

LMV Series 50-150W Low Profile - Medium Base

Champ® H.I.D. Luminaires

Cl. I, Div. 2, Groups A, B, C, D
Restricted Breathing Cl. I,
Div. 2 & Zone 2 (Suffix S826)
Certified for IEC Zone 2
(Suffix S826TB)

Cl. II, Groups E, F, G; Cl. III
& Simultaneous Presence
(HPS 35W, 50W)
Marine & Wet Locations
3, 3R, 4, 4X; IP66

Applications:

LMV series *Champ*® luminaires are used:

- In applications involving low luminaire mounting heights or restricted mounting space or where luminaire weight is a factor
- In areas in which ignitable concentrations of flammable gases or vapors will be present only due to abnormal, unusual, or accidental conditions
- Where combustible dusts are present
- Where combustible dusts and flammable vapors are present simultaneously
- In elevated ambient temperatures often found in industrial applications
- In marine applications where water spray and corrosive atmospheres are considerations
- Wherever the damaging effects of wind, snow, sleet, or hot sun are found
- In manufacturing plants, chemical, petrochemical, and other industrial process facilities, waste or sewage treatment facilities, offshore or dockside installations, cold storage facilities, parking garages or wherever dust, dirt, water, vibration and rough usage are a problem

Features:

- Compact, lightweight design is ideal for low mounting heights.
- Cast copper-free aluminum construction (less than 0.4 of 1% copper) and epoxy powder finish provide excellent resistance to corrosion.
- Seven mounting arrangements to suit any lighting layout – pendant, flexible pendant, ceiling, wall, straight stanchion, angle stanchion, and quad-mount.
- Wide range of lamp wattages to meet specifiers' needs: 50, 70, 100 and 150 watt (HPS); 70 and 100 watt (MH) medium base lamps.
- Hinged ballast housing for ease of installation and maintenance.
- All luminaires designed to perform in a 40°C ambient temperature. Selected luminaires are suitable for ambient temperatures up to 65°C.
- Superior gasketing seals between the mounting module, housing, and optical assembly for optimum performance in wet and corrosive environments.
- Hubs with an integral conduit stop and bushing to help prevent damage to field wiring during installation.
- Low ambient capability to -40°C.
- Dome and 30° angle reflectors made of bright white *Krydon*® material provide superior reflectivity, with twist-on feature requiring no tools or additional hardware. Will not chip, peel, dent, rust, or corrode.
- Grounding wire for safety.
- Medium base lamp sockets.



Certifications and Compliances:

- NEC/CEC:
Class I, Division 2, Groups A, B, C, D
HPS 35W, 50W – Class II, Class III &
Simultaneous Presence (Class I,
Division 2 and Class II)
Class I, Zone 2
- IEC:
Zone 2 Ex nR IIC
- UL Standards:
844 Hazardous (Classified) Locations
1598 Luminaires
1598A Marine Locations
- CSA Standards:
C22.2 No. 137
- IEC Standards:
60079-15

Standard Materials:

- Ballast housings and mountings – copper-free aluminum (less than 0.4 of 1%)
- Exterior hardware – stainless steel
- Reflectors (dome and angle) – *Krydon* fiberglass-reinforced polyester material
- Globes – heat and impact resistant, internally fluted glass
- Guards – copper-free aluminum

Standard Finishes:

- Copper-free aluminum – epoxy powder coat
- *Krydon* material – high reflectance white
- Stainless steel – natural

Electrical Ratings:

- 120 volts, dual-tap (120/277), multi-tap*
- 50, 70, 100, 150 watts HPS**
- 70 and 100 watts MH

* When ordering fuses for luminaires, option S658, you must specify the operating voltage. S658 cannot be ordered with /MT in the catalog number.

