VEKM-L33C/8XX ^{1,2}	D547-3M-303C	3 x F25T8	No	3	VPL100	High	46	6100	133
						Normal	38	5000	132
VEKM-L33F/8XX ^{1,2}	D547-3M-303F	3 x F25T8	Yes	3	VPL100	High	46	5050	110
						Normal	38	4200	111
VEKM-L34C/8XX ^{1,2}	D547-4M-303C	4 x F25T8	No	4	VPL100	High	60	8000	133
						Normal	50	6500	130
VEKM-L34F/8XX ^{1,2}	D547-4M-303F	4 x F25T8	Yes	4	VPL100	High	60	6500	108
						Normal	50	5400	108

¹ XX = 30, 35, 40 or 50
30 = 3000K, 35 = 3500K, 40 = 4000K and 50 = 5000K (3000K may be subject to lead times and availability.)
² Not DLC listed. See 4 foot modules for DLC listed modules.

LED LINEAR MODULES RETROFIT KITS

versaLinear™ LED Linear Module Retrofit Kits

Espen Model No.	DLC Model No.	Replaces	Diffuser Lens	Quantity of Modules Included	Driver Included	Drive Current	System Power (W)	System Lumens (lm)	System Efficacy (lm/W)
4 Foot HE - High Efficiency									
VEKM-L41C/8XX ^{1,2}	D546-1M-304C	1 x F32T8	No	1	VPL50	High Normal	18 14	2300 1850	128 132
VEKM-L41F/8XX ^{1,2}	D546-1M-304F	1 x F32T8	Yes	1	VPL50	High Normal	18 14	1850 1550	103 111
VEKM-L42C/8XX ^{1,3}	D546-2M-304C	2 x F32T8	No	2	VPL50	High Normal	35 27	4600 3700	131 137
VEKM-L42F/8XX ^{1,3}	D546-2M-304F	2 x F32T8	Yes	2	VPL50	High Normal	35 27	3900 3100	111 115
VEKM-L43C/8XX ^{1,2}	D547-3M-304C	3 x F32T8	No	3	VPL100	High Normal	50 39	6900 5550	138 142
VEKM-L43F/8XX ^{1,2}	D547-3M-304F	3 x F32T8	Yes	3	VPL100	High Normal	50 39	5850 4600	117 118
VEKM-L44C/8XX ^{1,4}	D547-4M-304C	4 x F32T8	No	4	VPL100	High Normal	65 51	9250 7400	142 145
VEKM-L44F/8XX ^{1,4}	D547-4M-304F	4 x F32T8	Yes	4	VPL100	High Normal	65 51	7800 6150	120 121
4 Foot HO - High Output									
VEKM-L41C/HO/8XX ^{1,2}	D546-1M-304C/ HO	1 x 4'HO	No	1	VPL50	Normal	26	4000	150
VEKM-L41F/HO/8XX ^{1,2}	D546-1M-304F/ HO	1 x 4'HO	Yes	1	VPL50	Normal	26	3400	130
VEKM-L42C/HO/8XX ^{1,2}	D547-2M-304C/ HO	2 x 4'HO	No	2	VPL100	Normal	52	8000	150
VEKM-L42F/HO/8XX ^{1,2}	D547-2M-304F/ HO	2 x 4'HO	Yes	2	VPL100	Normal	52	6800	130
4 Foot VHO - Very High Output									
VEKM-L41C/VHO/8XX ^{1,2}	D547-1M-304C/ VHO	1 x 4'VHO	No	1	VPL100	Normal	52	8200	155
VEKM-L41F/VHO/8XX ^{1,2}	D547-1M-304F/ VHO	1 x 4'VHO	Yes	1	VPL100	Normal	52	7000	135

¹ XX = 30, 35, 40 or 50
30 = 3000K, 35 = 3500K, 40 = 4000K and 50 = 5000K (3000K may be subject to lead times and availability.)
² Not DLC listed. See 4 foot modules for DLC listed modules.

