

## WHY LIGHTING MATTERS in Power Generation Applications

Lighting is of critical importance in Power Generation plants to maximize both safety and productivity. These sites are among the most dangerous places to work due to the presence of volatile chemicals and explosive environments. It is without question that the lighting must be able to prevent and withstand combustible and explosive atmospheres while also providing clear illumination for workers to read color coded safety labels.



Hazardous chemicals



High heat



Confined spaces



Physical hazards, such as slips, falls, and moving objects



Arc Flash



Flammable and explosive environments

# THE COST OF POOR LIGHTING in Power Generation Applications

Poor illumination can contribute to tragic work site accidents and injuries in the Power Generation Applications sector. Between 2009-2018 the US Bureau of Labor statistics cited:







The Power Generation industry involves risks and hazards that demand high quality lighting. When choosing a lighting partner for your facilities, care must be taken to ensure their products have proven to perform safely and reliably in your environments and offer a sustainable solution.



Dialight

## DIALIGHT SOLUTIONS for Power Generation Applications

Dialight is the world leader in industrial LED lighting technology with millions of fixtures installed worldwide. We specialize in lighting products designed for the world's harshest industrial environments – enabling industrial customers to reduce their energy costs, maintenance costs, and carbon footprint while maximizing the safety and productivity of their employees and facility. From our signature High Bay line to our versatile Linear fixtures, Dialight offers a large selection of rugged products ideally suited for environments found within the Power Generation Industry.



## WHERE TO USE DIALIGHT PRODUCTS in Power Generation Applications

- TANK FARMS
- TURBINE DECKS (INDOOR & OUTDOOR)
- MAINTENANCE SHOPS
- CHEMICAL STORAGE
- PROCESS AREAS
- COOLING TOWERS AND STACKS
- MCC/ELECTRICAL EQUIPMENT ROOMS
- BOILERS

- CATWALKS
- CONVEYORS (FOR STANCHION MOUNTS)
- WAREHOUSES AND GENERAL AREAS
- GENERAL FLOOD LIGHTING
- COAL HANDLING
- SWITCH YARDS
- CRANES

### See product portfolio pages for more detailed product and ordering information

## TECHNOLOGY DIFFERENTIATION

When choosing an LED Lighting partner, consider how their products are engineered, constructed and tested prior to making your decision. Most Dialight products are engineered to a 10 year warranty and were designed with harsh environments, such as Power Generation Plants, in mind.

### **CUSTOM POWER SUPPLIES**

Long-life potted drivers with optimized thermal dissipation for protection against environmental contaminants and vibration related failures.

## LOW MAINTENANCE MECHANICAL DESIGN

Sealed and optimized to reduce or eliminate the need for maintenance over the life of the fixture. Easy to install and retrofit to existing infrastructure.

