

Hazardous

Maximum performance in a demanding environment and well-distributed lighting is required in all Hazardous applications.

Holophane fixtures deliver optimal, efficient lighting performance in Class I, II, and III hazardous areas.

Rugged prismatic glass optics produce controlled light distributions efficiently placing light only where needed.

Robust materials and design characterize Holophane hazardous area lighting products, delivering maximum performance.

Typical applications for Holophane hazardous area lighting products include bulk storage facilities and production process areas.

Holophane hazardous area lighting fixtures, listed for wet and marine locations, are ideal for both indoor and outdoor applications.

Definitions of hazardous locations

The definitions below are taken from the National Electric Code 2005, developed by the National Fire Protection Association. These definitions are included here to clarify the Underwriters' Laboratories, Inc. listings for Holophane hazardous location luminaires, Petrolux II, Petrolume and Predator.

Class I Locations. Class I locations are those in which flammable gases, liquids or vapors are or may be present in quantities sufficient to produce explosive or ignitable mixtures. Class I locations include those specified in (a) and (b) below.

(a) Class I, Division 1. A Class I, Division 1 location is a location: (1) in which ignitable concentrations of flammable gases, liquids or vapors may exist frequently because of repair or maintenance operations or because of leakage; or (3) in which ignitable concentrations of flammable gases, liquids or vapors may exist because of equipment breakdown that simultaneously causes the equipment to become a source of release.

(b) Class I, Division 2. A Class I, Division 2 location is a location: (1) in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the liquids, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in a case of accidental rupture or breakdown of such containers or systems, or in case of abnormal operation of the ventilating equipment; or (3) that is adjacent to a Class I, Division 1 location, and to which ignitable concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided.

Class II Locations. Classes II locations are those that are hazardous because of the presence of combustible dust. Class II locations include those specified in (a) and (b) below.

(a) Class II, Division 1. A Class II, Division 1 location is a location: (1) in which combustible dusts are in the air under normal operating conditions in quantities sufficient to produce explosive or ignitable mixtures; or (2) where mechanical failure or abnormal operation of machinery or equipment might cause such explosive or ignitable mixtures to be produced, and might also provide a source of ignition through simultaneous failure of electric equipment, operation of protection devices, or from other causes; or (3) in which combustible dusts of an electrically conductive nature may be present in hazardous quantities.

(b) Class II, Division 2. A Class II, Division 2 location is a location where combustible dust is not normally in the air in quantities sufficient to produce explosive or ignitable mixtures, and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus, but combustible dust may be in suspension in the air as a result of infrequent malfunctioning of handling or processing equipment and where combustible dust accumulations on, in, or in the vicinity of the electrical equipment may be sufficient to interfere with the safe dissipation of heat from electrical equipment or may be ignitable by abnormal operation or failure of electrical equipment.

Class III Locations. Class III locations are those that are hazardous because of the presence of easily ignitable fibers or flyings, but in which such fibers or flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures. Class III locations include those specified in (a) and (b) below.

(a) Class III, Division 1. A Class III, Division 1 location is a location in which easily ignitable fibers or materials producing combustible flyings are handled, manufactured, or used.

(b) Class III, Division 2. A Class III, Division 2 location is a location in which easily ignitable fibers are stored or handled.

Table 1:

Petrolux PETL temperature classification for (under dust blanket) hazardous location

TEMPERATURE CLASSIFICATION — CLASS II AND III, DIVISION 1 AND 2													
Under Dust Blanket													
		40°C Ambient					55°C Ambient					65°C Ambient	
	HPS	CE	Group	PD	Group		CE	Group	PD	Group		CE	Group
Small	50W	T6	E,F,G	T6	E,F,G		T6	E,F,G	T6	E,F,G		T5	E,F,G
Small	70W	T6	E,F,G	T6	E,F,G		T5	E,F,G	T5	E,F,G		T4A	E,F,G
Small	100W	T4A	E,F,G	T4A	E,F,G		T4	E,F,G	T4	E,F,G		T3C	E,F,G
Small	150W	T4 ¹	E,F,G	T4A	E,F,G		T3C ¹	E,F,G	T3C	E,F,G		T3C	E,F,G
Large	250W	T3	E,F	T2	E,F,G								
Large	400W	T3 ¹	E,F	T1	E,F,G								
MH													
Small	100W	T3C	E,F,G	T3A	E,F		T3C ¹	E,F,G	T3	E,F		T3C	E,F
Small	175W	T3C	E,F,G	T3A	E,F		T3C ¹	E,F,G	T3	E,F		T3C	E,F
Large	250W	T4	E,F,G	T2A	E,F,G								
Large	400W	T3 ¹	E,F,G	T2	E,F,G								
PM													
Small	175W			T4A ¹	E,F,G		T4A ^{1,2}	E,F,G					
Large	250W	T4	E,F,G	T2	E,F,G								
Large	320W	T3C ¹	E,F,G	T3C ¹	E,F,G								
Large	350W	T3C ¹	E,F,G	T3C ¹	E,F,G								
Large	400W	T3C ¹	E,F,G	T3C ¹	E,F,G								
INC													
Small	200W	T3C	E,F,G	T3C	E,F,G		T3A	E,F	T3A	E,F		T3 ¹	E,F