³ DLC listed.
⁴ DLC pending.

Emergency Back-Up Kits



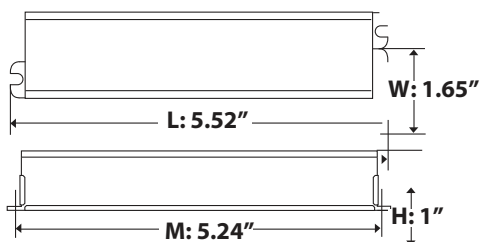
Constant Wattage LED

FEATURES AND BENEFITS

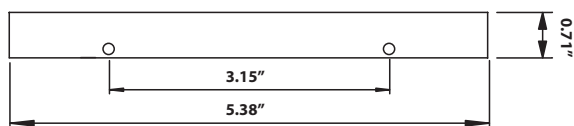
- Constant Wattage & Light Output
- High Efficacy LED Module
- Does not Affect Existing Lighting Fixture / Luminaire
- UL Listed

DIMENSIONS

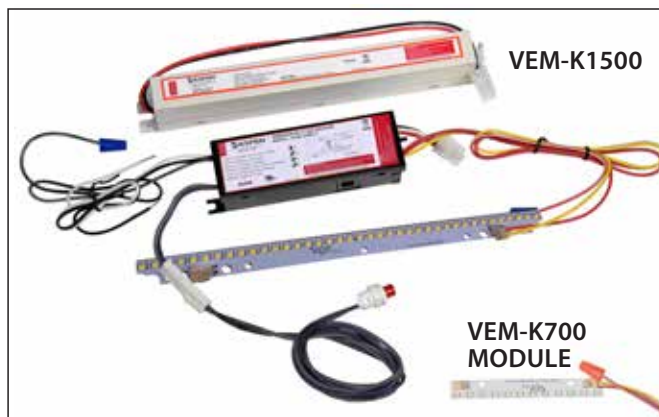
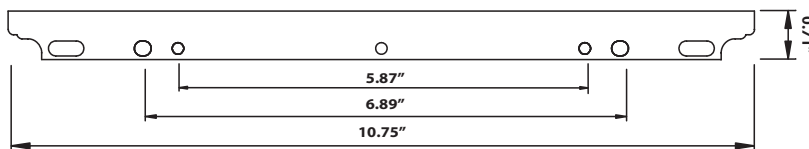
Emergency driver



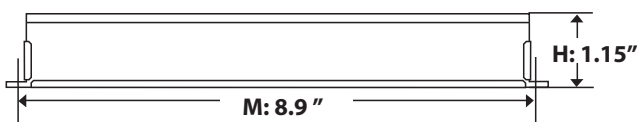
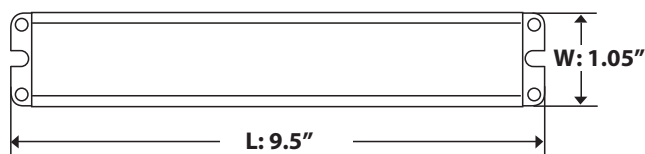
VEM-K700 LED module



