Tank, Task and Gauge Lighting Hazardous and Non-Hazardous Locations

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12L Specialty Lighting

Tank, Task and Gauge Hazardous and Non-Hazardous Locations Application and Selection

Application:

Specialty lighting luminaires are used:

- for various task lighting requirements in locations that are hazardous (classified) due to the presence of combustible dusts or easliy ignitible fibers and flyings
- in areas where conventional lighting is not acceptable due to size and/or location
- in locations where an adequate light source is necessary for tank, instrument, and gauge applications
- in manufacturing plants, refineries, pharmaceutical, chemical, petrochemical, and other industrial process facilities, waste or sewage treatment facilities, grain processing and handling facilities and other heavy industrial applications

Considerations for Selection:

Environmental:

• What is the hazardous area classification (NEC)/(CEC) of the location in which the luminaire will be installed?

Lighting levels required:

• What wattage luminaire(s) will provide the desired light level (See lighting Selector Guide, pages 665 through 689, to determine number and location of fixture required).

Physical Arrangement:

• Type of fixture mounting needed.

Product Selection:

- EV Tank Lights are suitable for use in Class I, Groups C, D hazardous (classified) locations. Tank lights are used to light the inside of tanks, vats, process vessels, etc.
- EVTL Explosionproof Task Lights are suitable for use in Class I, Group B, C, D and Class II, Groups E, F, G hazardous (classified) locations. EVTL Lights are ideal for applications in which water spray and corrosive atmospheres are considerations.
- ELG gauge lights are suitable for use in Class I, Groups C, D hazardous (classified) locations. The light is used to illuminate liquid level gauges and to direct the light over the length of the column.



V Observation Incandescent Luminaire

Application:

The incandescent V observation luminaire is used:

- in tanks or kettles where food is processed
- to light the inside of tanks for observation of the contents through a window

Features:

- Watertight
- Supported by a mounting ring which contains holes for riveting when placed around a hole in the tank. It can also be welded or brazed to the tank.
- Heavy heat and impact-resistant glass globe eliminates breakage and resultant contamination of food from glass particles
- Relamping is easily accomplished by removal of the two thumb-screws which fasten the body to the mounting ring
- The flexible cord or cable should be connected by an EC flexible coupling or CG Series connector

Standard Materials:

- Mounting ring silicon bronze
- Fixture body Feraloy® iron alloy
- Globe heat-resisting glass

Standard Finishes:

Feraloy – electrogalvanized and aluminum acrylic paint

• Bronze - natural

Size Ranges:

• Up to 100 watt, A-21 lamp

Certifications and Compliances:

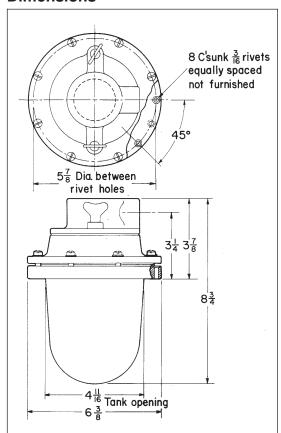
- UL Standard: 1571
- CSA Standard: C22.2



Furnished with EV10 Globe, and C166 Medium Base Lamp Receptacle

Hub Lamp		
Size	Size	Cat. #
	50, 60,	
1.4	75 or	V160
1/2	100W,	V 160
	Δ-21	

Dimensions





EV tank light luminaires are used:

- to light inside of tanks, vats, process vessels, etc.
- in chemical plants, petrochemical plants and petroleum process industries
- suspended over tank porthole by EC flexible hanger (EVO style)
- mounted directly in tank wall (EVA)

Features:

- High light output
- Compact design
- EVA160:
 Furnished with tank ring having eight
- 3/16" holes for riveting to tank ● Can be brazed if desired
- Luminaire ring is attached to the tank ring by eight 1/4-20 Allen Head cap screws
- Luminaire attached to luminaire ring by four wing screws
- EC flexible luminaire support should be used so relamping can be accomplished without disturbing the globe

Standard Materials:

- Bodies EVA: Receptacle housing and intermediate ring – Feraloy® iron alloy. Tank ring – silicon bronze; EVO: copper-free aluminum
- Globes: EVA glass, heat and impact resistant; EVO – glass, heat strengthened plate glass

Standard Finishes:

• Feraloy iron alloy – cadmium electrogalvanized and aluminum acrylic paint; copper-free aluminum – aluminum acrylic paint; silicon bronze – natural

Size Ranges:

• 1/2" and 3/4" hubs

Capacity Ranges:

- EVO 75 watt, reflector spot max.
- EVA 100 watt, A-21 max.