1 90°C Supply Wire Temperature
2 Reflector Optic 25°C only

Table 2:

Petrolux PETL temperature classification for (free air) hazardous location

TEMPERATURE CLASSIFICATION — CLASS I, DIVISION 2					
Free Air					
	HPS	40°	55°	65°	75°
Small	50W	T3C	T3C	T3B	T3A ¹
Small	70W	T3B	T3A	T3A ¹	T3 ¹
Small	100W	T3	T3	T2D ¹	
Small	150W	T2B	T2B ¹	T2D ³	
Large	250W	T2			
Large	400W	T2			
MH					
Small	100W	T3	T3	T2D ¹	
Small	175W	T2B	T2B ¹	T2B ³	
Large	250W	T2A			
Large	400W	T2			
PM					
Small	175W	T2			
Large	250W	T2			
Large	320W	T2A ¹			
Large	350W	T2A ¹			
Large	400W	T2A ¹			
INC					
Small	200W	T3	T3	T3A*	T3*

1 90°C Supply Wire Temperature
2 Reflector Optic 25°C only
3 1/2 Supply wire

Table 3:

Maximum operating temperatures are provided in Table 500-5(d) of the N.E.C.

TEMPERATURE IDENTIFICATION NUMBERS		
Maximum Temperature		
Degrees C	Degrees F	Temperature Code
450	842	T1
300	572	T2
280	536	T2A
260	500	T2B
230	446	T2C
215	419	T2D
200	392	T3
180	356	T3A
165	329	T3B
160	320	T3C
135	275	T4
120	248	T4A
100	212	T5
85	185	T6





Petrolux® PETL

Holophane luminaires deliver optimal, efficient lighting performance in Class I, II, and III hazardous areas. Rugged prismatic glass optics produce controlled light distributions efficiently placing light only where needed. Robust materials and design characterize Holophane hazardous area lighting products, delivering maximum performance in hostile, corrosive environments.

Available in a choice of low to medium wattage HID lamps, Holophane hazardous area lighting luminaires operate in a broad range of ambient temperature conditions.

Typical applications for Holophane hazardous area lighting products include bulk storage facilities and production process areas.

Holophane hazardous area lighting luminaires, listed for wet and marine locations, are ideal for both indoor and outdoor applications.



*Petrolux PETL with Refractor
(Low wattage)*



*Petrolux PETL with Refractor
(High wattage)*



*Petrolux PETL with Reflector
(Low wattage)*



*Petrolux PETL with Reflector
(High wattage)*

Petrolux® PETL



Typical Applications

- Petrochemical Plants
- Chemical Plants
- Fermenting Facility
- Solvent Extraction Plants
- Flour and Feed Mills
- Dip Tank Locations



Features

- Meets NEC Hazardous requirements
- Multiple mounting configurations
- Low copper aluminum housings
- Choice of light distributions
- Enclosed and gasketed reflectors
- Hinged ballast housing

Lamp Types

- 50 - 400 watt metal halide
- 175 - 400 watt high pressure sodium
- 200 watt incandescent

Approvals

- UL/CUL listed suitable for wet locations
- Class I, Division 2; Groups A, B, C, D
- Class II, Division 1 and 2; Groups E, F, G
- Class III, Division 1 and 2