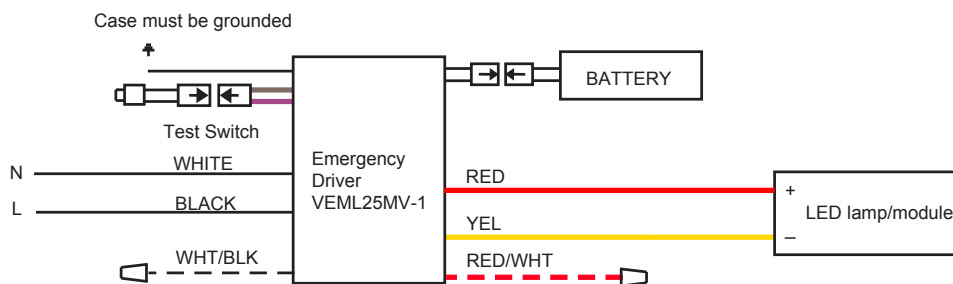
VEM-K1500 LED module



Battery



WIRING DIAGRAM



Model #	Dip Switch Setting	Emergency Mode Output Power	Emergency Mode Output Voltage	Emergency Mode Output Current	Battery Charging Current
VEM-K700		5W	12-50V	416-100mA	60mA
VEM-K1500		10W	12-50V	830-200mA	100mA

Model No.	Lumens (90min)	Wattage	Module Information
VEM-K700	700lm	5W	VLM0605L/850 5W, 5000K, CRI80
VEM-K1500	1500lm	10W	VLM1207L/850 10W, 5000K, CRI80

LED EMERGENCY BATTERY BACK UP

Sentinel® EMERGENCY DRIVERS

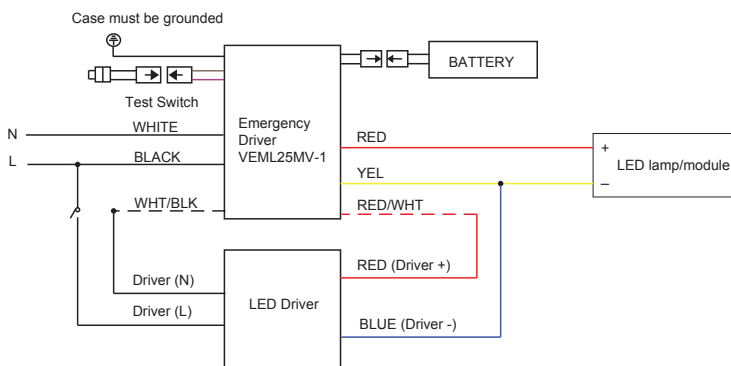


FEATURES AND BENEFITS

- Constant wattage & light output
- Auto LED load sensing
- Universal Input (120-277V)
- Complete Thermal Solution
- Lithium battery
- Programmable for Lumen Output
- UL Recognized



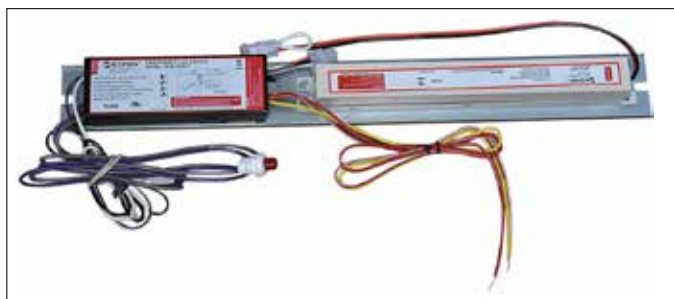
Wiring Diagram:



Wattage Adjustment (dip switch):

Dip Switch Setting	Emergency Mode Output Power	Emergency Mode Output Voltage	Emergency Mode Output Current	Battery Charging Current
	5W	12-50V	416-100mA	60mA
	10W	12-50V	830-200mA	100mA
	15W	12-50V	1250-300mA	160mA
	20W (VEML20MV-1) 25W (VEML25MV-1)	12-50V	1400-400mA 2084-500mA	210mA 210mA

Model No.	Battery Package	Max Load for 90 Min
Emergency LED Driver		
VEML20MV-1	BA/96L/1.0AH	5W
	BA/96L/2.0AH	10W
	BA/96L/3.0AH	15W
	BA/96L/6.0AH	20W
VEML25MV-1	BA/96L/1.0AH	5W
	BA/96L/2.0AH	10W
	BA/96L/6.0AH	25W



Model No.	Description
-----------	-------------

EML25-PLATE	Emergency driver back plate Pre-wired and mounted emergency driver and battery unit in one plate.
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LED EMERGENCY BATTERY BACK UP