Certifications and Compliances:

NEC:

Class I, Division 1 and 2, Groups C, D – EVO and EVA Class II, Division 1, Groups E, F, G –

EVO only

• UL Standard: 844

Temperature Performance

Data: (based on 40°C Ambient)

Class I		Class II	Supply	
	Groups C, D	Groups E, F, G	Wire (°C)	
EVO2376	T3C	T3C	75	
EVA160	T3C*	_	75	
*All mounting positions				



EVO2376

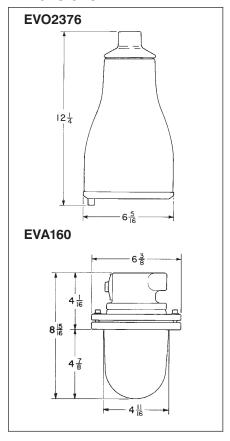


EVA160

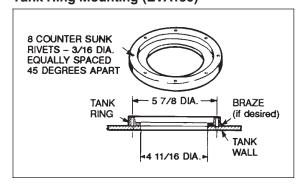
Watts	Lamp (not furnished)	Size	Cat. #
75	75R 30/SP reflector spot (medium base)	1/2 & 3/4	EVO2376
100, A-21	Medium base	1/2	EVA160

Hub

Dimensions



Tank Ring Mounting (EVA160)



EVTL Explosionproof Task Light

Class I Groups B, C, D
Class I Zone I, IIB+H₂
Class II Groups E, F, G
Class III Simultaneous Service

Wet Locations Marine Locations NEMA 3, 3R, 4, 4X

Application

EVTL task light luminaires are used:

- For various task lighting requirements in locations that are hazardous (classified) due to the presence of flammable gases or vapors, combustible dusts or easily ignitible fibers & flyings.
- in marine applications where water spray and corrosive atmospheres are considerations.
- in areas where conventional lighting is not acceptable due to size and/or location.
- in locations where an adequate light source is necessary for tank, instrument, and gauge applications.
- in porthole or sightglass applications where a spotlight is required for visibility inside tanks, vats and process vessels.
- in manufacturing plants, refineries, pharmaceutical, chemical, petrochemical, and other industrial process facilities, waste or sewage treatment facilities, grain processing and handling facilities and other heavy industrial applications.

Standard Materials:

- Housing—Copper-free aluminum
- 3/4" NPT hub and plug—Aluminum
- Mounting bracket(s) and External hardware— Stainless Steel
- Gasket—Silicone rubber
- Lens—Heat and impact resistant clear glass

Standard Finishes:

- Aluminum housing (exterior)—Corro-free epoxy powder coat
- Stainless Steel—Natural

Ratings (Electrical/Size) Source/Wattage (Medium Base Lamps)

- 50PAR20 type—50W 120V halogen parabolic reflector. Lamp life 2000-2500 hrs.
- 130V lamps available to extend lamp life to 5000+ hrs.

Voltage

• 120V 60 Hz

Hub Size

- (1) ½" NPT
- For through feed, use EVTL-TF1

Certifications and Compliances:

• NEC/CEC

- Class I Division 1 & 2 Groups B, C, D
- Class II Group E, F, G
- Class III
- Class I Zone 1 & 2 Group IIB + H₂
- Wet locations
- Marine locations
- NEMA 4X

NEC

• Simultaneous Presence

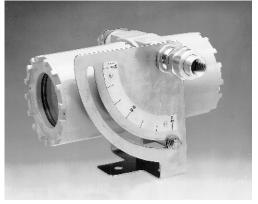
UL Standards

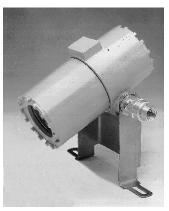
844—Hazardous (Divisions Classified) Locations 1571—Ordinary and Wet Locations, Marine Outside Type

CSA Standards

C22.2 No. 137

Note: Install luminaire within aiming ranges shown on nameplate (See Dimensions)





EVTL1B50

EVTL1L50

Key Features Be

Class I, II, III, Simultaneous Presence

Class I Group B standard

Wet and Marine (NEMA 4X)
Suitability

55° ambient suitability

Cast copper-free aluminum housing with Corro-free™ epoxy powder coat finish.

Stainless steel mounting brackets and hardware.

Two mounting styles bracket and leg

Bracket (Universal)

Leg (Site Glass)

Uses standard 50 watt PAR 20 medium base 120V lamps

Uses 50PAR20 130V lamps for added lamp life 50PAR20 lamps available in both

flood and spot light patterns
Easy access interior

Seal within 5 ft. (not 18") of

luminaire

Benefits

Suitable for most hazardous (classified) areas

Suitable for areas containing hydrogen Perfect for hose down applications

Addresses higher ambients typical of industrial

Superior corrosion resistance

Superior corrosion resistance

Maximize mounting flexibility

Ceiling, Wall or Base mounting Site Glass mounting

Improved light output, economical, long life 2000-2500 hour light source

Increase lamp life to 5000+ hours while maintaining 76% lumen output

Vary the illumination characteristics by simply changing lamps

Reduced maintenance and lamp replacement time

Provides greater flexibility in seal location

Ordering Information:

Luminaire Cat. #	Conduit Entry	Mounting Style	Wattage
EVTL1B50	1/2"	Bracket (Universal)	50
EVTL1L50	1/2"	Leg (Site Glass)	50