Petro-chemical Plants

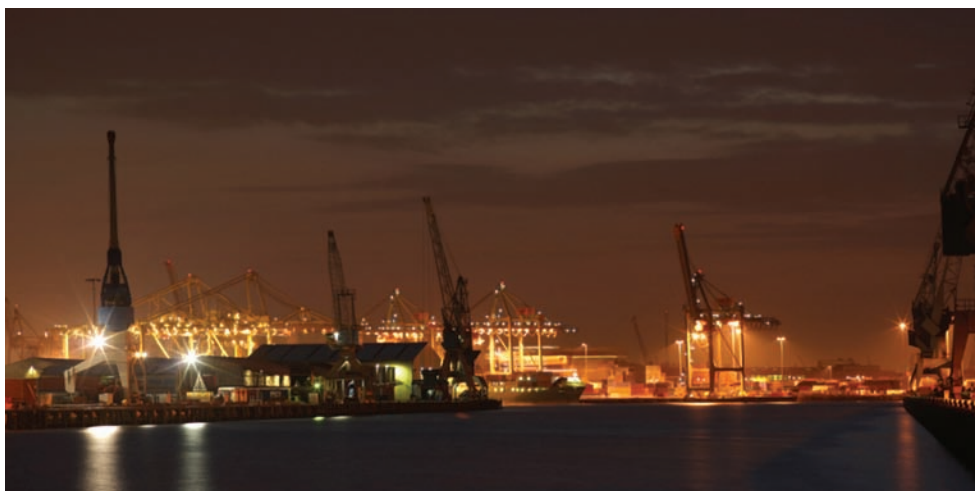
For hazardous areas within a petro-chemical plant the Petrolux luminaire features a corrosion resistant, low copper aluminum housing having a phosphate pre-treated and polyester powder coat finish as well as the Endural® borosilicate glass. The Petrolux luminaire is robustly designed and manufactured with superior materials and long life in mind.

Solvent Extraction Plants

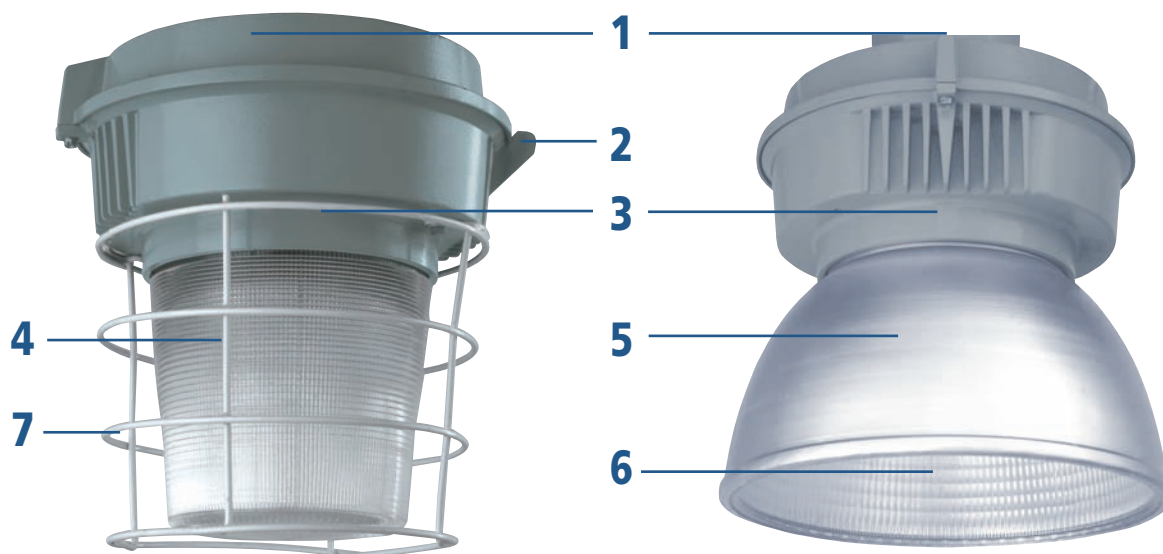
Most facility managers of solvent extraction plants want a luminaire that can be installed and then forgotten about. The Endural® borosilicate glass refractors provide excellent thermal shock resistance in all environments. Both the reflectors and refractors provide superior performance, efficiency and visibility. The reflectors and refractors thread on to the ballast housing allowing the optics and the lamp to be easily installed. In response to customer needs for a rugged, hazardous rated luminaire, Holophane offers the Petrolux luminaire.

Flour and Feed Mills

Available in two sizes, the Petrolux luminaire was designed to meet a variety of application needs within flour and feed mills. The low wattage (up to 175MH) luminaire offers a choice of two refractors with three distributions (symmetric, long and narrow, offset long and narrow) and one reflector (open or enclosed). The medium wattage (up to 400MH) luminaire offers a choice of three refractors with three distributions and one closed reflector.



