



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX QPS 15.0006X	Page 1 of 5	<u>Certificate history:</u>
Status:	Current	Issue No: 11	Issue 10 (2022-04-29) Issue 9 (2021-05-05) Issue 8 (2020-09-17) Issue 7 (2020-01-16) Issue 6 (2020-01-15) Issue 5 (2019-02-19) Issue 4 (2018-02-27) Issue 3 (2016-12-22) Issue 2 (2016-09-06) Issue 1 (2015-06-23)
Date of Issue:	2023-10-31		
Applicant:	Killark - A Division of Hubbell Inc. (Delaware) 2112 Fenton Logistics Park Blvd. Fenton MO 63026 United States of America		
Equipment:	Killark's: VM4L/VMLX/VMLX/VMLXC / Chalmit's EC2N/ ECXC, and LED Luminaires and Accessories		
Optional accessory:	Refer to Annex 1 page for VM Series fixture mount adapter and Reflector		
Type of Protection:	'ec' 'tb'		
Marking:	IECEX 15.0006X Killark's VM4L / VMLX / VMLXC(...iE) Series and Chalmit's EC2N and ECXC(...LE) series LED Luminaires i) Standard Version 1. Killark's Standard Version VM4L/VMLX/VMLXC. 2. Chalmit's Standard Version: EC2N, ECXC. Ex ec IIC Gc, T4/T3, Tamb : -40°C to +40°C / +55°C / +65°C Ex tb IIIC Db T135, Tamb : -40°C to +40°C / +55°C / +65°C , IP66. ii) Battery Backup Version 1. Killark's (VMLX..iE). 2. Chalmit's Battery model: EC2N/ECXC..LE Ex ec IIC Gc, T4/T3, Tamb : -20°C to +40°C / +50°C Ex tb IIIC Db T135, Tamb : -20°C to +40°C / +50°C, IP66 *T code refer to Annex for detail		

Approved for issue on behalf of the IECEx
Certification Body:

D. Adams, P.Eng.

Position:

Certification Manager, Ex Equipment

Signature:
(for printed version)

Date:
(for printed version)

2023-10-31

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QPS
Evaluation Services Inc.
81 Kelfield St
Unit 8
Toronto, Ontario M9W 5A3
Canada





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Manufacturer: **Killark - A Division of Hubbell Inc.**
(Delaware)
2112 Fenton Logistics Park Blvd.
Fenton
MO 63026
United States of America

Manufacturing locations: **Hubbell Inc. trading as Chalmit Lighting, Victor Products and Transtar**
388 Hillington Road
Glasgow
G52 4BL
United Kingdom

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[CA/QPS/ExTR15.0006/02](#)
[CA/QPS/ExTR15.0006/05](#)
[CA/QPS/ExTR15.0006/08](#)

[CA/QPS/ExTR15.0006/03](#)
[CA/QPS/ExTR15.0006/06](#)
[CA/QPS/ExTR15.0006/09](#)

[CA/QPS/ExTR15.0006/04](#)
[CA/QPS/ExTR15.0006/07](#)
[CA/QPS/ExTR15.0006/10](#)

Quality Assessment Reports:

[GB/BAS/QAR06.0027/09](#)

[GB/SIR/QAR16.0021/06](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Killark model VM4L /VMLX and Chalmite model EC2N Series LED Luminaires, with heat sink: Bulb or Concave, follow by: light source output: 40 - 250 Watts. Rated input voltage 100-277 V, 347- 480Vac 50/60 Hz, or 105-250 VDC, with Optional battery backup up to 90 Min (suffix ..iE), Mounting Splice Boxes: A, B, X, C, D, S followed by: 2, 3, 4, 5, 6, 7, 8, 9. Optics – (GL)VMG25, (R5) VMR255, (R1)VMR251, (R3) VMR253, (S5)VZRG4050, (S2)VMRG4020, (ER)VMER40, (GF)VZRGF 12, Followed by G or N, and options of color temperature, TURTLE-Amber colored LEDs , or PCAMBER-Amber colored through Phosphor Coating.