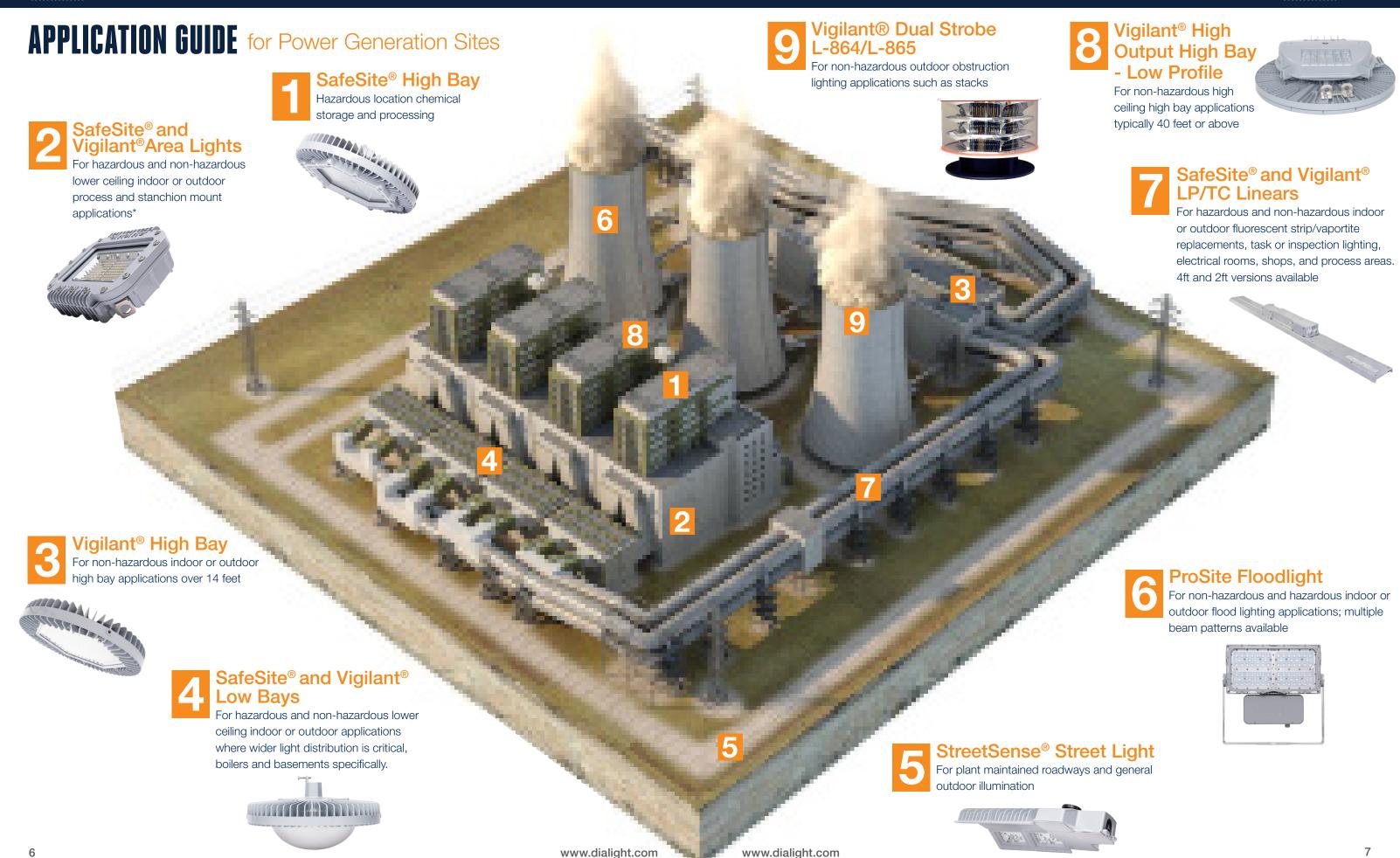
## LATEST LEDS AND ADVANCED OPTICS

Highly efficient, crisp, low-glare illumination. Lighting where you need it, not where you don't.

## **INTELLIGENT CONTROLS**

Flexibility to group, dim and schedule lights around the unique needs of a facility to maximize energy savings. Plus, seamless integration with existing factory automation.

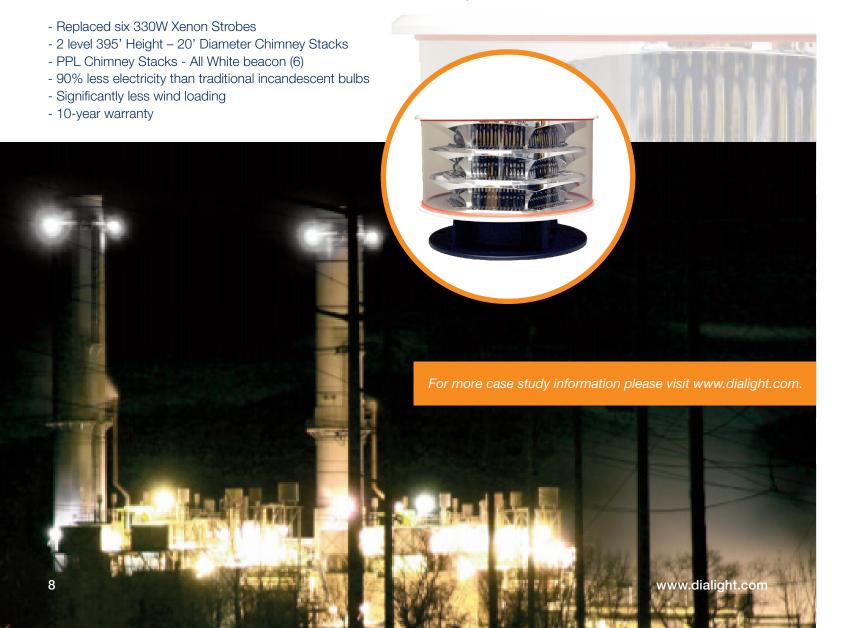
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### CASE STUDY PPL Power Generation Bangor, Pennsylvania

