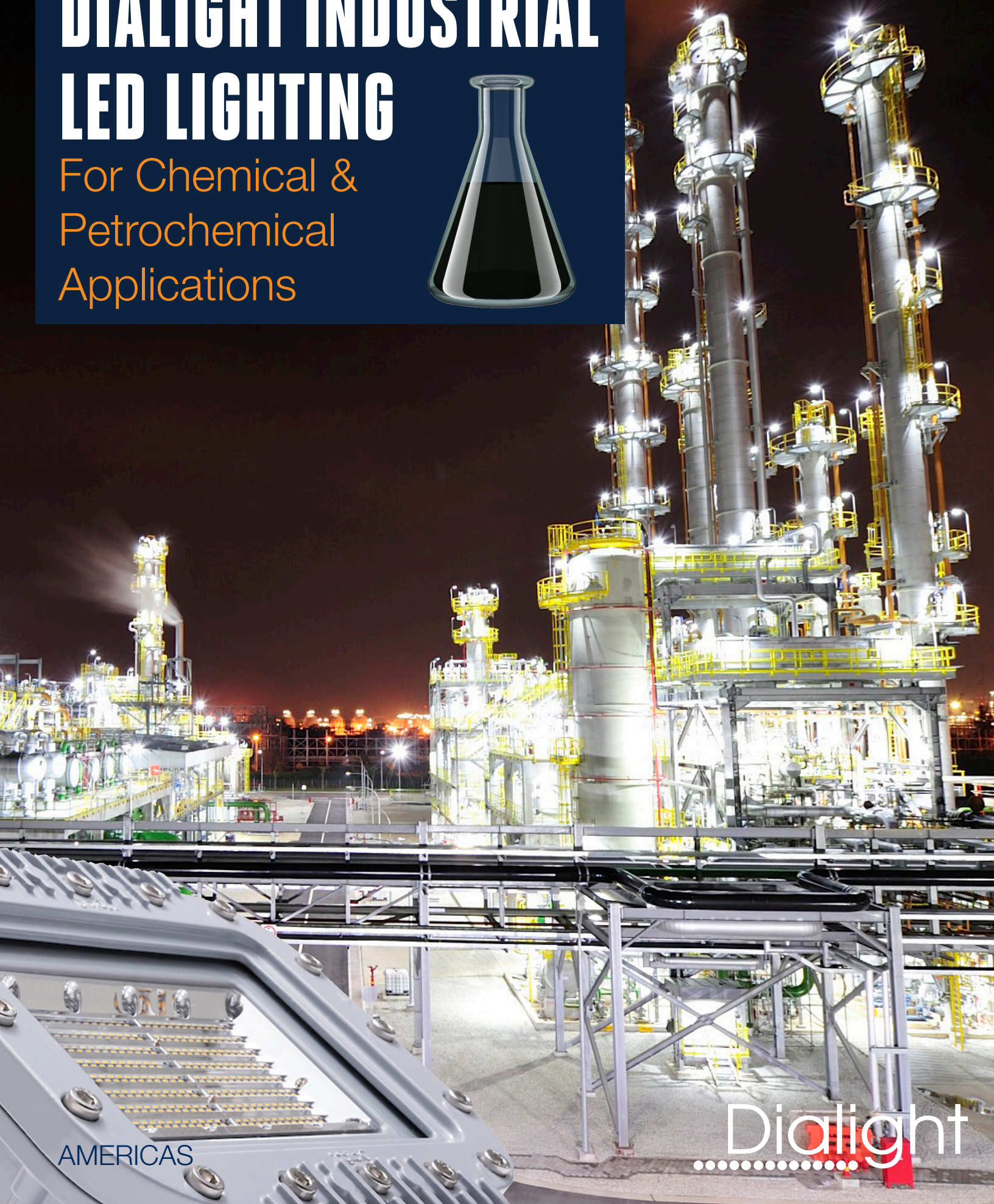


# DIALIGHT INDUSTRIAL LED LIGHTING

For Chemical &  
Petrochemical  
Applications



AMERICAS

Dialight



## WHY LIGHTING MATTERS in Chemical and Petrochemical Applications

Lighting is of critical importance in Chemical and Petrochemical 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. For this reason, and the fact that workers can struggle with fatigue when operating complicated, specialized equipment for long periods of time, the Chemical Safety Board recommends bright white lighting.