Accessories: Adapter for use with WM4L/VM4L Series LED Luminaires Models: VMCHVM, VMCHVM-DEEP, VMGEH2, VMHLDS, VMHPP2, VMM2LP, VMM3KP, SPL26748, VMRS6470-12/13 and VMLX-CH.

Note:

1. The KILLARK's fixture mount adaptor VM series has no affected on the temperature classification of the the WM4L/VM4L series LED luminaire when used together.
2. Refer to the Annex page for detail on VM fixture mount adaptor compatibility with the luminaires.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Read Installation, Operation and Maintenance Manual first;
- Do not open when energised;
- Do not open when an explosive atmosphere is present;
- The Luminaire shall only be installed where there is a low risk of mechanical damage.



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Equipment (continued):

Electrical Rating:

Killark's Standard Version VM4L/VMLX/VMLXC
Input: 12-24 Vdc, 100-277 VAC; and 347-480Vac 50/60 Hz, or 105-250 VDC
Killark's Battery Backup Version: (VM..iE)
100-277 VAC, 50/60 Hz., 347-480Vac, 50/60 Hz
Chalmit's Standard Version: EC2N, ECXC
Input: 100-277 VAC, 50/60 Hz, 105-250 VDC.
Chalmit's Battery Backup model: EC2N/ECXC..LE
Input: 100-277 VAC, 50/60 Hz.
* Refer to Annex page for the detail.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

00 - Original

01 - addition of trademark name "Victor Lighting" to marking label.

02 - Re-issue the ExTR and addition of the following:

i. Add the WM4L series.

ii. . Add the option going from 2 drivers to 1 driver.

iii. Add an alternate concave dish and bullet heat sink design.

iv. Add a battery backup option.

v. Add an alternate LED option - Cree XP-L.

vi. Add a new wiring scheme and LED board scheme (one board with up to 24 LEDs and 5 smaller boards with up to 8 LEDs instead of up to 16 boards with up to 4 LEDs each).

03 - revised markings and installation manuals

04 - Add Fixture mount adapter VM series for used with WM4I/VM4L series LED luminaires.

05 - Add alternate LEDs and updated the Annex page.

i. Cree's XP-G3 Series: XPGDWT-01-0000-00KE7 -- 5000K, and XPGDWT-01-000-00K7E -- 3000K

ii. Cree's XP-E2 Series: XPEBPA-L1-0000-00D01 --PC Amber and XPEBAM-L1-0000-00901 -- Amber Turtle.

Detail of Changes.

iii. Add on alternate LED's to the existing LED WM4L/VM4L series. The newly LEDs that added to the WM4L/VM4L series are models Cree XP-G3, XP-E2 Amber and XP-E2 Phosphor Coated Amber. The nomenclature of the WM4L/VM4L also add two new suffix to address the new Amber (TURTLE) and Phosphor Coated Amber (PCAMBER).

The additional LEDs are manufactured by CREE. The physical (footprint) of the all the LEDs have not changed. Therefore, the new LEDs still can use the same printed Circuit Board.

06- Add on alternate Soda lime Glass Globe. All the dimensions of the VMG25 glass globe remains the same.

07– Add on VM to STAHL adapter (Cat. VMRS6470-12/13) to the compatible adapter for use with WM4L/VM4L series luminaire.

08- Add on the Chalmit Nomenclature "EC2N Series" to the Annex page of the Certificate's Annex pages.

09-

1. Adding new model VMLX and VMLX..iE Series. and update the marking VM4L / WM4L/EN2C Series from "nA" to "ec". according to the IEC 60079-0:2017 and IEC 60079-7:2017.
2. Updated the Installation manuals for models WM4L/VM4L/EN2C and VMLX.
3. Updated the Marking Label for model: WM4L/VM4L/EN2C and VMLX.