Product Features



Refractor

- 1** Pendant top with .75" NPT threaded rigid conduit entry: For pendant or flexible pendant mounting (swivel hanger required). Large housing is balanced.
- 2** Hinged ballast housing with integral ballast.
- 3** Heavy duty low-copper aluminum, polyester powder painted ballast housing.

Reflector

- 4** Rugged prismatic glass refractors: Provides symmetrical, asymmetrical or long and narrow distribution.
- 5** Prismatic borosilicate glass reflector with spun on aluminum cover.
- 6** Sealed-in glass bottom closure.
- 7** Optional wire guard for added protection.

Specifications

Hazardous locations:

UL listed for use in:

- Hazardous locations - UL 844 Class I, Division 2 Class II Division 1 and 2
- Marine outside (salt and fresh water type) - UL 1598A
- Wet location - UL 1572

Units tested and listed in 40°C as well as higher elevated ambients. (see tables on page 145)

Choice of lamp type and wattage

- 50, 70, 100, 150, 250, 400W HPS
- 100, 175, 250, 320, 350, 400W metal halide
- 200W incandescent

Choice of mounting

- PD - Pendant ,mount
- FP - Flexible pendant mount for balanced hanging (low wattage fixture only)
- SA - Stanchion mount
- CD - Ceiling mount
- CE - Ceiling mount (thru-wire)
- WL - Wall mount

Enclosed and gasketed reflectors

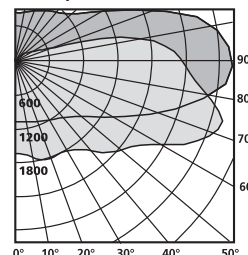
The low wattage Petrolux PETL luminaire offers a prismatic borosilicate glass reflector with a spun-on aluminum cover. The bottom closure is a sealed-in tempered glass roundel. The reflector provides excellent lamp cutoff for superior visual comfort while providing wide spacing capability. The medium wattage Petrolux PETL luminaire provides the same efficient optical performance but in a distribution more suitable for medium mounting height applications.

Choice of light distributions

Asymmetrical refractor series is designed for lighting narrow areas, such as walkways, loading platforms and parking structures. It allows spacing up to 2½ times as far apart as clear globe units. Two versions are available - with offset distribution where stanchion or wall mounting is preferred, or with long and narrow distribution for lighting from the center of a walkway. Symmetrical refractor series is ideal for lighting general areas such as open storage. The refractor directs more light downward and outward, reducing the number of luminaires required to achieve a given light level by as much as one-third.

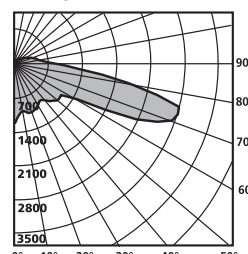
Distributions

541 optic



PETL175MH00541XXX
Petrolux PETL
Lamp: 175W Coated MH
Lumens: 14000
Watts: 175
Spacing Criteria: 1.99 (90°)
Luminaire Efficiency: 89%

545 optic



PETL175MH00545XXX
Petrolux PETL
Lamp: 175W Clear MH
Lumens: 14000
Watts: 175
Spacing Criteria: 1.3
Luminaire Efficiency: 90.7%

Ordering Information

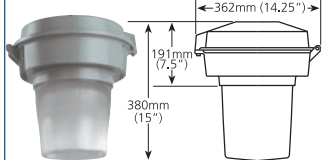
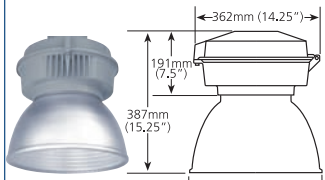
How to Construct a Catalog Number