Airborne substances, including caustic chemicals and vapors



High vibration and humidity



Noisy, complex heavy machinery



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



Power surges and electric shock



Flammable and explosive environments

Chemical Safety Board reference: ANSI/API RP 755: Fatigue Risk Management System

## THE COST OF POOR LIGHTING in Chem/Petrochem Applications

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

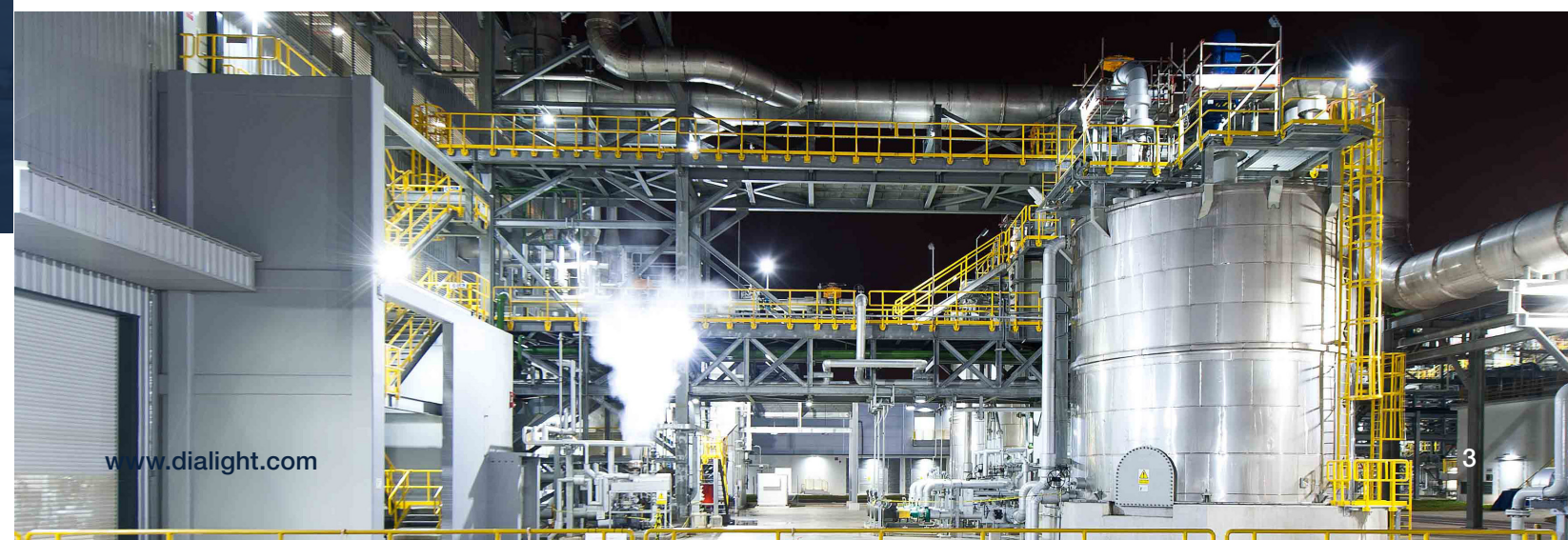
**185,400**  
NON-FATAL  
INJURIES with  
**\$6.5**  
BILLION  
TOTAL COSTS