10-

1. Update the WM4L and VM4L and EC2N with protection method "ec" according to IEC 60079-0, and IEC 60079-7
2. Update the New revision of Annex page with new VMLX model and Accessories. Nomenclature and Temperature classification and Electrical Rating

11-

The purpose of this project is to add the following:

- 1) Additional LED chip types. PCAmber. Phosphate Coated Amber LEDs. Free-air temperature tests were performed. As the construction of the LED chips is similar to the currently submitted LED chip, all other tests can be waived.
- 2) 347-480 transformer in combination with battery backup,
- 3) VMLXC tank to mount to Crouse Hinds CM2, CM3, TWM2 and TWM3 mounts.
- 4) Additional drivers added to certification.
- 5) Inclusion of Chalmit nomenclature and multiple listing

Annex:

[ANNEX to IECEx QPS 15.0006 Issue No. 11.pdf](#)



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ANNEX to IECEx QPS 15.0006 Issue No. 11.

Date: 2023-10-31

1. Nomenclature for VM4L (for Killark) and EC2N (for Chalmit brands)

Item	Detail																								
Type identification	Series VM4L B 130 30 0 0 00 0 00 (Sample) <table border="1" style="margin-left: 20px; border-collapse: collapse; width: 100%;"> <tr> <td style="width: 10%;">/V4ML/EC2N</td> <td style="width: 5%;">B</td> <td style="width: 10%;">130</td> <td style="width: 5%;">/E2</td> <td style="width: 5%;">30</td> <td style="width: 5%;">0</td> <td style="width: 5%;">0</td> <td style="width: 5%;">00</td> <td style="width: 5%;">0</td> <td style="width: 5%;">0</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> <td style="text-align: center;">8</td> <td style="text-align: center;">9</td> <td style="text-align: center;">10</td> </tr> </table>	/V4ML/EC2N	B	130	/E2	30	0	0	00	0	0	1	2	3	4	5	6	7	8	9	10				
	/V4ML/EC2N	B	130	/E2	30	0	0	00	0	0															
	1	2	3	4	5	6	7	8	9	10															
	1: Housing Series <u>Killark's Model: VM4L</u> or <u>Chalmit's Model: EC2N</u>																								
	2: Type of heat sink: B : Bulb, or C : Concave (Killark's Only)																								
	3: Rated light Wattage:																								
	<table border="1" style="margin-left: 40px; border-collapse: collapse; width: 80%;"> <thead> <tr> <th style="width: 50%;">Killark's Rating option</th> <th style="width: 50%;">Chalmit's rating option</th> </tr> </thead> <tbody> <tr><td>18 or 130 = 130 Watts</td><td>16L</td></tr> <tr><td>14 or 105 = 105 Watts</td><td>--</td></tr> <tr><td>120 = 120 Watt</td><td>--</td></tr> <tr><td>100 = 100 Watts</td><td>--</td></tr> <tr><td>12 or 090 = 90 Watts</td><td>12L</td></tr> <tr><td>080 = 80 Watts</td><td>--</td></tr> <tr><td>070 = 70 Watts</td><td>--</td></tr> <tr><td>9 or 065 = 65 Watts</td><td>09L</td></tr> <tr><td>055 = 55 Watts</td><td>--</td></tr> <tr><td>7 or 050 = 50 Watts</td><td>--</td></tr> <tr><td>6 or 040 = 40 Watts</td><td>06L</td></tr> </tbody> </table>	Killark's Rating option	Chalmit's rating option	18 or 130 = 130 Watts	16L	14 or 105 = 105 Watts	--	120 = 120 Watt	--	100 = 100 Watts	--	12 or 090 = 90 Watts	12L	080 = 80 Watts	--	070 = 70 Watts	--	9 or 065 = 65 Watts	09L	055 = 55 Watts	--	7 or 050 = 50 Watts	--	6 or 040 = 40 Watts	06L
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9 or 065 = 65 Watts	09L																								
055 = 55 Watts	--																								
7 or 050 = 50 Watts	--																								
6 or 040 = 40 Watts	06L																								
4: Battery Backup model: (blank No backup Mode) / E2 – Battery Backup																									
5: Input Voltage: Killark: 30 : 100-277 Vac, or 34: 105-250Vdc or Chalmit's: 'LE': 100-277 Vac																									
6: Mounting Type:																									
A —Pendant B —Wall Bracket C —Cone Top D —Stanchion 25° X —Ceiling S —Stanchion Straight 90°																									
7: Conduit Entry:																									
<table style="width: 100%;"> <tr> <td style="width: 50%;">2—3/4" NPT (A, B,C,X)</td> <td style="width: 50%;">3—1" NPT (A, B,C,X)</td> </tr> <tr> <td>4—1 1/4" NPT (D,S),</td> <td>5—1 1/2" NPT (D, S)</td> </tr> <tr> <td>6—3/4" NPT 5-Hub (X),</td> <td>7 --1" NPT 5-Hub (X)</td> </tr> <tr> <td>8—M20 4-Hub (X),</td> <td>9 --M25 5-Hub (X)</td> </tr> </table>	2—3/4" NPT (A, B,C,X)	3—1" NPT (A, B,C,X)	4—1 1/4" NPT (D,S),	5—1 1/2" NPT (D, S)	6—3/4" NPT 5-Hub (X),	7 --1" NPT 5-Hub (X)	8—M20 4-Hub (X),	9 --M25 5-Hub (X)																	
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8—M20 4-Hub (X),	9 --M25 5-Hub (X)																								
8: Optic:																									
GL = Glass Globe (VMG25) GG = Globe and Guard R5 = Refractor type 5 (VMR255) R3 = Refractor type 3 (VMR253) R1 = Refractor type 1 (VMR251) ER = Enclosed Reflector (VMER40) S5 = 12" Spin top refractor type 5(VZRG4050) S2 = 12" Spin top refractor type 2(VMRG4020) GF – 12" Spin-top Flat Glass Optic (VZRGF12)																									
9- Guard																									
G = Guard, N = No Guard																									
10- Options																									
XXXX - Four-digit number referring to correlated color temperature and the color rendering Index TURTLE -Amber colored LEDs are primarily used to protect wildlife. PCAMBER -Amber colored LEDs that provide the amber color through Phosphor Coating.																									



