

3/16/2012

# Vaporproof Highbay Fluorescent 3 - 6 Lamps

Vaporproof Fluorescent



Project:	
Catalog#:	
Approved by:	

## Description

VHA1 series vaporproof highbay is engineered for performance down to the smallest detail. It is fully gasketed to provide total protection from dust and moisture penetration. It withstands corrosion, splashing water, hose-directed water, damage from external ice formation, and temporary submersion. This rugged fixture operates three to six lamps and as a standard feature comes with a Howard ballast.

## Features

### Housing

- One-piece upper body; no seams to crack, break, or leak
- Reinforced fiberglass body is rugged and corrosion resistant
- 5VA Flammability Rating
- Stainless steel hardware for maximum durability
- Twelve latches for positive lens retention
- White polyethylene molded end plugs for use as knockouts
- High gloss, baked enamel reflective front
- Available 95% Enhanced Specular Aluminum Reflector
- Pressure wash up to 1500 PSI<sup>(1)</sup>

### Gasket

- Closed cell polyester gasket
- Poured gasket seamlessly fills channel for maximum seal
- Gasket has dry skin that will not stick to the mating surface
- High gasket compression recovery ensures a solid seal over life of fixture

### Diffuser

- Injection molded for maximum strength and precise detail
- Frosted ends and lineal prisms on sides reduce glare
- Continuous formed perimeter provides for positive seal
- **Materials:**
  - 100% Virgin Impact Resistant Acrylic
  - Long lasting clarity and resistance to weathering
  - OR
  - UV Stabilized Polycarbonate
  - Maximum impact resistance

### Installation

- Shipped fully wired with Howard ballast
- Easy access to wiring compartment and ballast via removable gear tray
- Gear tray tethered to housing by two lanyards for extra safety
- NEC compliant luminaire power disconnect standard
- **Mounting:**
  - Standard: two versatile V-Hook mounting brackets
  - OR
  - Optional: wire hanging kit

### Ballast

- Electronic, Inherent Thermal Protection, Class P, Sound rated A
- UL Listed

### Quality Assurance

- System Tested, Designed, Approved, and Manufactured by Howard Lighting Products in Mendenhall, Mississippi.

(1) All installed fittings must be both of appropriate type and be installed to the manufacture's specifications.

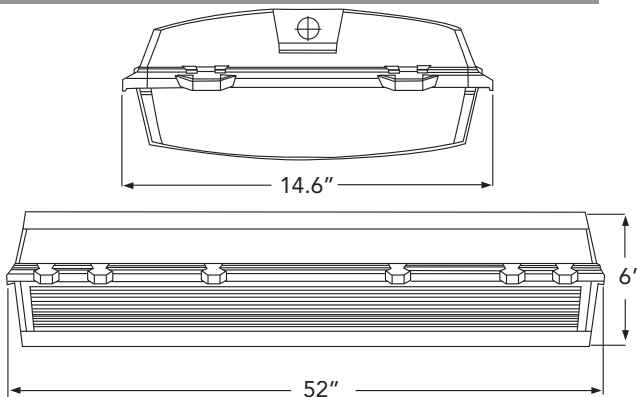
## Applications

- |                    |                     |
|--------------------|---------------------|
| Entrance Lighting  | Beverage Industry   |
| Car Washes         | Food Processing     |
| Public Access      | Construction Sites  |
| Parking Structures | Industrial Lighting |

## Certifications



## Dimensional Drawings



Specifications subject to change without notice.