**250**  
FATALITIES with  
**\$257**  
MILLION  
TOTAL COSTS



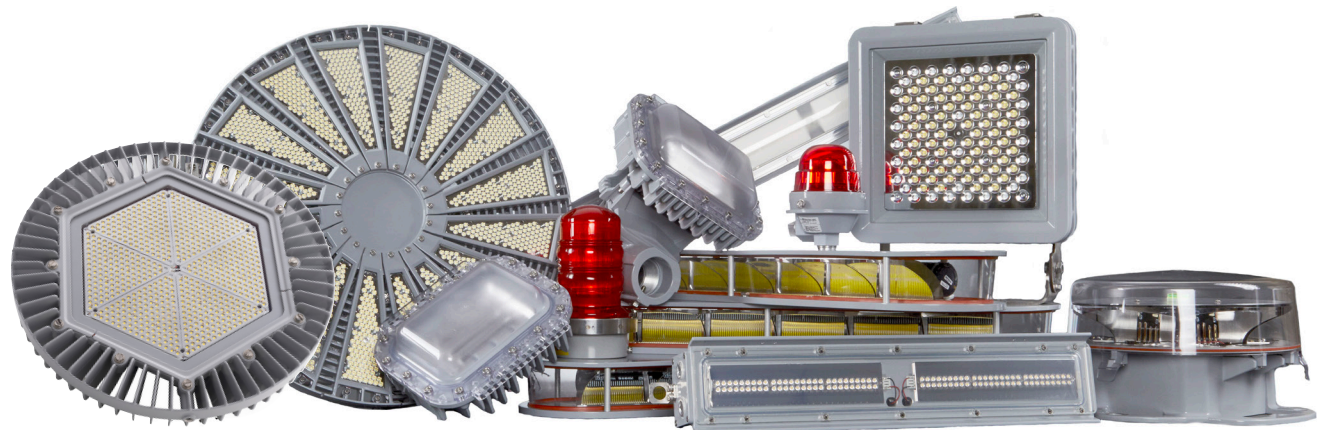

The Chemical and Petrochemical industry involves risks and hazards that demand high quality lighting. What's more, the Chemical and Petrochemical industries have been global leaders in sustainability, offering essential materials and energy, while seeking to reduce harmful emissions. Dialight industrial LED lighting is engineered to maximize safety while minimizing environmental impact. 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 SOLUTIONS for Chemical and Petrochemical 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 Chemical and Petrochemical Industry.



## WHERE TO USE DIALIGHT PRODUCTS in Chem/Petrochem Applications

- TANK FARMS
- LABORATORIES
- MAINTENANCE SHOPS
- CHEMICAL STORAGE
- PROCESS AREAS
- COOLING TOWERS
- MCC/ELECTRICAL EQUIPMENT ROOMS
- WATER TREATMENT
- CATWALKS
- CONVEYORS (FOR STANCHION MOUNTS)
- WAREHOUSES AND GENERAL AREAS
- GENERAL FLOOD LIGHTING
- RAIL YARDS
- LOADING/UNLOADING AREAS

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 Chemical and Petrochemical 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

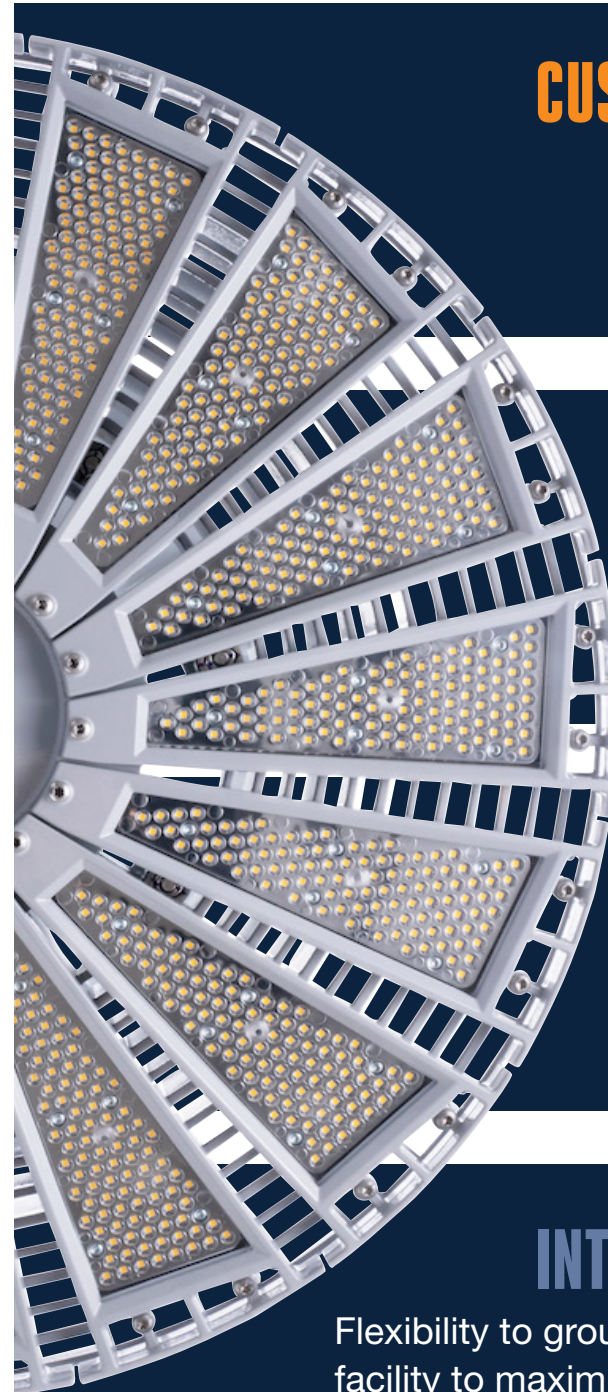
Sealed and optimized to reduce or eliminate the need for maintenance over the life of the fixture. Easy to install and retrofit to existing infrastructure.