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2. Temperature Classes for V4ML / (for Killark) and EC2N (for Chalmit brands)

Catalog Number	Rated Ambient Temp °C	LED Type	LED Watts	"ec" IIC	"td" IIC	Supply Wire Temp Deg C
				Globe/Reflector w/ Reflector		
VM4L(B/C)13030	40	D/E/G	130	T4	83°C	75
VM4L(B/C)13030	55	D/E/G	130	T140°C	83°C	90
VM4L(B/C)10530	40	C/F/G	105	T4	83°C	75
VM4L(B/C)10530	55	C/F/G	105	T140°C	83°C	90
VM4L(B/C)10534	40	C	105	T4	83°C	75
VM4L(B/C)10534	55	C	105	T140°C	83°C	90
VM4L(B/C)10030	40	D/E/F/G	100	T4	83°C	75
VM4L(B/C)10030	55	D/E/F/G	100	T4	83°C	90
VM4L(B/C)09030	40	D/E/G/H/I	90	T4	83°C	75
VM4L(B/C)09030	55	D/E/G/H/I	90	T4	83°C	90
VM4L(B/C)08030	40	C/G/H/I	80	T4	83°C	75
VM4L(B/C)08030	55	C/G/H/I	80	T4	83°C	90
VM4L(B/C)07030	40	D/E/G/H/I	70	T4	83°C	75
VM4L(B/C)07030	55	D/E/G/H/I	70	T4	83°C	90
VM4L(B/C)06530	40	D/E/G/H/I	65	T4	83°C	75
VM4L(B/C)06530	55	D/E/G/H/I	65	T4	83°C	90
VM4L(B/C)05530	40	C/D/E/G/H/I	55	T4	83°C	75
VM4L(B/C)05530	55	C/D/E/G/H/I	55	T4	83°C	90
VM4L(B/C)05030	40	D/E/G/H/I	50	T4	83°C	75
VM4L(B/C)05030	55	D/E/G/H/I	50	T4	83°C	90
VM4L(B/C)04030	40	C/G/H/I	40	T4	83°C	75
VM4L(B/C)04030	55	C/G/H/I	40	T4	83°C	90