** 150W HPS is not available with multi tap ballast. 120V only.

Options:

The following special options are available from the factory by adding suffix to luminaire Cat. No.:

Description	Suffix
• Restricted Breathing Construction Class I, Division 2 & Zone 2 Suitability Cooler Operating Temperatures (T-Numbers)	S826
• Certified for IEC Zone 2..... Furnished with terminal block, crimp terminals and dedicated voltage ballasts (no MT, DT, or TT)	S826TB
• Fused – to protect ballast and capacitors against abnormal line conditions (Not for use in Canada) (Not suitable for marine applications)	S658*
• Quick-Clip - Holds weight of housing when closed. No need to support luminaire while screwing the housing to the cover	S890
• Ballast-Gard™ starter cut-out switch – prevents starter pulsing when lamp is cycling or inoperative; prolongs ballast and ignitor life. Available for use with 50–100W HPS only	BG
• Factory assembled with H.I.D. lamps installed for additional labor savings	FA
• Stainless steel insert – top hat with stainless steel threaded insert to attach ballast housing	S806

Accessories:

- See pages 977–978 for complete listing

LMV Series 50–150W High Pressure Sodium








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& Simultaneous Presence
(35W, 50W)
Marine & Wet Locations
3, 3R, 4, 4X; IP66

3L

To complete the catalog #, include information in notes 1, 2 and 3 below. For guards and other optics see LMV Series - Ordering By Components page.

	Mounting Style	Hub Size	Lamp Watts	BASIC CATALOG NUMBER		
				With G54 Globe and P50 Guard		
	Pendant Mount	3/4	50	LMVS2A050GP LMVS3A050GP		
			70	LMVS2A070GP LMVS3A070GP		
		1	100	LMVS2A100GP LMVS3A100GP		
			150	LMVS2A150GP LMVS3A150GP		
			Flexible Pendant Mount	3/4	50	LMVS2HA050GP LMVS2HA070GP
					100	LMVS2HA100GP LMVS2HA150GP
1	50			LMVS2C050GP LMVS3C050GP		
	70			LMVS2C070GP LMVS3C070GP		
	Ceiling Mount Thru-Feed	3/4	100	LMVS2C100GP LMVS3C100GP		
			150	LMVS2C150GP LMVS3C150GP		
			Wall Mount Thru-Feed	3/4	50	LMVS2TW050GP LMVS3TW050GP
					70	LMVS2TW070GP LMVS3TW070GP
1	100			LMVS2TW100GP LMVS3TW100GP		
	150			LMVS2TW150GP LMVS3TW150GP		
	Quad Mount Pendant, Adjustable Thru-Feed, 25° Angle, 12 1/2° Angle	3/4	50	LMVS25Q050GP LMVS25Q070GP		
			100	LMVS25Q100GP LMVS25Q150GP		
		1	50	LMVSJ050GP LMVSJ070GP		
			70	LMVSJ100GP LMVSJ150GP		
	Stanchion Mount 25° Angle	1 1/2	50	LMVSJ050GP LMVSJ070GP		
			100	LMVSJ100GP LMVSJ150GP		
		1	50	LMVSP050GP LMVSP070GP		
			100	LMVSP100GP LMVSP150GP		
	Stanchion Mount Straight	1 1/2	50	LMVSP050GP LMVSP070GP		
			100	LMVSP100GP LMVSP150GP		
		1	50	LMVSP050GP LMVSP070GP		
			100	LMVSP100GP LMVSP150GP		

1. Add voltage suffix to end of catalog number
Standard Voltage Ballasts - 60Hz

Voltage Suffix	NEC/UL				CEC/CSA (cUL)		
	Multi Tap /MT	Dual Tap /DT	120V /120	480V /480	Tri Tap /TT	Dual Tap /DT	120V /120

2. 150W HPS Luminaires: For 55V lamps - add suffix LX. 50W HPS luminaire is dual tap only. 150W HPS is not available with multi tap ballast. 120V only.
3. Options - Add the required option suffixes, see page 934, in alpha-numeric order.







LMV Series 70-100W Metal Halide

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Certified for IEC Zone 2
(Suffix S826TB)

Marine & Wet Locations
3, 3R, 4, 4X; IP66

To complete the catalog #, include information in notes 1, 2 and 3 below. For guards and other optics see LMV Series - Ordering By Components page.