As part of its efforts to reduce energy consumption and cut back on maintenance costs for its twin 400-foot exhaust chimney stacks, the company turned to Fuellgraf Chimney & Tower Inc. to retrofit the stacks with Dialight's high-efficiency LED obstruction lighting. The Lower Mount Bethel chimneys' six Xenon medium-intensity bulbs were not only expensive to operate, but costly to replace and dispose of. Annual replacement bills ran about \$12,000, with each lamp costing \$1500. In addition to the cost, safety was a factor, especially considering Lower Mount Bethel Energy's exceptional record. Should one of the bulbs fail unexpectedly, FAA fines could top thousands of dollars per day, for each light that is out. Xenon bulb disposal was also an issue, with special handling required - another added cost.

At Fuellgraf's recommendation, PPL installed six new Dialight L864/L865 dual LED obstruction fixtures in place of the antiquated Xenon fixtures. Powered by ultra-long life LEDs, the new Dialight LED beacons deliver the equivalent of 330-watt illumination from a 110/230VAC 50/60 Hz power supply with exceptional performance and reliability for up to 10 years, in most cases. Solid state construction resists shock and vibration, while the fixture itself is much smaller, reducing wind load interference and damage. The dual beacon uses 90% less electricity than traditional incandescent bulbs to reduce energy consumption and the plant's overall carbon footprint. Pursuant to the company's environmental stewardship, the Dialight beacons also meet the U.S. Fish and Wildlife Services' recommendation for the protection of migratory birds. And, the new LED units are safer for humans, too: the Dialight L864/L865 LED beacons operate at a much lower voltage than traditional Xenon flashtubes, reducing the risk of injury due to electrical shock for installers and maintenance crews. The L864/L865 power supply/control box can be positioned at the base of the tower for added safety and convenience when servicing the units.



## PRODUCT PORTFOLIO Obstruction Lighting Solutions



Dialight is the market leader in LED obstruction solutions with over 20 years of design and manufacturing experience. Dialight offers the industry's most reliable, energy-efficient and comprehensive line of LED-based obstruction systems in the world. Precision patented optics ensure maximum safety with minimal ground scatter for community friendly illumination. Dialight systems offer a small, lightweight flash head for ease of installation, and our low-maintenance fixtures virtually eliminate tower climbs and unplanned site visits for years, dramatically reducing maintenance costs and non-compliance risk. Dialight controlled LED obstruction solutions can be seamlessly integrated into existing operation and control centers while providing additional valuable information, both locally and remotely.

#### Ideally suited for:

**TOWERS** STACKS

Part Number	Description							
White (L865) or Dual red/white (L864/L865) Complete System - IR Compliant								
D1CW-CTR-409	DUAL STROBE white or red/white controller and power supply 120 to 240VAC							
D1CW-FH-409	AL STROBE white or red/white + IR flash head							
D1CW-PS-9409	UAL STROBE white or red/white power supply 120-240VAC							
D256-6000PEC	Day and night photocell, 3/4NPT cast enclosure							
CAB-050183	Photocell cable, 50 Ft, 18 AWG / 3 conductor							
CAB-020183BFD	Communication cable, 20 Ft, 18 AWG / 3 conductor							

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# PRODUCT PORTFOLIO High Bays



For use in non-hazardous indoor and outdoor high bay and occasionally flood lighting applications. Replaces up to 1,000 watt traditional HID fixtures.

Ideally suited for:

STORAGE/WAREHOUS

MAINTENANCE SHOPS

BOILER ROOM



### SAFESITE® HIGH BAY

For use in hazardous classified high bay applications where chemical vapors or explosive dusts are present. See technical spec sheet for applicable certifications.