LED Types:

- A) Nichia, white, LED Model: NS9W153MT - (W = 3.675 Watts) (Rjs = 10 °C/W)
- B) Nichia, white, LED Model: NS9W153AMT - (W = 3.5 Watts) (Rjs = 10 °C/W)
- C) Nichia, white, LED Model: Nichia NVSW219B – (W = 2.19 Watts) (Rjs = 6 °C/W)
- D) Cree, white, LED Model: Cree XML – (W = 2.03 Watts) (Rjs = 2.5 °C/W)
- E) Cree, white, LED Model: Cree XML2– (W= 2.03 Watts) (Rjs = 2.5°C/W)
- F) Cree, white, LED Model: Cree XP-L- (W=2.03W) (Rjs = 2.1°C/W)
- G) Cree, white, LED Model: Cree XP-G3–(W = 2.0 W)(Rjs=3 °C/W)
- H) Cree, amber, LED Model: Cree XP-E2–(W = 1.8 W)(Rjs=7 °C/W) (TURTLE)
- I) Cree, PC Amber, LED Model: Cree XP-E2–(W = 2.3 W)(Rjs=9 °C/W) (PCAMBER)



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3. Compatible Adapter for VM4L/VMLX Series LED Luminaire.

Accessories	<p>Adapters for Ex ec IIC T140°C or T4 Gc , Ex tb IIIC T83°C Db . IP66</p> <p>The KILLARK's VM series is the compatible adapters that use with the /VM4L Series Luminaire. The VM Series fixture mount adapter model number VMCHVM, VMCHVM-DEEP, VMGEH2, VMHLDS, VMHPP2, VMM2LP, VMM3KP, SPL26748 and VMRS6470-12/13 for use with specified fixture fitting in conjunction with /VM4L series luminaire.</p> <ul style="list-style-type: none"> • KILLARK Series VMCHVM fixture mount adaptors, model number VMCHVM and VMCHVM-deep for use with specified fixture fitting in conjunction with KILLARKS Series VM4L series LED Luminaire. Rated input: 100-277 Vac or 105-250Vdc, with optional Backup mode. Output up to: 130 W max. May supplied with either Globe, Enclosed Reflector, or Refractor. For use with power supply wiring rated up to 90°C Max. <p>The VMCHVM fixture adaptors are for use on listed Crouse Hinds Fixtures Cat. Nos. CM2, CM3, TWM2 and TWM3 Mounting Covers.</p> <ul style="list-style-type: none"> • KILLARK Series VM Fixture Mount adaptors, Model Numbers. VMGEH2, VMHLLDS, VMHPP2, VMM2LP, VMM3KP, and SPL26748, for use with specified fixture fitting in conjunction with KILLARK Series VM fixtures, Rated input: 100-277 Vac or 105-250Vdc, with optional Backup mode. Output up to: 130 W max. May supplied with either Globe, Enclosed Reflector, or Refractor. For use with supply wiring rated up to 90°C Max. <ul style="list-style-type: none"> - The VM Series fixture Adaptor are for use on listed Crouse Hinds and Appleton Fixture Mounting Covers (See table below) in conjunction with Series VM fixture fitting. - The KILLARK's VMGEH2 fixture adaptors are for use with General Electric Series H2 Fixtures Mounting Covers (See table below) in conjunction with Series VM fixture fitting. - The KILLARK's VMHPP2 fixture adaptors are for use with Holophane Series P2 (Petrolux II) Fixtures Mounting Covers (See table below) in conjunction with Series VM fixture fitting. - The VM to STAHL adapter (Cat. VMRS6470-12/13) adapter is to be used with R. Stahl® 6470 Series. