

DIALIGHT INDUSTRIAL LED LIGHTING

For Water &
Wastewater
Treatment

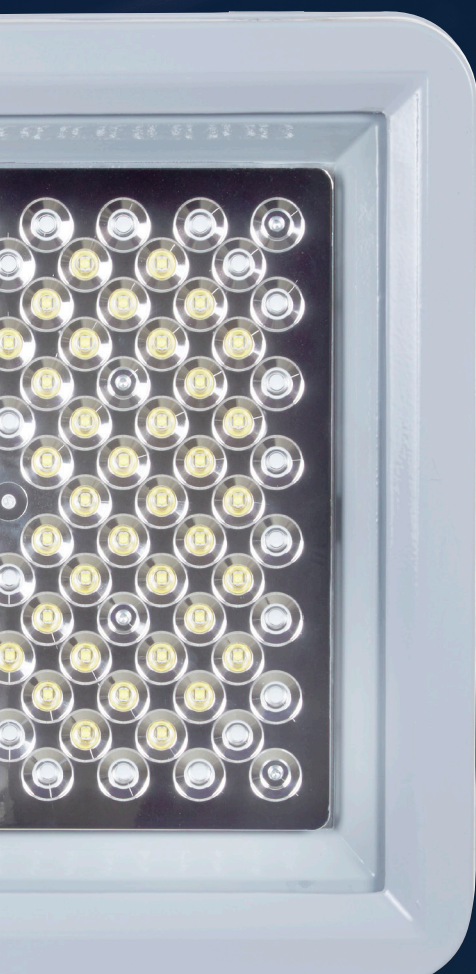


AMERICAS

Dialight

WHY LIGHTING MATTERS in Water and Wastewater Treatment

Lighting is of critical importance in Water and Wastewater Treatment facilities to maximize both safety and productivity. Water treatment plants are among the most hazardous places to work due to the presence of volatile chemicals, hazardous biosolids and combustible gases - all of which can take a toll on facility lighting. Heavy equipment also makes accessing lighting for routine maintenance burdensome and dangerous.



Airborne substances, including caustic chemicals and vapors, such as methane gas, hydrogen sulfide, and ammonia



High vibration and humidity



Noisy machinery



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

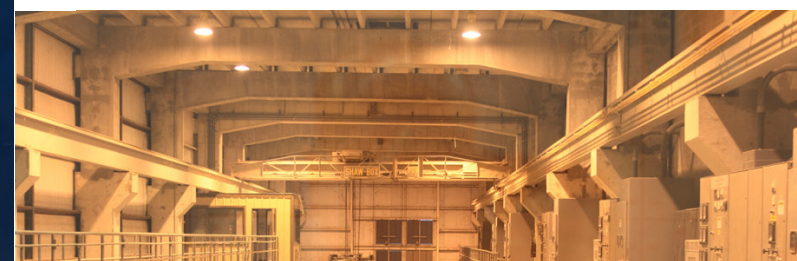
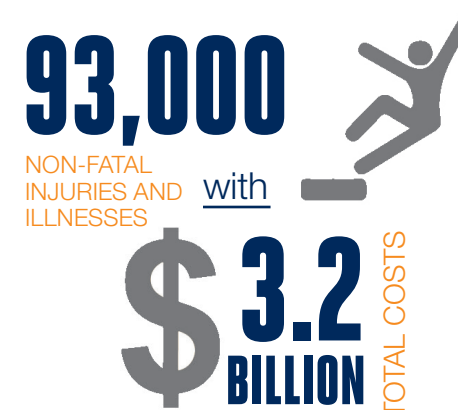