Sentinel[®] EMERGENCY INVERTERS



FEATURES AND BENEFITS

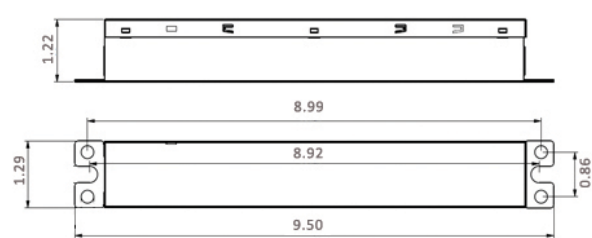
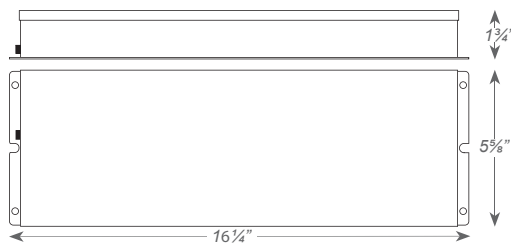
- Operates Espen Type B T5 & T8 LED Lamps
- Illuminates Most LEDs at Full Brightness, Up to 20W
- 32° F to 122° F Ambient Operating Temperature
- Durable Steel Housing Contains LED Driver & Battery
- Suitable for Damp Locations
- 90 Minute Illumination Time
- Nickel-Cadmium Rechargeable Battery
- LED Test Switch Included
- UL924, NFPA 101 Life Safety Code, NEC & OSHA Compliant
- 5 Year Warranty

FEATURES AND BENEFITS

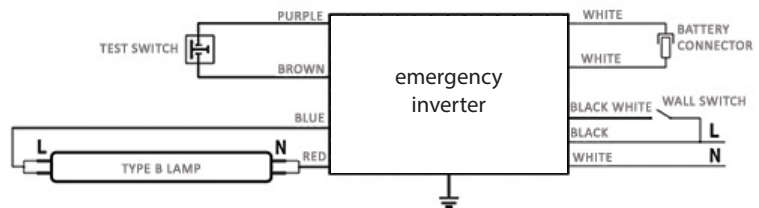
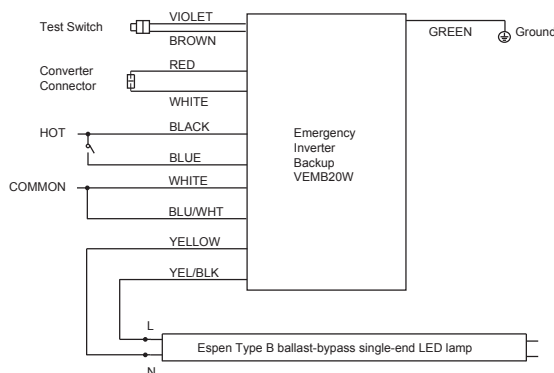
- Operates Espen Type B T5 & T8 LED Lamps
- Provides 5W of power for a minimum of 90 minutes
- 32° F to 122° F Ambient Operating Temperature
- Durable Steel Housing Contains LED Driver & Battery
- Suitable for Damp Locations
- Lithium-Ion Rechargeable Battery
- LED Test Switch Included
- UL924 & FCC Compliant
- 5 Year Warranty



DIMENSIONS



WIRING DIAGRAM



Model No.	Input Voltage (V)	Output Voltage (V)	Output Power (W)
Type B Emergency LED Driver			
VEMB20W	120-277	OCV 320VDC	20
VEMB5W	120-277	OCV 300VDC	5

STEP-DOWN TRANSFORMERS

LED MODULES



LED DRIVERS

PRODUCT FEATURES

- Non-isolated autotransformer
- UL listed
- Thermally protected (auto reset)
- Max case temperature 105C°
- Sound rated A
- 5 year limited warranty
- Designed for lighting applications
- LED
- Electronic ballasts
- HID
- Low profile cases

APPLICATION NOTES

- Supply current frequency 60Hz
- Do not use on ungrounded systems

LED DRIVER CASES

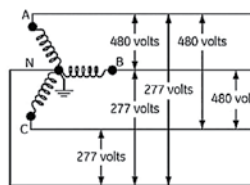
Why do we use VA instead of Watts when setting Step-Down Transformer loads?