Mounting Style	Hub Size	Lamp Watts	BASIC CATALOG NUMBER
			With G54 Globe and P50 Guard
 Pendant Mount	3/4	70	LMVM2A070GP
	1		LMVM3A070GP
	3/4	100	LMVM2A100GP
	1		LMVM3A100GP
 Flexible Pendant Mount	3/4	70	LMVM2HA070GP
	3/4	100	LMVM2HA100GP
 Ceiling Mount Thru-Feed	3/4	70	LMVM2C070GP
	1		LMVM3C070GP
	3/4	100	LMVM2C100GP
	1		LMVM3C100GP
 Wall Mount Thru-Feed	3/4	70	LMVM2TW070GP
	1		LMVM3TW070GP
	3/4	100	LMVM2TW100GP
	1		LMVM3TW100GP
 Stanchion Mount 25° Angle	1 1/2	70	LMVMJ070GP
	1 1/2	100	LMVMJ100GP
 Stanchion Mount Straight	1 1/2	70	LMVMP070GP
	1 1/2	100	LMVMP100GP

3L

1. Add voltage suffix to end of catalog number

Standard Voltage Ballasts - 60Hz

Voltage Suffix	NEC/UL			CEC/CSA (cUL)	
	Multi Tap /MT	120V /120	480V /480	Tri Tap /TT	120V /120

2. 70W ballast not available in 480V.

3. Options - Add the required option suffixes, see page 934, in alpha-numeric order.

LMV luminaires are available in components.

A complete luminaire consists of:

- I. Champ Cover (Mounting Module)
- II. LMV Ballast Housing – Include voltage and required option(s)
- III. Globe, Guard, Reflector

I. Champ Cover (Mounting Module):

Type	Conduit	Cat. #
Pendant	3/4"	APM2
	1"	APM3
Flexible Pendant	3/4"	HPM2
Ceiling	3/4"	CM2
	1"	CM3
Wall	3/4"	TWM2
	1"	TWM3
Stanchion – 25 Degree Angle	1 1/2"	JM5
Stanchion – Straight	1 1/2"	PM5
Quad-Mount	3/4"	QM25

II. Ballast Housings:

Complete catalog number must have the **voltage suffix** (MT shown) and any **options suffixes**.

Lamp Type	Lamp Watts	Cat. #
High Pressure Sodium	50	LMVS050/120
	70	LMVS070/MT
	100	LMVS100/MT
	150	LMVS150/120 LX
Metal Halide	70	LMVM070/MT
	100	LMVM100/MT

III. Globe, Guards and Reflectors:

Type	Cat. #
Globe	G54
Globe Guard	P50
Reflector – Dome	RD636
Reflector – Angle	RA636

Champ® H.I.D. Luminaires

COVERS:

PENDANT

APM2 3/4 IN.

APM3 1 IN.

HPM2 3/4 IN.

WALL

TWM2 3/4 IN.

TWM3 1 IN.

QUAD—MOUNT

QM25 3/4 IN.

PHOTOCELL

V2PC20

V2PC22

V2PC27

CEILING

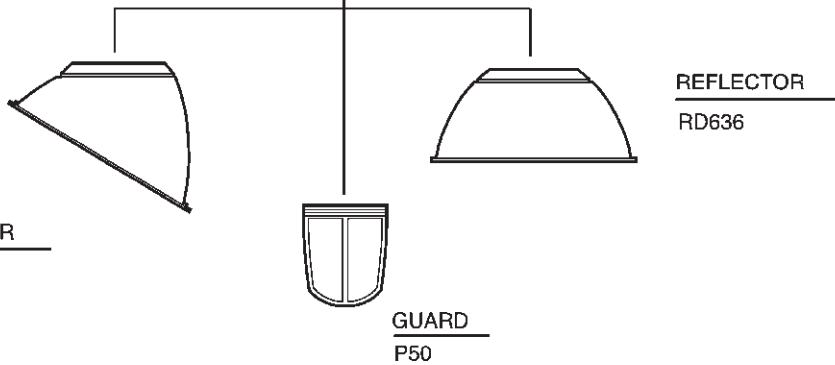
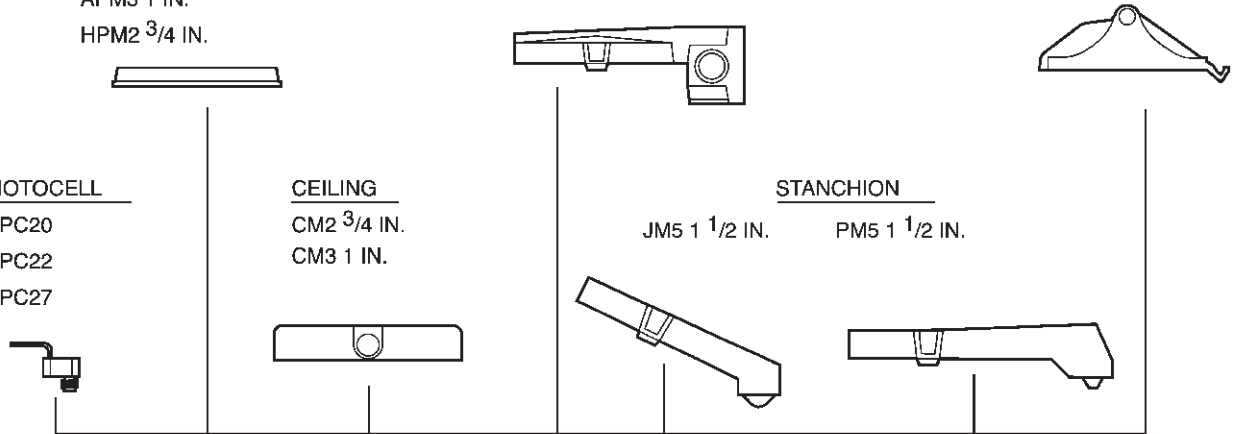
CM2 3/4 IN.

