

2/22/2015

Vaporproof Highbay Fluorescent 3 - 6 Lamps

Vaporproof Fluorescent

| | |
|--------------|--|
| Project: | |
| Catalog#: | |
| Approved by: | |



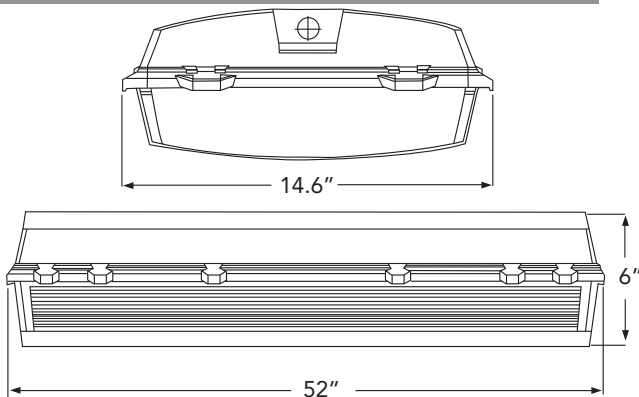
Applications

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

Certifications



Dimensional Drawings



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⁽¹⁾

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.

Specifications subject to change without notice.

Vaporproof Highbay Fluorescent 3 - 6 Lamps

| | |
|--------------|--|
| Project: | |
| Catalog#: | |
| Approved by: | |

Ordering Information

| Model Family | Lens | No. of Lamps | Lamp Type/Wattage ⁽¹⁾ | 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 ⁽²⁾ HE: HBF High Eff ⁽²⁾ LE: LBF High Eff ⁽²⁾ PS: PRS T5 P8: PRS T8 ⁽²⁾ | MV: 120-277v HV: 347-480v (T5HO) AX: 480-277 ⁽³⁾ | 000: No FIOs A: Occ Sensor ⁽⁴⁾ C: Lens Tether Safety Cable E: Enhanced Specular Reflector ⁽⁵⁾ 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.

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

**RAPID SHIP MODELS
AVAILABLE FOR NEXT DAY SHIPMENT**

- VHA1A454APSMV000000I
- VHA1A632AHMV000000I
- VHA1A654APSMV000000I

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

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 |

Specifications subject to change without notice.

2/22/2015

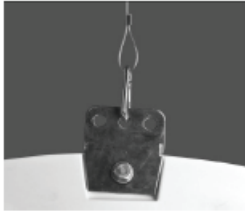
Vaporproof Fluorescent

Options Available

| | |
|--------------|--|
| Project: | |
| Catalog#: | |
| Approved by: | |



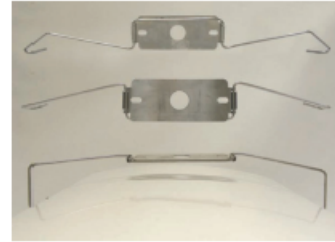
V-Hook
2 per fixture



End Mount Bracket
(clip not included)



Rough Service
Yellow Cord
(plug not included)

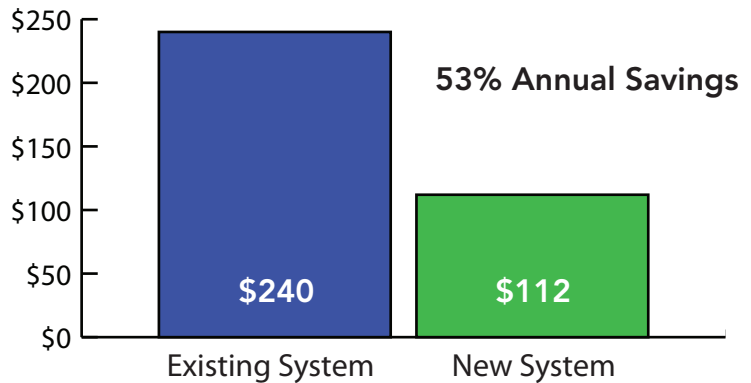


VHA1-CM
Ceiling Mount
Bracket
2 per fixture



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) | | \$128.00 | |



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. Click "Cost of Ownership Calculator".
Copyright (c) 2008 Howard Industries All Rights Reserved.

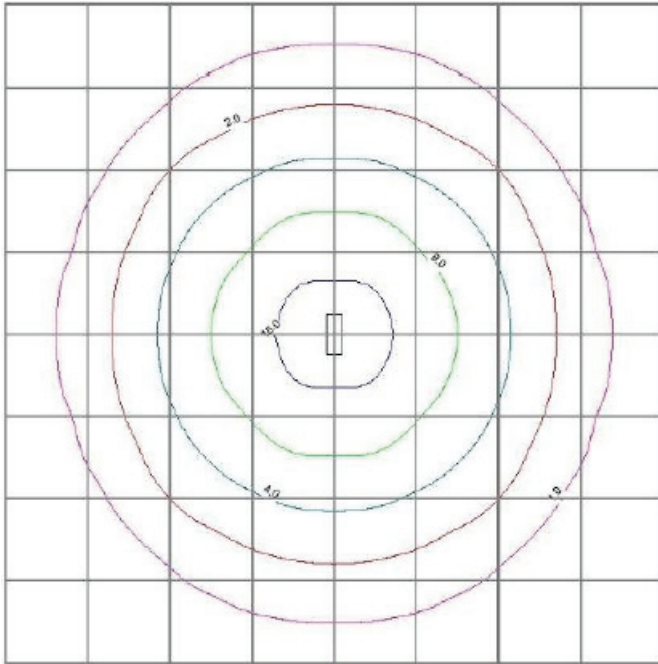
Specifications subject to change without notice.

2/22/2015

Vaporproof Fluorescent

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

| | |
|--------------|--|
| Project: | |
| Catalog#: | |
| Approved by: | |

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 |

Specifications subject to change without notice.