Power surges and electric shock



THE COST OF POOR LIGHTING in Water and Wastewater Treatment

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

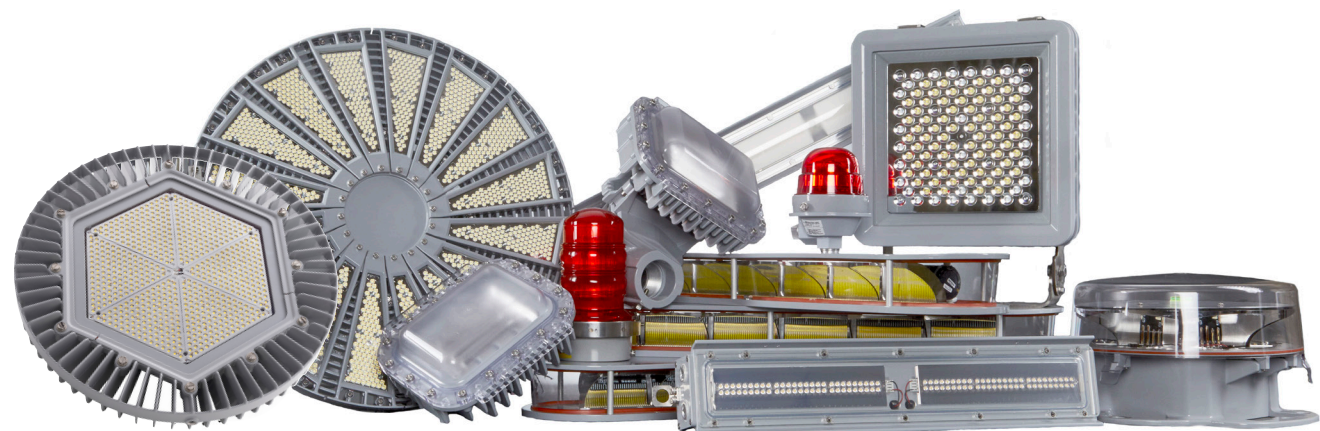


The Water and Wastewater Treatment industry involves risks and hazards that demand high quality lighting. When choosing a lighting partner for your facilities, care must be taken to ensure their products have proven to be survivable in your environments.



DIALIGHT SOLUTIONS for Water / Wastewater

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 facilities. 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 Water and Wastewater Treatment Industry, including many IP66 rated options for long-lasting protection against the elements.



WHERE TO USE DIALIGHT PRODUCTS in Water / Wastewater

- PUMP STATIONS
- AERATION BASINS
- SLUDGE PITS
- CHEMICAL STORAGE
- CATWALKS
- PROCESS AREAS
- CONVEYORS (FOR STANCHION MOUNTS)
- WAREHOUSES AND GENERAL AREAS
- GENERAL FLOOD LIGHTING

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 Water and Wastewater Treatment facilities, 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

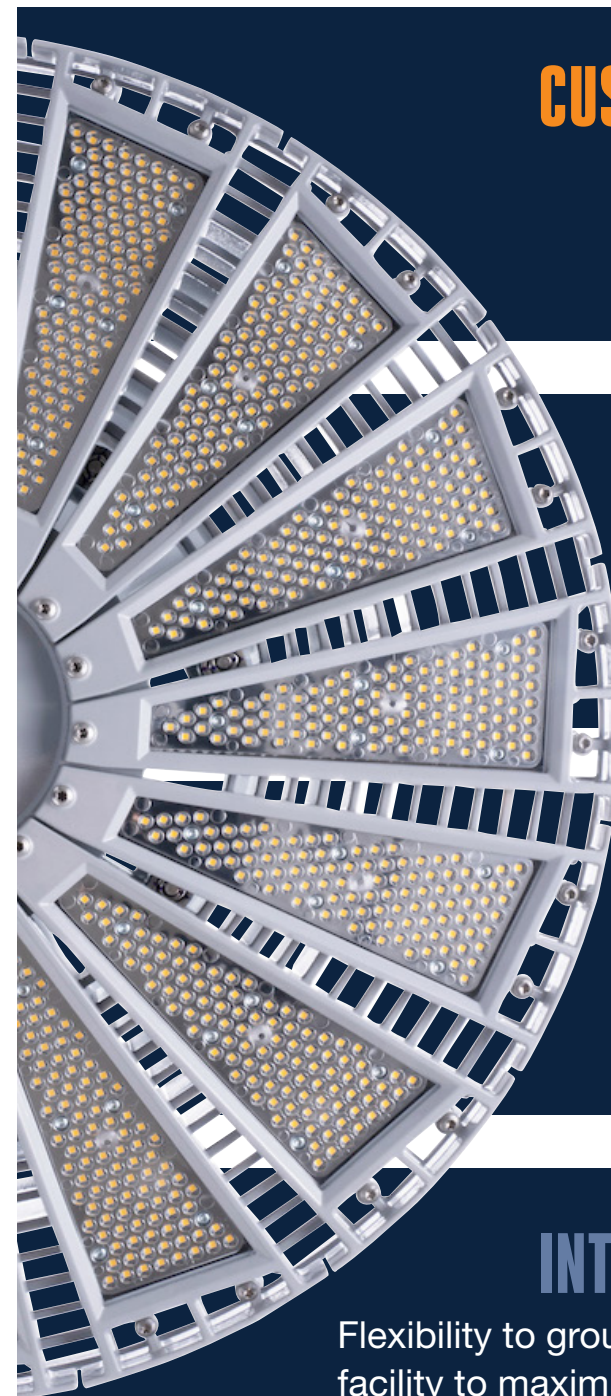
Sealed and optimized to reduce or eliminate the need for maintenance over the life of the fixture. Easy to install and retrofit to existing infrastructure.