CM3 1 IN.

STANCHION

JM5 1 1/2 IN.

PM5 1 1/2 IN.



Champ® H.I.D. Luminaires

Cat. #	Lamp		Rated Ambient °C	Class I, Division 2	Class II, Division 1		Simultaneous Presence Class I, Div. 2 Class II, Div. 1	Class I, Zone 2		Supply Wire Suitable for °C
	Wattage	Type		Globe (G54) w/ or w/o Reflector (RA636 or RD636)	Group	Globe (G54) w/ or w/o Reflector (RA636 or RD636)		Restricted Breathing Suffix S826 w/ Globe (G24)	Factory Sealed Suffix S865 AEx nA nR II	
LMVS50	50	HPS	40	T2D	EFG	T3C	T2B	T5	T3	N/A
LMVS50	50	HPS	55	T2C	—	—	—	T4	T3	75
LMVS50	50	HPS	65	T2C	—	—	—	T4	T3	85
LMVS70	70	HPS	40	T2B	—	—	—	T4	T3	75
LMVS70	70	HPS	55	T2B	—	—	—	T4	T3	85
LMVS100	100	HPS	40	T2	—	—	—	T4	T3	85
LMVS100	100	HPS	50	—	—	—	—	T3	T3	90
LMVM70	70	MH	40	T2B	—	—	—	T4	T3	75
LMVM70	70	MH	55	T2B	—	—	—	T4	T3	85
LMVM100	100	MH	40	—	—	—	—	T3	T3	85
LMVM150	150	HPS	40	T1 350°C	—	—	—	—	—	85