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: center;">Killark VM Adaptor Model</th> <th style="text-align: center;">For Use with</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">VMGEH2</td> <td>GE® filtr-gard® H2; Using fixture mounts H2000-3C, H2000-4C, H2000-3F, H2000-4F, H2000-5J, H2000-6J, H2000-3P, H2000-4P, H2000-5S, H2000-6S, H2000-3W, H2000-4W, H2000-6P</td> </tr> <tr> <td style="text-align: center;">VMHLDS</td> <td>Thomas and Betts® Hazlite® M2, M3; Hazbatt® 2, 3; Using fixture mounts HV1, VP2, VF2, VA2, VC2. Vb2, VS5 and VL5</td> </tr> <tr> <td style="text-align: center;">VMHPP2</td> <td>Holophane® Petrolux® II or Petrolux®</td> </tr> <tr> <td style="text-align: center;">VMM2LP</td> <td>Appleton® MercMaster® II Series; Using fixture mounts LPA-75/100, LPC-75/100, LPWB-75/100, LPS-125/150.</td> </tr> <tr> <td style="text-align: center;">VMM3KP</td> <td>Appleton® MercMaster® III or MercMaster® LED Series; Using fixture mounts KPA-75/100/M20, KPCH-75-75/100/M20, KPC-75/100/M20, KPWB-75/100/M20, KPS-125/150, KPST-125/150.</td> </tr> <tr> <td style="text-align: center;">SPL26748</td> <td>Holophane® Petrolux® II-Using Ceiling mounting cover (PETLCE)</td> </tr> <tr> <td style="text-align: center;">VMRS6470-12/13</td> <td>Adapters are to be used with R. Stahl® 6470 Series. (VM to STAHL adapter)</td> </tr> </tbody> </table> <p>The adapter VM series has no effect on the temperature classification of the VM4L/VMLX/VMLXC series LED luminaire when used together.</p>	Killark VM Adaptor Model	For Use with	VMGEH2	GE® filtr-gard® H2; Using fixture mounts H2000-3C, H2000-4C, H2000-3F, H2000-4F, H2000-5J, H2000-6J, H2000-3P, H2000-4P, H2000-5S, H2000-6S, H2000-3W, H2000-4W, H2000-6P	VMHLDS	Thomas and Betts® Hazlite® M2, M3; Hazbatt® 2, 3; Using fixture mounts HV1, VP2, VF2, VA2, VC2. Vb2, VS5 and VL5	VMHPP2	Holophane® Petrolux® II or Petrolux®	VMM2LP	Appleton® MercMaster® II Series; Using fixture mounts LPA-75/100, LPC-75/100, LPWB-75/100, LPS-125/150.	VMM3KP	Appleton® MercMaster® III or MercMaster® LED Series; Using fixture mounts KPA-75/100/M20, KPCH-75-75/100/M20, KPC-75/100/M20, KPWB-75/100/M20, KPS-125/150, KPST-125/150.	SPL26748	Holophane® Petrolux® II-Using Ceiling mounting cover (PETLCE)	VMRS6470-12/13	Adapters are to be used with R. Stahl® 6470 Series. (VM to STAHL adapter)
Killark VM Adaptor Model	For Use with																
VMGEH2	GE® filtr-gard® H2; Using fixture mounts H2000-3C, H2000-4C, H2000-3F, H2000-4F, H2000-5J, H2000-6J, H2000-3P, H2000-4P, H2000-5S, H2000-6S, H2000-3W, H2000-4W, H2000-6P																
VMHLDS	Thomas and Betts® Hazlite® M2, M3; Hazbatt® 2, 3; Using fixture mounts HV1, VP2, VF2, VA2, VC2. Vb2, VS5 and VL5																
VMHPP2	Holophane® Petrolux® II or Petrolux®																
VMM2LP	Appleton® MercMaster® II Series; Using fixture mounts LPA-75/100, LPC-75/100, LPWB-75/100, LPS-125/150.																
VMM3KP	Appleton® MercMaster® III or MercMaster® LED Series; Using fixture mounts KPA-75/100/M20, KPCH-75-75/100/M20, KPC-75/100/M20, KPWB-75/100/M20, KPS-125/150, KPST-125/150.																
SPL26748	Holophane® Petrolux® II-Using Ceiling mounting cover (PETLCE)																
VMRS6470-12/13	Adapters are to be used with R. Stahl® 6470 Series. (VM to STAHL adapter)																