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 Water and Wastewater Treatment

2 Vigilant® Area Light
For lower ceiling indoor or outdoor process & stanchion mount applications*



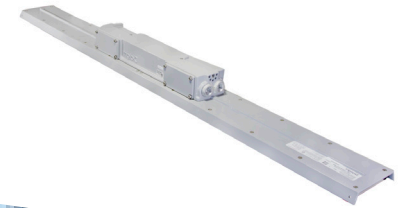
1 SafeSite® High Bay
Hazardous location chemical storage and processing



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



7 Vigilant® LP/TC Linear
For indoor or outdoor fluorescent strip/vaportite replacements, task or inspection lighting, electrical rooms, shops, process areas etc. 4ft and 2ft versions available



3 Vigilant® High Bay
For indoor or outdoor high bay applications over 14 feet



4 Vigilant® Low Bay
For lower ceiling indoor or outdoor applications where wider light distribution is critical



5

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



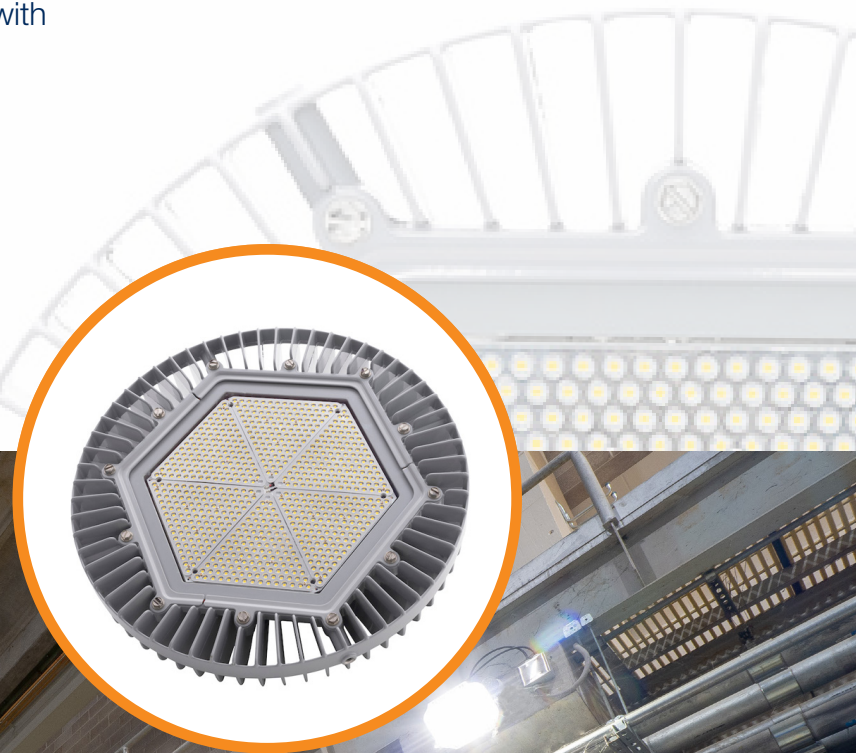
6 Vigilant® Floodlight
For indoor and outdoor flood lighting applications, multiple beam patterns available



CASE STUDIES A.B. Jewell *Tulsa, Oklahoma*

Aiming to upgrade, the A.B. Jewell staff began researching the options and selected a few LED samples for a fixture trial. After evaluating each system, they settled on Dialight's LED StreetSense® streetlights and Vigilant® High Bays, Low Bays, Flood Lights and Area Lights. In addition to a better performing fixture, the Dialight LEDs offered a 10-year warranty, covering the entire fixture, power supply and housing, which sealed the deal for A.B. Jewell. To-date, the facility has installed more than 600 Dialight LED lighting fixtures in several areas of the facility to replace a mix of outdated lighting.