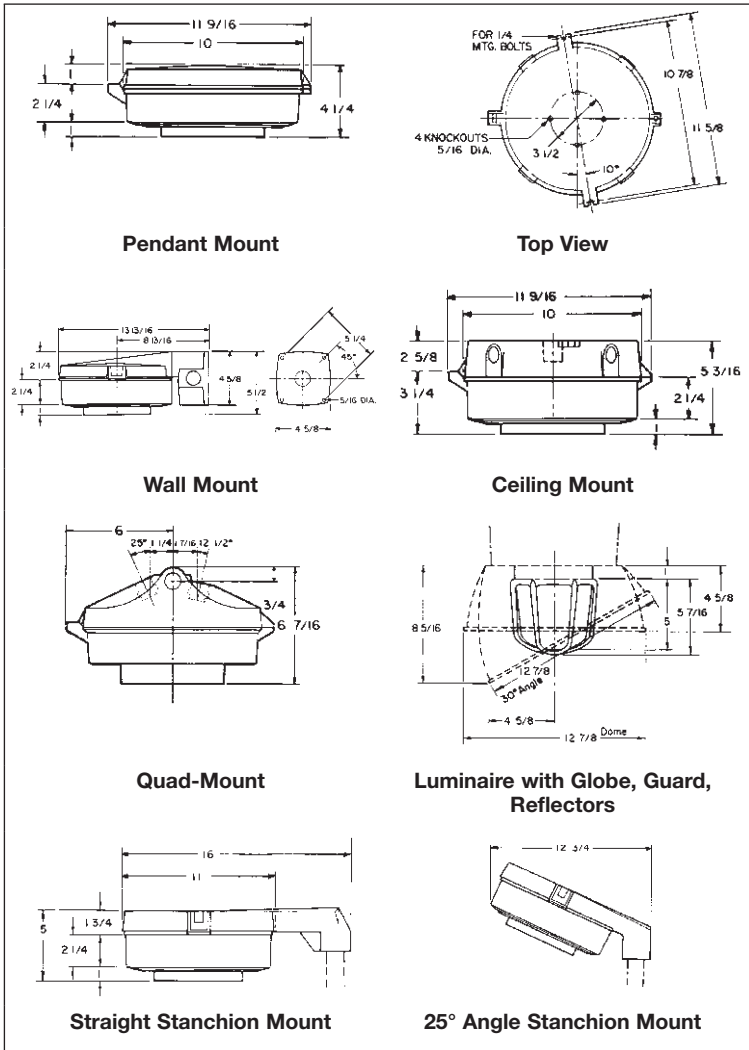
The Class I, Division 2 T-codes apply to luminaires without the restricted breathing (S826) or factory sealed (S865) options. These luminaires are listed to UL 844. UL 844 specifies how the temperatures are measured.

The Class I, Zone 2 T-codes are for luminaires that are additionally listed to UL 60079-15 that specify a different method for measuring temperatures. Since NEC® 501.1 states that equipment "...for use in Class I, Zone 0, 1, or 2 locations shall be permitted in Class I, Division 2 locations..." then these luminaires are suitable for Class I, Division 2 but with lower temperature ratings. They also have the advantage of meeting the more rigorous mechanical tests of UL 844.



Champ® H.I.D. Luminaires

Dimensions
In Inches:



Luminaire Net Weights:

Luminaire Series	Lamp Watts	Luminaire with Globe, Guard (lbs.)
LMVS	50	7 ³ / ₄
	70	8 ¹ / ₄
	100	8 ³ / ₄
	150	9 ¹ / ₄
LMVM	70	9
	100	9

Type	Lbs.
Add for mounting modules:	
Pendant	1 ¹ / ₄
Flexible Pendant	1 ¹ / ₂
Ceiling	2 ³ / ₄
Quad-Mount	3 ¹ / ₂
Wall	4 ¹ / ₂
Angle Stanchion	3 ¹ / ₂
Straight Stanchion	4 ¹ / ₂

Type	lbs.
Add for reflectors:	
Dome	1.0
30° Angle	1.0

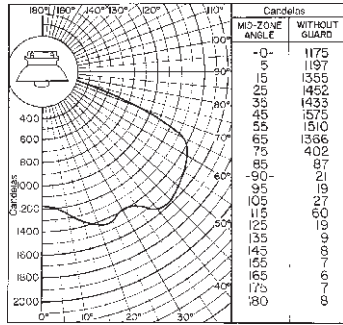
Deduct for luminaire without guard:	
P50 Guard	1/2

Champ® H.I.D. Luminaires

Lamp: 100W/E-17 high pressure sodium (HPS)
 Total bare lamp lumens: 9500

All data provided is for high pressure sodium luminaires with 100W/E-17 clear lamps. Use conversion factors (multipliers) shown below for other lamp types and wattages. Consult Cooper Crouse-Hinds for additional photometric data on any Champ Series.

Luminaire with Globe and Dome Reflector



Multipliers (for use with candela curve only).

Luminaire Series	Lamp Watts	Con-version Factor
	35	0.24
	50	0.42
LMVS	70	0.67
	150	1.68