### 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.





# APPLICATION GUIDE for Chemical and Petrochemical Sites

**2 SafeSite® and Vigilant® Area Lights**  
For hazardous and non-hazardous lower ceiling indoor or outdoor process and stanchion mount applications\*



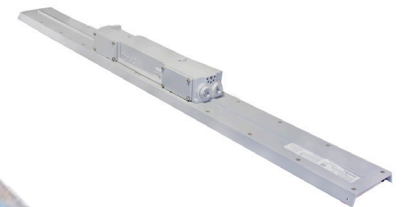
**1 SafeSite® High Bay**  
Hazardous location chemical storage and processing



**8 Reliant™ High Bay**  
For indoor, light industrial applications and lighter-duty areas of heavy industrial facilities, such as warehouses



**7 SafeSite® and Vigilant® LP/TC Linears**  
For hazardous and non-hazardous indoor or outdoor fluorescent strip/vaportite replacements, task or inspection lighting, electrical rooms, shops, and process areas. 4ft and 2ft versions available



**3 Vigilant® High Bay**  
For non-hazardous indoor or outdoor high bay applications over 14 feet



**4 SafeSite® and Vigilant® Low Bays**  
For hazardous and non-hazardous lower ceiling indoor or outdoor applications where wider light distribution is critical



**5 StreetSense® Street Light**  
For plant maintained roadways and general outdoor illumination



**6 SafeSite® and DuroSite® Flood Lights**  
For hazardous and non-hazardous indoor or outdoor flood lighting applications; multiple beam patterns available





## CASE STUDIES Diamond Vogel *Tulsa, Oklahoma*

Because of the potential for airborne particles and fumes, the Diamond Vogel facility is a Class I Div 2 hazardous environment, which imposes strict requirements on the type of fixtures that could be used safely inside. Not only must they be hazardous certified, but heat is also a concern, as temperatures routinely reach 110° F under the scorching midwestern sun. With over fifty 11,000 lumen, six 14,000 lumen and six 26,000 lumen Class I, Div. 2 SafeSite® High Bays now in place, Production Supervisor Alton Wells says it's "like night and day" inside the facility. To add, they were able to reduce their fixture count by about 10 lights. Because several of the fixtures Diamond Vogel chose included Dialight's standard AC & DC capability, the fixtures could easily be configured into a battery backup system, this not only substantially improved egress and safety lighting, but also cut down on maintenance of the system. Now, the facility has 13 battery backup lights, all wired into a transfer switch and central DC power supply. That means multiple points of safety lighting, with just one point of maintenance.

- Installed 63 Dialight SafeSite High Bay fixtures and 6 linears
- Incandescent lighting maintenance was an ongoing chore
- Poor light quality hindered productivity and quality control
- Class I Div. 2 hazardous environment
- Reduced fixture count by 10



## CASE STUDIES Rubis Terminal *Rotterdam, The Netherlands*

Rubis Group is the fifth largest independent operator in Europe of downstream petroleum and chemical facilities. With a new Rotterdam location, designers were looking for a better solution, aiming to light the new facility with the latest-generation LED fixtures to provide the most energy efficient, safe and reliable illumination. Because of its harbor location, reducing light pollution for the benefit and well-being of both humans and wildlife was also a priority, making Dark Sky-compliant lighting a must. By opting for Dialight's next-generation LED fixtures, Rubis reduced energy lighting consumption, along with the greenhouse gases produced as a result, at the new facility by 60 percent compared to conventional lighting. Based on maintenance expenditures at other similar facilities, the company also saved around 100,000 euros per year on maintenance, for lights that were guaranteed to last, multiplying the annual savings accordingly.