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4. NOMENCLATURE for VMLX, *VMLXC Series for Killark

Example: Cat. No. VML 2 X 28 iE 30 F

VMLC/ VMLXC	2	X	28	_/iE	30	F	00	0	0	F
1	2	3	4	5	6	7	8	9	10	11

1: Series Designation-VMLX; *VMLXC

2: Tank Size:

1	Small	80W max Approx. 5000, 7000, 9000lm
2	Medium	140W max Approx. 12000, 15000, 18000lm
3	Large	250W max Approx. 23000, 28000lm

3: Fixture Lumen Output in 1000s of Lumens

28- Maximum 28,000 lumens which corresponds to 250 watts. Other lower wattage fixtures are follows.

‘X--’	28	23	18	15	12	9	7	5	3
Watts	250	200	140	120	100	75	55	40	25
Lumens	28000	23000	18000	15000	12000	900	7000	5000	3000

4: Battery Backup model: (blank No backup Mode) / (80W) Size 1 and Size 2 tanks

iE05 500 Lumen
iE1 1000 Lumen

***5: Voltage-** Input Supply:

27 - 12-24 Vdc
30 - 120 thru 277 Vac, 50/60 Hz
33 - 347 thru 480 Vac, 50/60 Hz
34 - 105 thru 250 Vdc

6: Mounting Splice Box:

- Blank - No Splice Box provided
- A - Pendant (VMA2B, VMA3B)
- B - Wall Bracket (VMB2B, VMB3B)
- C - Cone Top (VMC2B, VMC3B)
- D - Stanchion 25° (VMD4B, VMD5B)
- X - Ceiling (VMX2B, VMX3B, VMX6B, VMX7B, VMX8B, VMX9B)
- S - Stanchion Straight 90° (Straight) (VMS4B, VMS5B)
- * VMLX-CH Adapter for VMLX mount to Crouse Hinds CM2, CM3, TWM2 and TWM3 mounts.



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7: Conduit Entry:

2—3/4" NPT (A, B, C, X)	3—1" NPT (A, B, C, X)
4—1 1/4" NPT (D, S),	5—1 1/2" NPT (D, S)
6—3/4" NPT 5-Hub (5 hubs)	7 --1" NPT 5-Hub (5 hubs)
8—M20 (Metric-4 hubs)	9 --M20 (Metric 5-Hubs)

8: Optic:

Blank	Type 5-No optics
5W	Type 5 wide (140W max)
T1	Type 1 (80W max)
T3	Type III (80W max)

9- Guard

G = Guard, **N** = No Guard

10- Globe

Blank	Glass
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11- Options

F	Single Fuse
FF -	Double Fuse
SP -	Added Surge Protector
Px -	Photocell factory installed (x = Factory Wired Voltage)
xH -	Optional Paint (i.e. RH = Red Housing)
YYZZ -	White LED Chromaticity where YY= correlated color temperature (CCT) minimum 3000K; ZZ = Color Rendering Index (CRI) maximum 95 (No value=Standard 5000K CCT 70 CRI minimum)
AMBER -	Amber colored LEDs primarily used to help protect marine wildlife
*PCAMBER	Phosphor Coated Amber LEDs
CISPR -	CE Marked driver
GREEN -	Green colored LEDs. Primarily used to help protect migratory birds.
HA -	High Ambient: bigger tank with lower wattage fixture for use in higher Ambient.
AR -	Angled Reflector
DR -	Dome Reflector

An * is included before the title of documents that are new or revised.