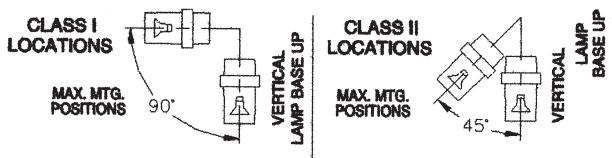
Temperature Performance Data:

Catalog Number	Maximum Ambient °C	Class I, Div, 1, B, C, D Class II, Div. 1, E, F, G Class III Simultanenous Presence Class I, Zone 1, IIB + H ₂	Supply Wire °C
EVTL1B50	40	ТЗВ	85
EVTL1L50	40	ТЗВ	85

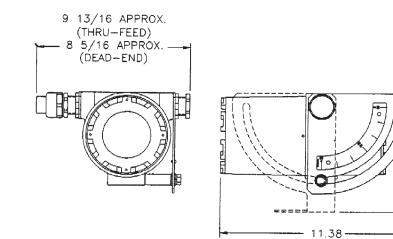


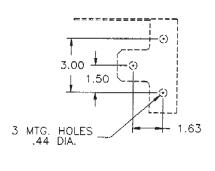
12L EVTL Explosionproof Task Light

Aiming Range



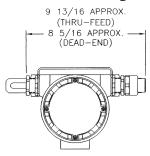
Dimensions: Bracket Mount

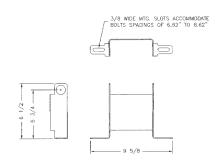


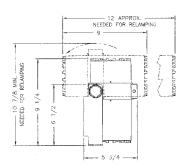


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Dimensions: Leg Mount

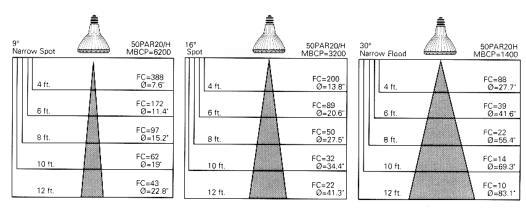






Net Luminaire Weig Luminaire Catalog	• • •
EVTL1B50	7
EVTL1L50	7
EVTL-TF1	1/2

Explosionproof Task Light



 $\mathsf{MBCP} = \mathsf{Maximum} \; \mathsf{Beam} \; \mathsf{Candlepower} \qquad \emptyset = \mathsf{Diameter} \; \mathsf{of} \; \mathsf{beam} \; \mathsf{spread} \; \mathsf{in} \; \mathsf{inches} \qquad \mathsf{FC} = \mathsf{Footcandles} \; \mathsf{measured} \; \mathsf{at} \; \mathsf{0}^{\mathsf{o}}$

Lamp Light Distribution - (Philips lamp data shown. Similar for other manufacturers) Data shown is for 120 volt lamps For 130 volt lamps adjust data using a .76 multiplier

ELG Gauge lights are used:

- in hazardous areas to illuminate liquid level gauges over entire length of gauge
- clamped to **rear** of liquid level gauge and conduit is attached to the ELG hubs. Light is reflected by Lucite reflector along the entire length of the gauge. Liquid level shows on front of gauge. All light is concentrated on liquid column no spill light.

Features:

- Even illumination over entire length of gauge
- Variety of sizes to fit many gauges
- Several lights can be used in tandem to illuminate long gauge

Standard Materials:

- Body copper-free aluminum
- Reflectors plexiglass

Standard Finishes:

Body – electrogalvanized and aluminum acrylic paint

Size Ranges:

• 1" conduit through feed

Capacity Ranges:

- 120V medium screw base "A19" style incandescent lamp 58W maximum
- 25 watt medium base 1000 hour life
- 52 watt medium base 2500 hour life
- 58 watt medium base 3000 hour life

Certifications and Compliances:

• NEC/CEC:

Class I, Division 1 and 2, Groups C, D

Temperature Performance

Data: (based on 40°C ambient)

58 Watt – T4A Maximum

Options:

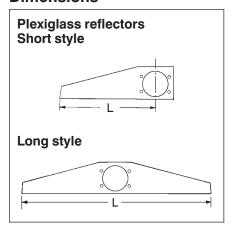


ELG329 with LE49 reflector

Ordering Information:

Description	Catalog No.	Length (L) (inches)
Gauge Light (less reflector)	ELG329	_
Reflector – Short style	LE34 LE35	4½ 5½
Reflector – Long style	LE46 LE47 LE48 LE49 LE410 LE412 LE413	13 15 17 19 ³ / ₄ 22 25 ¹ / ₄ 26 ³ / ₄

Dimensions



Suggested Lamps (Lamps not furnished)

Manufacturer	Catalog Number			Volts
	25 Watt	52 Watt	58 Watt	
General Electric Osram/Sylvania Philips	25A 25A 25A	60A/52WMP/98 60A/52/SS/XL 60A-52A/99/EW	58A19/62	120 120 120