- Zero-emissions facility
- Installed over 270 ATEX certified and non-certified fixtures
- Sought alternative to failure-prone fluorescent fixtures
- Reduced energy consumption 60 percent
- 100,000 euros annual maintenance savings





PRODUCT PORTFOLIO

High Bays

PRODUCT PORTFOLIO

High Bays



VIGILANT® HIGH BAY

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/WAREHOUSE
- 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

For use in high output or high ceiling non-hazardous 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



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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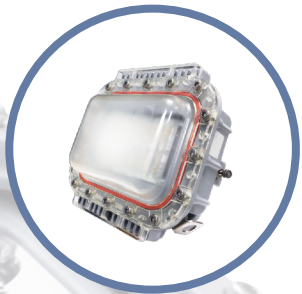
Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
Vigilant® High Bay							
HEU7MC2ANNWNGN	UL 1598, CSA	11,250	80	141	5000K (cool white)	Glass - Clear	Medium
HEU7MC2BNNWNGN	UL 1598, CSA	14,250	102	140	5000K (cool white)	Glass - Clear	Medium
HEU7MC2CNNWNGN	UL 1598, CSA	19,500	129	151	5000K (cool white)	Glass - Clear	Medium
HEU7MC2ENNWNGN	UL 1598, CSA	26,250	186	141	5000K (cool white)	Glass - Clear	Medium
SafeSite® High Bay							
HED7MC2ANNWNGN	UL 844 (CID2)	11,250	80	141	5000K (cool white)	Glass - Clear	Medium
HED7MC2BNNWNGN	UL 844 (CID2)	14,250	102	140	5000K (cool white)	Glass - Clear	Medium
HED7MC2CNNWNGN	UL 844 (CID2)	19,500	129	151	5000K (cool white)	Glass - Clear	Medium
HED7MC2ENNWNGN	UL 844 (CID2)	26,250	186	141	5000K (cool white)	Glass - Clear	Medium
HEC7MC2ENNWNGN	UL 844 (CID1)	23,500	186	126	5000K (cool white)	Clear Tempered Glass	Circular
Reliant™ 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
Vigilant® Low Bay							
LEULUC29NNWNGN	UL 1598, CSA	9,000	80	113	5000K (cool white)	Polycarbonate Dome - Diffused	Ultra Wide
SafeSite® Low Bay							
LEDLUC29NNWNGN	UL 844 (CID2)	9,000	80	113	5000K (cool white)	Polycarbonate Dome - Diffused	Ultra Wide

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\*Occupancy Sensor models available, see Product Specification Sheet



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	CCT	Lens	Beam Distribution	Mounting
Vigilant® Area Light								
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® Area Light								
ALF5BC26NSNNGN	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	316 stainless steel adjustable mounting bracket							

For more details on product specifications including mounting information, please visit [www.dialight.com](http://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