Ideally suited for:

**PROCESS AREAS** 

**CHEMICAL STORAGE** 

WATER TREATMENT

LOADING/UNLOADING



#### RELIANT™ HIGH BAY

For use in indoor non-hazardous applications to replace either HID or Fluorescent fixtures up to 1,000 watts where harsh environment protection is less of a concern.

Ideally suited for:

STORAGE/WAREHOUSE

MAINTENANCE SHOPS

SHIPPING/RECEIVING



### VIGILANT® HIGH OUTPUT HIGH BAY- LOW PROFILE

For use in high output or high ceiling nonhazardous indoor and outdoor high bay applications. Replaces up to 1,500 watt traditional HID fixtures with mounting heights up to 100'.

Ideally suited for:

STORAGE/WAREHOUSE

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### **VIGILANT® LOW BAY**

For use in indoor and outdoor lower mounting height high bay applications where wider light distribution is required. Replaces up to 250+ watt traditional HID fixtures.

Ideally suited for:

WAREHOUSES

MCC/ELECTRICAL ROOMS

MAINTENANCE SHOPS



#### SAFESITE® LOW BAY

For use in lower mounting height hazardous high bay applications where chemical vapors or explosive dusts are present. See technical spec sheet for applicable certifications.

Ideally suited for:

PROCESS AREAS

CHEMICAL STORAGE

LABORATORIES

LOADING/UNLOADING

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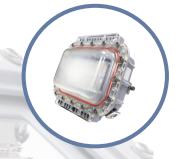
# PRODUCT PORTFOLIO High Bays

	Part Number	Certification	Fixture Lumens	Wattage	lm/W	ССТ	Lens	Beam Distribution	
	Vigilant <sup>®</sup> High Bay								
	VEU7MC2ANNWNGN	UL 1598, CSA	11,000	65	169	5000K (cool white)	Glass - Clear	Medium	
	VEU7MC2BNNWNGN	UL 1598, CSA	13,600	80	170	5000K (cool white)	Glass - Clear	Medium	
	VEU7MC2CNNWNGN	UL 1598, CSA	17,400	96	181	5000K (cool white)	Glass - Clear	Medium	
	VEU7MC2ENNWNGN	UL 1598, CSA	23,900	140	171	5000K (cool white)	Glass - Clear	Medium	
Ì				SafeS	ite® Higl	ı Вау			
	VED7MC2ANNWNGN	UL 844 (CID2)	11,000	65	169	5000K (cool white)	Glass - Clear	Medium	
	VED7MC2BNNWNGN	UL 844 (CID2)	13,600	80	170	5000K (cool white)	Glass - Clear	Medium	
	VED7MC2CNNWNGN	UL 844 (CID2)	17,400	96	181	5000K (cool white)	Glass - Clear	Medium	
	VED7MC2ENNWNGN	UL 844 (CID2)	23,900	140	171	5000K (cool white)	Glass - Clear	Medium	
				Reliar	nt™ High	Bay*			
	RHU5MC2FDCNNGN	UL 1598, CSA	26,400	199	133	5000K (cool white)	Diffused Polycarbonate	Medium	
	RHU5MC2HDCNNGN	UL 1598, CSA	31,500	239	132	5000K (cool white)	Diffused Polycarbonate	Medium	
				Vigila	nt® Low	Bay			
7	VEULUC29NNWNGN	UL 1598, CSA	9,000	60	150	5000K (cool white)	Polycarbonate Dome - Diffused	Ultra Wide	
1				SafeS	ite® Lov	/ Bay			
	VEDLUC29NNWNGN	UL 844 (CID2)	9,000	60	150	5000K (cool white)	Polycarbonate Dome - Diffused	Ultra Wide	

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### Dialight

# PRODUCT PORTFOLIO Area Lights



### **VIGILANT® AREA LIGHT**

This extremely versatile fixture series can be used in non-hazardous indoor and outdoor applications. Designed for ease of installation, this product line features quick install retrofit kits that support legacy HID fixtures from GE, Crouse, Appleton, Killark and others. See technical spec sheet for more information and additional accessories.