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## Ordering Information

Model Family	Lens	No. of Lamps	Lamp Type/ Wattage <sup>(1)</sup>	CRI/CCT				Ballast (see Table1)		Input Volts	Factory Installed Options	Cordset Options	T B A	Pack.
VHA1	A	6	32	A				SE		MV	00C	01	0	I
VHA1	A: Impact resistant acrylic  P: UV stabilized polycarb.	3 4 5 6	28: F28T8 32: F32T8  28:F28T5 54: F54T5HO	CRI	CCT	High Lumen	T8	T5	SE: SBF High Eff <sup>(2)</sup> HE: HBF High Eff <sup>(2)</sup> LE: LBF High Eff <sup>(2)</sup>  PS: PRS T5 P8: PRS T8 <sup>(2)</sup>	MV: 120-277v HV: 347-480v (T5HO) AX: 480-277 <sup>(3)</sup>	000: No FIOs A: Occ Sensor <sup>(4)</sup> C: Lens Tether Safety Cable E: Enhanced Specular Reflector <sup>(5)</sup> M: End Mount Bracket R: Rough Service Lampholders (6LT5) W: Wire Cable Hanging Kit	00: Standard Disconnect 01: 6', no plug 02: 10', no plug 03: 6', twist lock 120v 04: 10' twist lock 120v 05: 6' non twist lock 120v 06: 10' non twist lock 120v 07: 6' twist lock 277v 08: 10' twist lock 277v 09: 6' non twist lock 277v 10: 10' non twist lock 277v 11: 16/3, no plug spec len 12: 16/4, no plug spec len 16: 16', non twist lock 277v 17: 18/3, no plug spec len 18: 6', twist lock 480v 19: 10', twist lock 480v 20: 16', twist lock 120v 21: 16', twist lock 277v Y1: Yellow 6' 16/3 STOW, no plug		I: Single

(1) Lamp installation available.

(2) High Efficiency ballasts are CEE Listed.

(3) Step-down autotransformer. Allows hook-up of standard MV ballast to 480v.

(4) Occupancy Sensors should be used with programmed rapid start ballasts for maximum lamp life.

Standard Occupancy Sensor requires neutral wired fixtures (ex. -120v or -277v).

For phase-to-phase voltage applications (240v) advise Customer Service at time of request.

(5) Consult factory when ordering 3 or 5 lamp reflector.

Table1:

SE	Standard Ballast Factor High Efficiency Instant Start T8 Ballast
HE	High Ballast Factor High Efficiency Instant Start T8 Ballast
LE	Low Ballast Factor High Efficiency Instant Start T8 Ballast
PS	Program Rapid Start T5 Ballast
P8	Program Rapid Start High Efficiency T8 Ballast

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### Sample Ordering Number:

VHA1 A 6 32 A SE MV 00C 01 I

VHA1 Series Vaporproof Highbay Fluorescent

Impact Resistant Acrylic Lens

6-lamps (none installed)

F32T8 Standard Ballast Factor High Efficiency Ballast

Multi-volt (120-277v)

Factory Installed Lens Tether Safety Cable

6 foot 18/3 SJT cord

Single Packaging

Note: VHA1 comes standard with 2 versatile V-hook mounting brackets.  
OR Optional Wire Hanging Kit (FIO option W)

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**Options Available**

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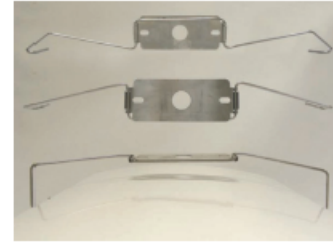
V-Hook  
2 per fixture



End Mount Bracket  
(clip not included)



Rough Service  
Yellow Cord  
(plug not included)

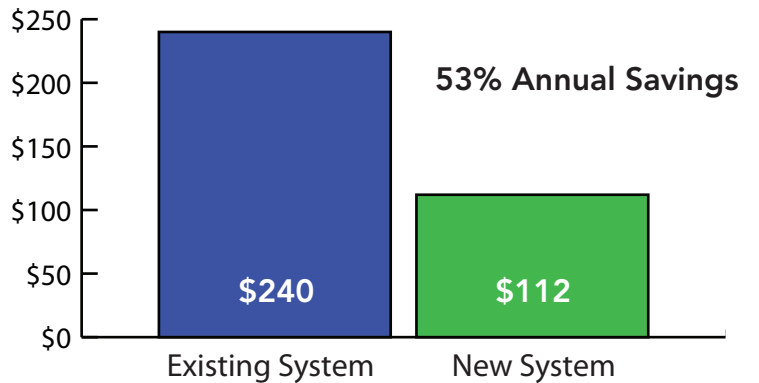


VHA1-CM  
Ceiling Mount  
Bracket  
2 per fixture



Rough Service  
Socket Bar (T5  
only)