The power in watts is the real power drawn by the equipment. Volt-Amps (VA) are called the "apparent power" and is the product of the voltage applied to the equipment times the current drawn by the equipment.

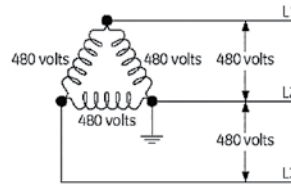
*Use one of these formulas to determine the missing quantity:
Watts = VA * Power factor or VA = Watts / Power Factor

*For example to find VA of a 240W load with a .98PF is $240 / .98 = 244VA$ for sizing your Step-Down Transformer

LED LAMPS



WYE

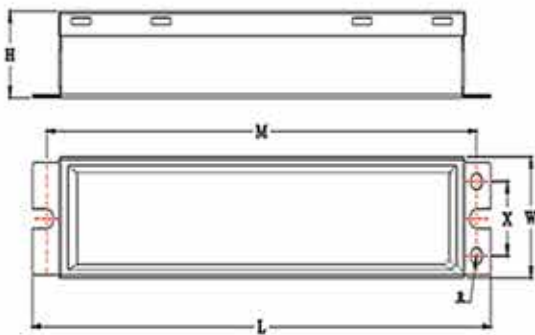


DELTA

Model Number	Input			Output		Physical Properties	
	Voltage	Current at Max Load	Power at Max Load	Output Voltage	Max Load (VA)	Case	Wiring Diagram
VETR480/277-60VA	480/347	0.125/0.172	66W	277/240	60	A	WD-1
VETR480/277-110VA	480/347	0.229/0.317	125W	277/240	110	B	WD-1
VETR480/277-250VA	480/347	0.520	275W	277/200	250/180	B	WD-2
VETR480/277-375VA	480/347	0.781	410W	277/200	375/270	C	WD-2

LED RETROFIT KITS

PHYSICAL PARAMETERS

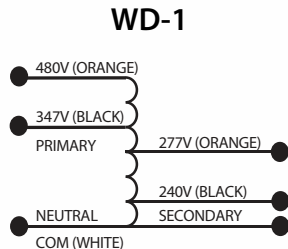


CASE DIMENSIONS IN INCHES			
Case	A	B	C
L	7.20	9.49	11.70
M	6.61	8.90	11.14
W	1.73	1.73	1.73
X	1.06	1.06	1.06
H	1.30	1.30	1.30
R	1.30	1.30	1.30
Lead Lengths	15" / 16AWG	14" / 16AWG	14" / 16AWG