Ideally suited for:

CATWALKS

**COOLING TOWERS** 

LOADING/UNLOADING

CONVEYORS



#### SAFESITE® AREA LIGHT

For use in hazardous classified applications where chemical vapors or explosive dusts are present. Designed for ease of installation, this product line features quick install retrofit kits that support many legacy HID fixture brands. See technical spec sheet for hazardous certifications and more information on additional accessories.

#### Ideally suited for:

PROCESS AREAS CATWALKS CONVEYORS

LOADING/UNLOADING

CHEMICAL STORAGE

Part Number	Certification	Fixture Lumens	Wattage	lm/W	ССТ	Lens	Beam Distribution	Mounting
			Vigilant <sup>o</sup>	® Area L	ight			
ALU5BC23DSNNGN	UL 1598/A, CSA, NOM	2,800	24	117	5000K (cool white)	Diffused Polycarbonate	360°	45° Stanchion
ALU5BC27DWNNGN	UL 1598/A, CSA, NOM	6,700	52	129	5000K (cool white)	Diffused Polycarbonate	360°	45° Wall
ALU7BC29DNWNGN	UL 1598/A, CSA, NOM	9,000	66	136	5000K (cool white)	Glass - Clear	360°	3/4" NPT
				SafeSite	e® Area Light			
ALD5BC26NSNNGN	UL 844 (CID2, CII, CIII)	5,300	40	133	5000K (cool white)	Diffused Polycarbonate	360°	45° Stanchion
ALC7BC26DNWNGN	UL 844 (CID1)	5,400	40	135	5000K (cool white)	Clear Tempered Glass	360°	3/4" NPT
ALD7BC27DVNNGN	UL 844 (CID2, CIII)	7,300	52	140	5000K (cool white)	Glass - Clear	360°	0° Stanchion
ALD7BC27DSNNGN	UL 844 (CID2, CIII)	7,300	52	140	5000K (cool white)	Glass - Clear	360°	45° Stanchion
	Accessories							
HZXW3	HZXW3 316 stainless steel adjustable mounting bracket							

For more details on product specifications including mounting information, please visit www.dialight.com.

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## PRODUCT PORTFOLIO Area Light Accessories

With a wide variety of brackets and retrofit kits available, Dialight's versatile Area Light can easily meet the needs of virtually any industrial application, while saving time and money on installation.



### **AREA LIGHT RETROFIT KITS**

Dialight's Area Light series is available with quick install retrofit kits to the following products: Eaton's Crouse-Hinds – Champ®, GE Lighting Solutions - Filtr-Gard™, Holophane Petrolux® II, III, Thomas & Betts Hazlux®, Appleton® Mercmaster III, Appleton® Mercmaster II, and Killark® Certilite® & Certilite® V



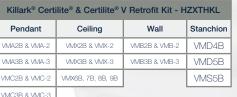
### AREA LIGHT MOUNTING **ACCESSORIES**

The Area Light has always been extremely versatile and now with our new Universal Mounting Adapter (HZXUMA), it provides even greater flexibility by allowing you to modify stock you have on-hand to configure based on your needs. All available in Class I, Div. 2, Class II, and Class III certified options.

Eaton's Crouse-Hinds – Champ® Retrofit Kit - HZXTHCH							
Pendant	Ceiling	Wall	Stanchion	Quad Mount			
APM2	CM2	TWM2	JM5	QM25			
APM3	СМЗ	TWM3	PM5				
HPM2					Γ		

Holophane® Petrolux II, III Retrofit Kit - HZXTHP3									
Pendant	Universal	Stanchion	Ceiling	Wall					
PD	UN	SA	CD	WL					
GH		ST	CE	W					
Р		А	B, C, D						

Appleton® Mercmaster II Retrofit Kit - HZXTHM2							
Pendant	Ceiling	Wall	Stanchion				
LPA-75	LPC-75	LPWB-75	LPS-125				
LPA-100	LPC-100	LPWB-100	LPS-150				