Energy Cost Estimator					
		Existing System		New System	
		400W MH Highbay		VHA1E632AHE High Eff Standard BF Fluorescent Highbay	
Hours burned per year	4368	Number of Fixtures	1	Number of Fixtures	1
Cost per kWh\$	0.12	Watts per Fixture (existing system)	458	Watts per Fixture (new system)	214
Energy Cost Estimation		Energy used per year (existing system)	\$240	Energy used per year (new system)	\$112
		Energy saving per year (per fixture)		<b>\$128.00</b>	



Howard Industries provides this tool to examine the potential impact of lighting decisions. This tool provides an ESTIMATE only. The analysis of this tool does not warrant or guarantee the actual costs or savings that will be realized as the analysis suggested. You can find the full version of this cost saving tool at the Howard Lighting Website—[www.howardlightingproducts.com](http://www.howardlightingproducts.com). Click "Cost of Ownership Calculator".  
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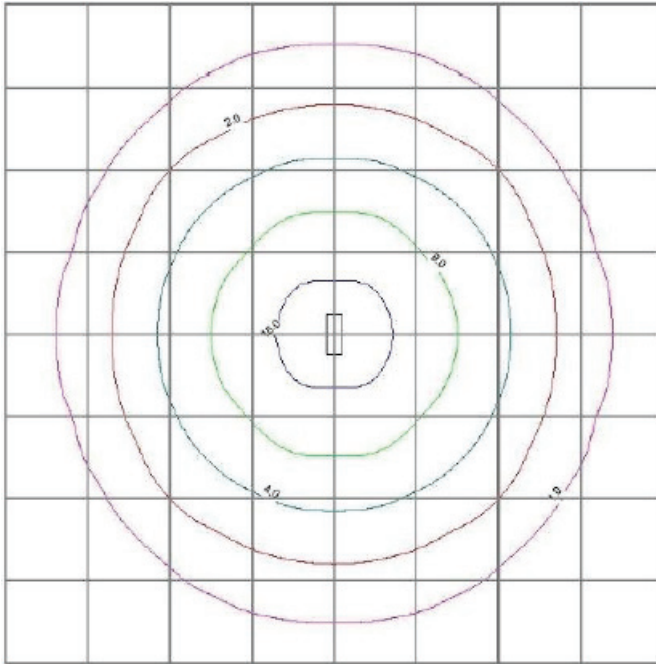
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**Photometric Data - 6 Lamp T8 (VHA1A632AHE)**

**Iso Footcandle Plot**



16' Mounting Height  
Ballast: EPH3/32IS/MV/MC/HE (High Ballast Factor)  
Lamps: Six Howard F32T8/841/ECO/IC

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**Operating Temperatures**

Number of Lamps	Lamp Type	Ballast Factor	Acceptable Temperature Range C (min-max)	Acceptable Temperature Range F (min-max)
3-4	T5	Standard	-30 to 42	-20 to 108
5-6	T5	Standard	-30 to 33	-20 to 91
3-4	T8	Standard	-15 to 42	0 to 108
3-4	T8	High	-15 to 35	0 to 95
5-6	T8	Standard	-15 to 25	0 to 77
5-6	T8	High	-15 to 25	0 to 77

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fix
0-30	4080	22	28
0-40	6613	36	46
0-60	11426	61	79
0-90	14472	78	100.00
0-180	14472	78	100.00

**Coefficients of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance 0.20															
RC	80				70				50			30			10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0
0	93	93	91	91	91	91	87	87	87	83	83	83	80	80	80
1	78	75	83	79	76	73	76	73	71	73	71	69	66	66	66
2	65	61	75	69	64	60	66	62	59	64	60	57	55	55	55
3	56	51	68	61	55	50	59	53	49	56	52	48	46	46	46
4	48	43	63	54	48	43	52	47	42	50	45	42	39	39	39
5	42	37	58	48	42	37	47	41	37	45	40	36	34	34	34
6	37	32	53	44	37	32	42	36	32	41	36	32	30	30	30
7	34	29	50	40	33	29	38	33	28	37	32	28	26	26	26
8	30	26	46	36	30	26	35	30	25	34	29	25	24	24	24
9	27	23	43	33	27	23	32	27	23	32	26	23	21	21	21
10	25	21	41	31	25	21	30	25	21	29	24	21	19	19	19

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