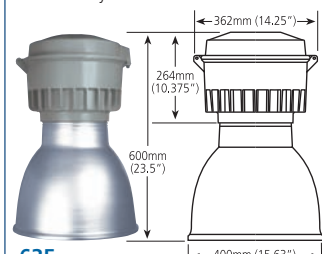
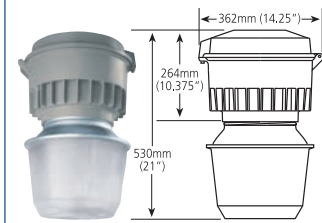
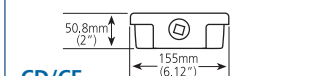
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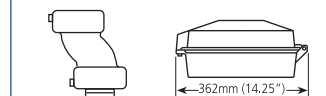
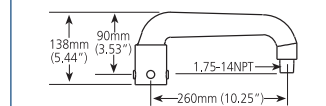
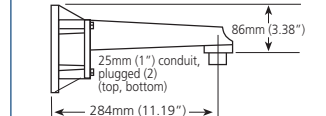
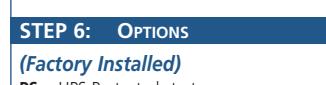
PETL	250MH	12	521	PD	PS	F1
1	2	3	4	5	6	7
LUMINAIRE	WATTAGE	VOLTAGE	OPTICS	MOUNTING	OPTIONS	ACCESSORIES
PETL	050HP 070HP 100HP 10DMP 15AHP 15DMP 175MH 175PM 17DMP 200IN 250HP 250MH 250PM 25LPM 320PM 350PM 35LPM 400HP 400MH 400PM 40LPM 70DMP	08 12 20 24 27 34 40 48 MT VT	25C 521 525 526 541 545 635	CD CE FP PD SA WL	PS	09189-X F1 F2 LAMP PETLSW PETLWGA PETLWGB PETLWGC PETLWGD PS-55 PS-100

Catalog Number Information

STEP 1: LUMINAIRE
PETL Petrolux PETL, hazardous locations
STEP 2: SOURCE AND WATTAGE
SMALL HIGH PRESSURE SODIUM 050HP 50W HPS 070HP 70W HPS 100HP 100W HPS 15AHP 150W/55V HPS METAL HALIDE 10DMP 100W MH, medium base 15DMP 150W MH, medium base 70DMP 70W MH, medium base 175MH 175W MH PULSE START METAL HALIDE 175PM 175W MH, mogul base 17DPM 175W MH, medium base, protected INCANDESCENT 200IN 200W INC, 120V only LARGE HIGH PRESSURE SODIUM 250HP 250W HPS 400HP 400W HPS METAL HALIDE 250MH 250W MH 400MH 400W MH PULSE START METAL HALIDE 250PM 250W MH 320PM 320W MH 350PM 350W MH 400PM 400W MH Energy Saving 25LPM 250W MH 35LPM 350W MH 40LPM 400W MH

STEP 3: VOLTAGE
08 ¹ 208V 40 ¹ 240V 12 120V 20 208V 24 240V 27 277V 34 347V 48 480V MT Multi-voltage VT Vari-tap ¹ Available with large housing only, must be handled through TSG
STEP 4: OPTICS
SMALL 25C Closed bottom reflector 545 Symmetric refractor 541 Long and narrow refractor  541/545 Maximum Weight: 13.15 kg (29 lbs.)  25C Maximum Weight: 13.15 kg (29 lbs.)

STEP 4: OPTICS (CONTINUED)
LARGE 635 Closed bottom reflector 521 Long and narrow refractor 525 Symmetric refractor 526 Asymmetrical refractor  635 Maximum Weight: 22.22 kg (49 lbs.)  521/525/526 Maximum Weight: 22.22 kg (49 lbs.)
STEP 5: MOUNTING
CD ¹ Ceiling mount CE ² Ceiling mount (thru-wire) FP ³ Flexible pendant mount PD Pendant and box cover mount SA Stanchion arm mount 1.5 NPT WL Wall mount  CD/CE
¹ With four 1" NPT conduit connections ² With two 1" NPT conduit connections ³ Not available with the large housing

STEP 5: MOUNTING (CONTINUED)
FP  PD  SA  WL 
STEP 6: OPTIONS
(Factory Installed) PS HPS Protected starter <i>See page 163-168 for definitions</i> 1 HPS units only, not available with "08" or "40"
STEP 7: ACCESSORIES
LAMP Appropriate lamp shipped F1 Single fuse assembly F2 Double fuse assembly PETLSW Optics removal wrench set 09189-X Safety chain, 914mm (X indicates length of chain) Replacement Protected Starters PS-55 For 15AHP and below PS-100 For 250HP and 400HP Wire Guards PETLWGA For 541 and 545 optics PETLWGB For 521, 525 and 526 optics PETLWGC For 25C optics PETLWGD For 635 optics <i>See page 163-168 for definitions</i>