VMF2B, 3B	100							
Appleton® Mercmaster III Retrofit Kit - HZXTHAP								
Pendant	Ceiling	Wall	Stanchion					
KPA- 75, 100	KPC-75	KPWB-75	KPS-125					
KPAF-75, 100	KPC-100	KPWB-100	KPS-150					

hion	Pendant	Pendant Cone	Flexible Pendant	Ceiling	Wall
4B	3P	3F	3C	3W	5S
5B	4P	4F		4W	6S
5B					5J, 6J
	Wall	25° Angle Stanchion	25° Angle Stanchion	Straight Stanchion	Straight Stanchion
	VB2-VIB	VS4	VS4-VIB	VL4	VL4-VIB
	VB3-VIB	VS5	VS5-VIB	VI.5	VI 5-VIB

Thomas & Betts Hazlux® Retrofit Kit - HZXTHTB

	VD3-VID	V 000	V 000-VI	D VLO	VLJ-VID					
П	GE Lighting Solutions – Filtr-Gard™ Retrofit Kit - HZXTHGE									
	Pendant	Ceiling	Wall	Stanchion	Quad Mount					
	3P	3F	3C	3W	5S					
	4P	4F		4W	6S					
					5J, 6J					



KPST-150

Wall 0°

HZXW01







**HZXFM** 

For more details on product specifications including mounting information, please visit www.dialight.com.

KPCH-75, 100

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### Dialight

# PRODUCT PORTFOLIO Floodlights



### PROSITE FLOODLIGHT F1 MODEL

Flood light family designed to replace 250 – 1000W HID units in industrial and hazardous certified areas where chemical vapors or explosive dusts are present. See technical spec sheet for certification information and further details on lumen output options, accessories and optical patterns.

Ideally suited for:

**GENERAL FLOOD LIGHTING** 

RAIL YARDS

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### PROSITE FLOODLIGHT F2 MODEL

Flood light family designed to replace 250 - 1000W HID units in industrial and hazardous certified areas where chemical vapors or explosive dusts are present. See technical spec sheet for certification information and further details on lumen output options, accessories and optical patterns.

Ideally suited for:

LOADING/UNLOADING

**CHEMICAL STORAGE** 



### STREETSENSE® STREET LIGHT

For use in plant maintained roadways, parking areas and general outdoor illumination.

Ideally suited for:

ROADWAYS/PARKING AREAS

Part Number	Certification	Fixture Lumens	Wattage	lm/W	ССТ	Lens	Beam Distribution
F1 ProSite Floodlight							
F1UN6B2BDENVGN	UL1598/A / CSA	13,200	81	163	5000k (cool white)	Integrated PC	NEMA 6
F1UN6B2CDENVGN	UL1598/A / CSA	19,100	124	154	5000k (cool white)	Integrated PC	NEMA 6
F1UN6B2EDENVGN	UL1598/A / CSA	25,000	175	143	5000k (cool white)	Integrated PC	NEMA 6
F1D76B2BDENVGN	UL 844 CID2	12,500	81	154	5000k (cool white)	Glass	NEMA 6
F1D76B2CDENVGN	UL 844 CID2	18,000	124	145	5000k (cool white)	Glass	NEMA 6
F1D74B2EDENVGN	UL 844 CID2	23,600	175	135	5000k (cool white)	Glass	NEMA 6
			F2	ProSite	Floodlight		
F2UN6B8LDENVGN	UL1598/A / CSA	51,000	346	147	5000k (cool white)	Integrated PC	NEMA 6
F2UN6B8NDENVGN	UL1598/A / CSA	65,000	484	134	5000k (cool white)	Integrated PC	NEMA 6
			Stree	etSense	® Street Light		
SL3C5CLGG	UL 1598, CSA	6,400	62	103	5000K (cool white)	Clear Tempered Glass	Type III
SL3C7ILGG	UL 1598, CSA	15,700	154	102	5000K (cool white)	Clear Tempered Glass	Type III

For more details on product specifications, please visit www.dialight.com.

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PRODUCT PORTFOLIO Linear Lights



### VIGILANT® LP/TC LINEAR

Now featuring Dialight's exclusive 10 year warranty. Available in 2ft and 4ft varieties. For use in indoor and outdoor non-hazardous linear and occasionally flood lighting applications.