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5. NOMENCLATURE for ECXC/ (Chalmit brand)

Example : Catalog Number ECXC/18L/LE/EM/M25/WM/M

Series Designation	Lumen Output	Emergency Mode	Options
1	2	3	4

1- Series Designation = ECXC/

2- Lumen Output (Approximate Lumens in Thousands)

	18L/LE	15L/LE	12L/LE	9L/LE	7L/LE	5L/LE	3L/LE
Watts	140	120	100	75	55	40	25
Lumens	18000	15000	12000	9000	7000	5000	3000

3- Battery Backup Model (blank no backup mode) / (80Wmax) Size 1 and Size 2 tanks

/EM	1000 Lumen in emergency mode – 90minutes
/EM/3H	500 Lumen in emergency mode – 3 hours

4- Options

/M25 = M25 Cable entries

/DC = 105-250Vdc

/WM = Wall mounted version (with 2xM20 and 2xM25 entries)

/ST = Stanchion mounted version

/PE = Pendant mounted version (for M25 conduit)

/3K = 3000K CCT

/4K = 4000K CCT

/AM = Amber colored LEDs. Primarily used to help protect marine wildlife.

/GR = Green colored LEDs. Primarily used to help protect migratory birds.

/PA = Amber colored LEDs that provide the amber color through Phosphor Coating

/HA = High Ambient: bigger tank with lower wattage fixture for use in higher Ambient

/P1 = Photocell factory installed for use with 120VAC supply

/P2 = Photocell factory installed for use with 208-277VAC supply

/AR = Angled Reflector

/DR = Dome Reflector

/W = Type V wide optic (140W max)

/M = Type I optic (80W max)

/AS = Type III optic (80W max)



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6. Operating Temperatures for VMLX (for Killark and Chalmit brands)

Maximum temperature for battery backup fixtures is 50°C

Catalog Number	Wattage	40 ° C Ambient			55 ° C Ambient			65 ° C Ambient		
		"ec" IIC	"tb" IIIC	Supply Wire Temp ° C	"ec" IIC	"tb" IIIC	Supply Wire Temp ° C	"ec" IIC	"tb" IIIC	Supply Wire Temp ° C
VML3X2830/33/34	250	T4	T135	90	T3	T135	90	--	--	--
VML3X2330/33/34	200	T4	T135	90	T3	T135	90	--	--	--
VML2X1830/33/34 ECXC/18L/LE	140	T4	T135	90	T4	T135	90	--	--	--
VML2X1530/33/34 ECXC/15L/LE	120	T4	T135	90	T4	T135	90	--	--	--
VML2X1230/33/34	100	T4	T135	90	T4	T135	90	--	--	--
VML3X1830/33/34 HA	140	T4	T135	90	T4	T135	90	T4	T135	90
VML3X1530/33/34 HA	120	T4	T135	90	T4	T135	90	T4	T135	90
VML3X1230/33/34 HA	100	T4	T135	90	T4	T135	90	T4	T135	90
VML1X930/33/34 ECXC/9L/LE	75	T4	T135	90	T4	T135	90	--	--	--
VML1X730/33/34 ECXC/7L/LE	55	T4	T135	90	T4	T135	90	--	--	--
VML1X530/33/34 ECXC/5L/LE	40	T4	T135	90	T4	T135	90	--	--	--
VML1X327/30/33/34 ECXC/3L/LE	25	T4	T135	90	T4	T135	90	--	--	--
VML2X930/33/34 HA ECXC/9L/LE/HA	75	T4	T135	90	T4	T135	90	T4	T135	90
VML2X730/33/34 HA ECXC/7L/LE/HA	55	T4	T135	90	T4	T135	90	T4	T135	90
VML2X530/33/34 HA ECXC/5L/LE/HA	40	T4	T135	90	T4	T135	90	T4	T135	90