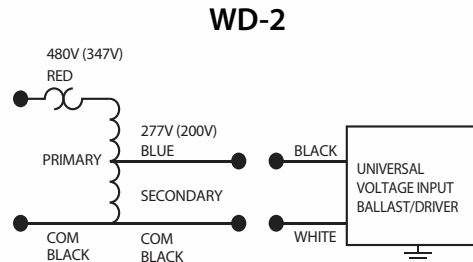
LED EMERGENCY BATTERY BACK UP

STEP-DOWN TRANSFORMERS

WIRING DIAGRAMS



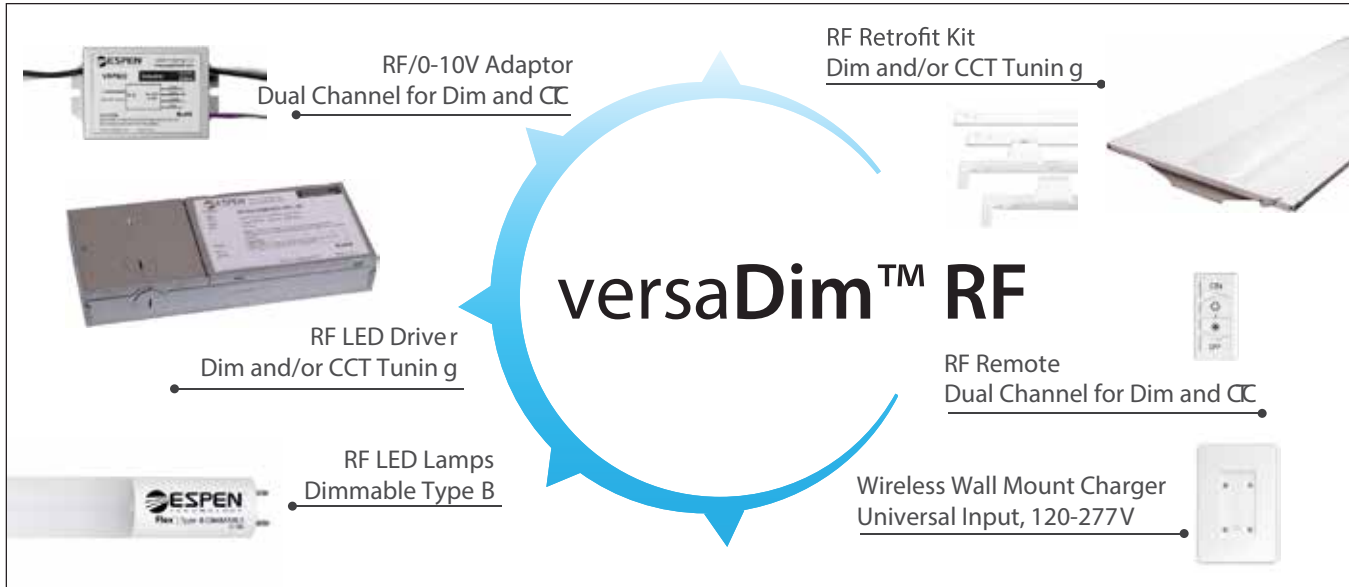
VETR480/277-60VA & VETR480/277-110VA
Cap all unused wires



VETR480/277-250VA & VETR480/277-375VA

CONTROL OPTIONS

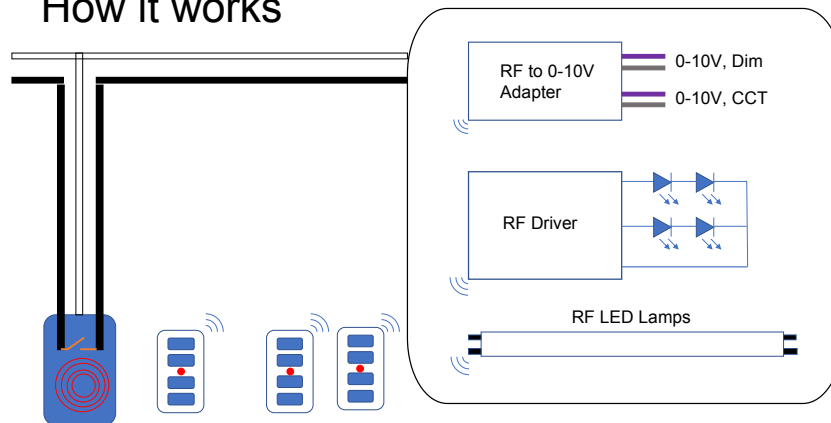
CONTROL OPTIONS



FEATURES AND BENEFITS

- Dual Channel for Dimming and CCT Tuning
- Wall Mount Wireless Charger
- Adapter to Convert Current Fixtures to RF
- Dual Channel Drivers for New Fixtures
- Dimmable Type B Lamps
- Universal 120-277V Input
- Capable of Zoning Control
- Emergency Switch
- Highly Secure System
- UL Certified

How it works



The versaDim™ RF System solves the problem of overly complex and expensive wireless controls. The system enables simple, low-cost dimming and CCT selection using a handheld RF remote. The remote has a wall dock that wirelessly recharges the remote.