Luminaire spacing ratio: 2.0

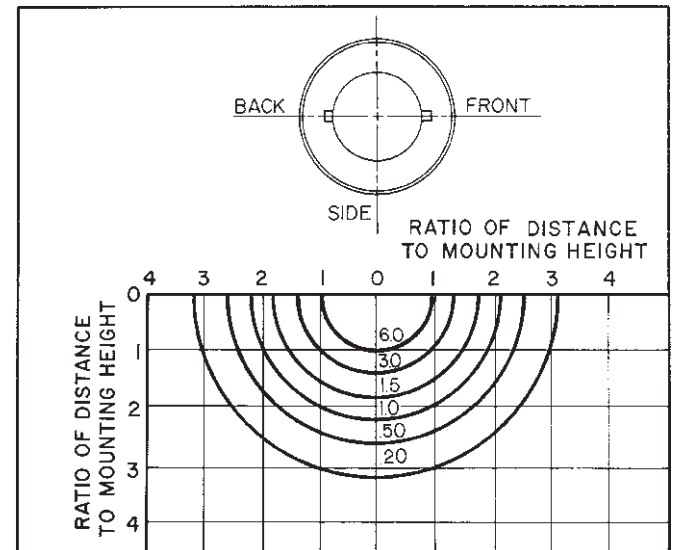
Coefficient of Utilization

Effective Floor Cavity Reflectance 20%

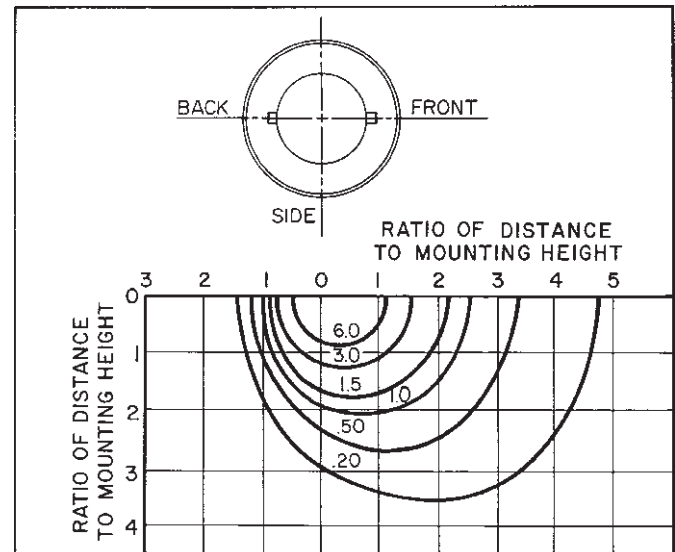
% Reflectance	Room Cavity Ratio					
	Eff. Ceil.	Wall	1	2	3	4
80	50	.722	.628	.545	.473	.413
	30	.691	.579	.487	.408	.346
	10	.663	.537	.441	.358	.296
70	50	.705	.613	.534	.463	.403
	30	.676	.568	.479	.403	.340
	10	.650	.531	.436	.355	.293
50	50	.671	.585	.511	.442	.387
	30	.647	.548	.464	.390	.332
	10	.627	.514	.426	.349	.289
30	50	.641	.560	.489	.424	.371
	30	.623	.529	.450	.379	.322
	10	.605	.501	.416	.342	.284
10	50	.614	.537	.470	.407	.356
	30	.598	.510	.436	.367	.311
	10	.584	.488	.407	.335	.279
0	0	.568	.471	.391	.319	.263

% Reflectance	Room Cavity Ratio					
	Eff. Ceil	Wall	6	7	8	9
80	50	.366	.324	.288	.261	.226
	30	.300	.259	.225	.199	.165
	10	.253	.215	.180	.156	.127
70	50	.358	.318	.282	.256	.221
	30	.295	.255	.223	.196	.165
	10	.249	.212	.179	.156	.126
50	50	.343	.305	.271	.246	.214
	30	.288	.248	.217	.192	.161
	10	.246	.209	.177	.154	.124
30	50	.330	.292	.261	.237	.206
	30	.280	.243	.210	.186	.157
	10	.242	.205	.175	.152	.122
10	50	.317	.282	.251	.228	.199
	30	.272	.237	.206	.182	.152
	10	.238	.202	.172	.149	.120
0	0	.223	.187	.158	.136	.107

Isofootcandle Chart: Luminaire with Globe and Dome Reflector



Isofootcandle Chart: Luminaire with Globe and 30° Angle Reflector



Isofootcandle charts show illumination in footcandles on work plane 10 feet below light center. Multiply by factor shown to convert to other mounting heights.

Height (Ft.)	Factor	Height (Ft.)	Factor
6	2.78	14	0.51
8	1.56	16	0.39
12	0.70		