Eaton's Crouse-Hinds – Champ® Retrofit Kit - HZXTHCH					Killark® Certilite® & Certilite® V Retrofit Kit - HZXTHKL				Thomas & Betts Hazlux® Retrofit Kit - HZXHTB				
Pendant	Ceiling	Wall	Stanchion	Quad Mount	Pendant	Ceiling	Wall	Stanchion	Pendant	Pendant Cone	Flexible Pendant	Ceiling	Wall
APM2	CM2	TWM2	JM5	QM25	VMA2B & VMA-2	VMX2B & VMX-2	VMB2B & VMB-2	VMD4B	3P	3F	3C	3W	5S
APM3	CM3	TWM3	PM5		VMA3B & VMA-3	VMX3B & VMX-3	VMB3B & VMB-3	VMD5B	4P	4F		4W	6S
HPM2					VMC2B & VMC-2	VMX6B, 7B, 8B, 9B		VMS5B					5J, 6J
Holophane® Petrolux II, III Retrofit Kit - HZXTHP3					VMC3B & VMC-3				Wall	25° Angle Stanchion	25° Angle Stanchion	Straight Stanchion	Straight Stanchion
Pendant	Universal	Stanchion	Ceiling	Wall	VMF2B, 3B				VB2-VIB	VS4	VS4-VIB	VL4	VL4-VIB
PD	UN	SA	CD	WL	Appleton® Mercmaster III Retrofit Kit - HZXTHAP				VB3-VIB	VS5	VS5-VIB	VL5	VL5-VIB
GH		ST	CE	W	Pendant	Ceiling	Wall	Stanchion	GE Lighting Solutions – Filtr-Gard™ Retrofit Kit - HZXTHGE				
P		A	B, C, D		KPA- 75, 100	KPC-75	KPWB-75	KPS-125	Pendant	Ceiling	Wall	Stanchion	Quad Mount
Appleton® Mercmaster II Retrofit Kit - HZXTHM2					KPAF-75, 100	KPC-100	KPWB-100	KPS-150	3P	3F	3C	3W	5S
Pendant	Ceiling	Wall	Stanchion		KPCH-75, 100			KPST-125	4P	4F		4W	6S
LPA-75	LPC-75	LPWB-75	LPS-125					KPST-150					5J, 6J
LPA-100	LPC-100	LPWB-100	LPS-150										



UMA Area Light  
ALx-xxxx-xxUx-xxN



Stanchion 45°  
HZXS45



Wall 45°  
HZXW45



Wall 0°  
HZXW01



Conveyor  
HZXC34



Ceiling  
HZXF

For more details on product specifications including mounting information, please visit [www.dialight.com](http://www.dialight.com).

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PRODUCT PORTFOLIO Floodlights



DUROSITE®  
10/15K FLOODLIGHT

Traditional square flood light designed to replace 250 watt and 400 watt HID units in non-hazardous areas. See technical spec sheet for information on additional accessories and optical patterns.

Ideally suited for:

- GENERAL FLOOD LIGHTING
- RAIL YARDS
- PARKING AREAS



SAFESITE®  
10/15K FLOODLIGHT

Traditional square flood light designed to replace 250 watt and 400 watt HID units in hazardous areas. See technical spec sheet for information on additional accessories and optical patterns.

Ideally suited for:

- TANK FARMS
- WATER TREATMENT
- LOADING/UNLOADING
- CHEMICAL STORAGE



STREETSENSE®  
STREET LIGHT

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

Ideally suited for:

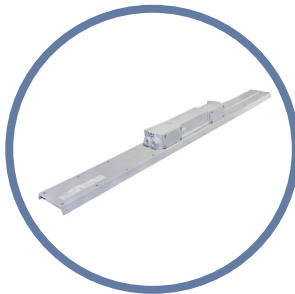
- ROADWAYS/PARKING AREAS

Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
DuroSite® Floodlight							
FLW266NC2NG	UL 1598/A	11,250	106	106	5000K (cool white)	Clear Tempered Glass	NEMA 6
FLW455NC4NG	UL 1598/A	14,500	140	104	5000K (cool white)	Clear Tempered Glass	NEMA 5
SafeSite® Floodlight							
FLD266NC2NG	UL 844 (CID2)	11,250	109	103	5000K (cool white)	Clear Tempered Glass	NEMA 6
FLD466NC4NG	UL 844 (CID2)	15,000	130	115	5000K (cool white)	Clear Tempered Glass	NEMA 6
StreetSense® 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](http://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 ROOMS
- WALKWAYS
- SHOP AREAS

Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	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
SafeSite® 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
Accessories							
LPXW4LP	Low profile mounting bracket, can be angled at 0 and 15 degrees						

\*Battery backup unit

For more details on product specifications, please visit [www.dialight.com](http://www.dialight.com).

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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 ignitable mixtures
Class II	Hazardous due to the presence of combustible and/or conductive dusts
Class III	Hazardous due to the presence of easily ignitable 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 ignitable 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

### North American HQ

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info@dialight.com

Reference  
2020 NEC Code

#### WARNING / DISCLAIMERS:

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