RF Adapter Components	
Model No.	Description
VC720MV	Wall charger (720VA), 120V-277V
VRFA720MV-10V	RF Adapter, 720VA, 120-277V, 0-10V dimming
VRF-DR	RF Remote, distance remote

CONTROL OPTIONS

LED
MODULES

LED
DRIVERS

LED
DRIVER CASES

LED
LAMPS

LED
RETROFIT KITS

LED EMERGENCY
BATTERY BACKUP

STEP-DOWN
TRANSFORMERS

CONTROL
OPTIONS

PRODUCT SPECIFICATIONS

OCCUPANCY SENSOR

360° HIGH BAY PASSIVE INFRARED (PIR) FIXTURE MOUNT

FMH-6A-MV (UM)



FMH-6A-MV

L1 (Low bay)

L2 (High bay)

SPECIFICATIONS

Voltage:	120/277VAC, 60 Hz
Load Requirement:	800VA @120VAC* 1200VA @277VAC* * Fluorescent Ballasts No Min
Load Horsepower:	1/6HP
Time Delay Adjustment:	Fixed 15 seconds to 30 minutes
Operating Temperature:	32° to 131° F (0° to 55° C)
Humidity Range:	0% to 90% RH, non-condensing
Coverage Range:	High Bay mounting heights up to 30 ft mounting/360° field
Terminal Line:	Black - Hot, White - Neutral, Red - Load

The FMH-6A-MV (UM) Occupancy Sensor is designed to mount directly onto a luminaire and is ideal for high mounted areas such as warehouses, manufacturing facilities, and other high ceiling applications.

Other mounting options include: Ceiling mount, J-Box Mount

OPERATION

The sensor detects changes in the infrared energy given off by occupants as they move within the field-of-view. When occupancy is detected, a self-contained relay switches the connected lighting load on. The sensor is line powered and can switch line voltage. An internal timer, factory set at 15 seconds, keeps the lights on during brief periods of inactivity.

OPERATIONAL MODES

Auto ON, Auto OFF

COVERAGE AREA

Best choice for 15 to 30 ft mounting heights. 15 to 20 ft radial coverage overlaps area lit by a typical high bay fixture (refer to Fig. A)

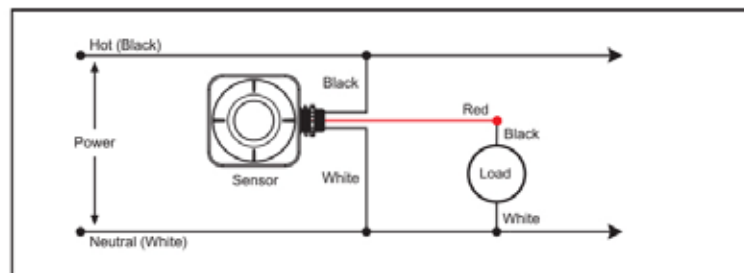
TYPICAL APPLICATIONS

- Warehouses
- Gymnasiums
- Manufacturing Facilities
- Industrial Facilities

FEATURES

- PIR Occupancy Detection
- Self Contained Relay, no Power Pack needed
- Adjustable Time Delay: 15 sec - 30 mins
- Frequency: 50/60Hz
- UL, cUL
- CA Title 24 Compliant
- 5 Year Warranty

WIRING DIAGRAMS



1000

2000

3000

4000

5000

6000

8000





the **Power** to Create Better Light™

OEM PRODUCT GUIDE

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