Ideally suited for:

MCC/ELECTRICAL ROOM



### SAFESITE® LP/TC LINEAR

Now featuring Dialight's exclusive 10 year warranty. Available in 2ft and 4ft varieties. For use in indoor and outdoor hazardous certified linear and occasionally flood lighting applications where chemical vapors or explosive dusts are present. CID1 linear available in a different series. Refer to Dialight website for more information.

Ideally suited for:

LABORATORIES

PROCESS AREAS

Part Number	Certification	Fixture Lumens	Wattage	lm/W	ССТ	Lens	Beam Distribution	
	Vigilant® Low Profile Linear							
LKU4MC27DNNNGN	UL 1598/A	7,250	52	139	5000K (cool white)	Clear Polycarbonate	Medium	
LJU4MC25DNNNGN	UL 1598/A	4,750	37	128	5000K (cool white)	Clear Polycarbonate	Medium	
			SafeS	ite® Low	/ Profile Linear			
LKD4MC27DNNNGN	UL 844 (CID2, CIID2, CIII)	7,250	52	139	5000K (cool white)	Clear Polycarbonate	Medium	
LJD4MC25DNNNGN	UL 844 (CID2, CIID2, CIII)	4,750	37	128	5000K (cool white)	Clear Polycarbonate	Medium	
LSC3C4M3GEX	UL 844 (CID1)	7,250	78	93	5000K (cool white)	Clear Tempered Glass	Medium	
LSD3C4MEP*	UL 844 (CID2)	7,000	85	82	5000K (cool white)	Clear Polycarbonate	Medium	

\*Battery backup unit

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## **HAZARDOUS LOCATIONS RATINGS**

Fixed and portable fixtures for installation and use in hazardous (classified) locations Class I, Divisions 1 and 2, Groups A, B, C, and D; Class II, Division 1, Groups E, F, and G; Class II, Division 2, Groups F and G; and Class III, Divisions 1 and 2, in accordance with the National Electrical Code, NFPA 70

#### Classes

The classes define the general nature of hazardous material in the surrounding atmosphere.

Class	Hazardous Material in Surrounding Atmosphere
Class I	Hazardous due to the presence of flammable gases or vapors in the air in quantities to produce explosive or ignitible mixtures
Class II	Hazardous due to the presence of combustible and/or conductive dusts
Class III	Hazardous due to the presence of easily ignitible fibers and flyings, such as wood chips, cotton, flax and nylon. Group classifications are not applied to this class

#### **Divisions**

The division defines the likelihood of hazardous substances being present in ignitible concentrations in the surrounding atmosphere.

Division	Presence of Hazardous Material
Division 1	The hazard exists during normal operating conditions
Division 2	The hazard is present only due to accidental system breakdowns or abnormal operations

#### Groups

The group(s) are determined by the specific hazardous materials which may be present.

Group	Hazardous Material in Surrounding Atmosphere	
Class I Groups		
Group A	Acetylene	
Group B	Hydrogen, fuel and combustible process gases containing more than 30% hydrogen by volume or gases of equivalent hazard such as butadiene, ethylene oxide, propylene oxide and acrolein	
Group C	Carbon monoxide, methyl ether, hydrogen sulfide, methylacetylene, cyclopropane, ethyl and ethylene or gases of equivalent hazard	
Group D	Gasoline, acetone, ammonia, benzene, butane, cyclopropane, ethanol, hexane, methanol, methane, vinyl chloride, natural gas, naphtha, propane or gases of equivalent hazard	
Class II Groups		
Group E	Combustible metal dusts, including aluminum, magnesium and their commercial alloys or other combustible dusts whose particle size, abrasiveness and conductivity present similar hazards in connection with electrical equipment	
Group F	Carbonaceous dusts that have more than 8 percent total entrapped volatiles or that have been sensitized by other materials so that they present an explosion hazard. Coal, carbon black, charcoal, and coke dusts are examples of carbonaceous dusts	
Group G	Flour dust, grain dust, flour, starch, sugar, wood, plastic and chemicals	

Reference 2020 NEC Code

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#### WARNING / DISCLAIMERS

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