- Replaced 350 HID, MH and T12 fixtures with more than 600 Dialight LED fixtures
- \$6,000-7,000 per year saved on lighting maintenance
- \$22,300 annual energy savings
- \$32,000 utility incentive
- 446,576 kWh saved



"For over five years, we've experienced an increase in safety and reliability from Dialight's crisp, clear lighting, and the lights still function like the day they were installed."

- A.B. Jewell's Tulsa, OK Maintenance Supervisor

CASE STUDIES Santa Cruz *Santa Cruz, California*

As part of a citywide Climate Action Program to reduce energy consumption and to resolve its lighting challenges, the facility experimented with several LED lighting solutions, including one from Dialight. Impressed with the way the Dialight fixture outperformed the others, the facility ultimately chose Dialight to replace 82 fixtures in its solids dewatering building, pre-aeration and trickling filters with the company's DuroSite LED fixtures, including 33 Low Bays specially designed for areas of low clearance, and 49 High Bays – 19 with 14,000 lumen output and 30 with 12,000 lumen output. The entire changeout took just five days—about 30-60 minutes per fixture. The 12/7 lighting was outfitted with a combination of photocells and timers, taking advantage of the Dialight LED's instant-on capabilities.

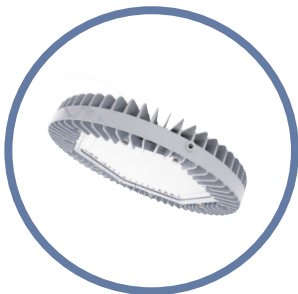
- Exterior lighting at wastewater treatment facility
- Complete installation in just 5 days
- Energy rate: \$0.15/kWh
- 12/7 lighting with photocells and timers
- \$5,000 rebate
- ~3 year payback



For more case study information please visit www.dialight.com.

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:

- WET WELLS
- PUMP ROOMS
- MCC ROOMS
- BOILER ROOMS
- HOPPER ROOMS
- STORAGE AND GENERAL AREAS



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:

- BULK CHEM ROOMS
- DIGESTER ROOMS
- CHLORINE STORAGE
- CHEMICAL STORAGE



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:

- GENERAL STORAGE & WAREHOUSING
- MACHINE/MAINTENANCE SHOPS



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 & GENERAL AREAS



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:

- TANK ROOMS
- DIGESTER ROOMS
- AERATION BASINS



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

WARNING - INSTALLATION & SECONDARY RETENTION. Use of any Dialight products without proper installation (including secondary retention / netting) and periodic inspections could cause severe injury or death. Dialight recommends that all installations should use secondary retention / netting (appropriate to the installation environment) where applicable. It is the exclusive responsibility of the contractor, installer and/or end-user to: (a) determine the suitability of the product for its intended application; and, (b) ensure that the product is safely installed (with secondary retention / netting where appropriate) and in compliance with all applicable laws and regulations. To the extent permissible under applicable laws, Dialight disclaims all liability for personal injury and/or other damage resulting from any dislodgment or other dislocation of its products.

PRODUCT PORTFOLIO

High Bays

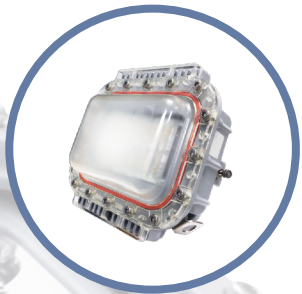
Part Number	Certification	Fixture Lumen	Wattage	lm/W	CCT	Lens	Beam Distribution
Vigilant® High Bay							
HEU7MC2ANNWNGN	UL 1598, CSA	11,250	80	141	5000K (cool white)	Glass - Clear	Medium
HEU7MC2BNNWNGN	UL 1598, CSA	14,250	102	140	5000K (cool white)	Glass - Clear	Medium
HEU7MC2CDNWNGN	UL 1598, CSA	19,500	129	151	5000K (cool white)	Glass - Clear	Medium
SafeSite® High Bay							
HED7MC2ANNWNGN	UL 844 (CID2)	11,250	80	141	5000K (cool white)	Glass - Clear	Medium
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:

- CONVEYORS
- CATWALKS
- UV AND FILTER ROOMS
- CLARIFIERS
- TUNNELS & NARROW SPACES



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:

- PUMP STATIONS
- DIGESTER ROOMS
- CHLORINE STORAGE

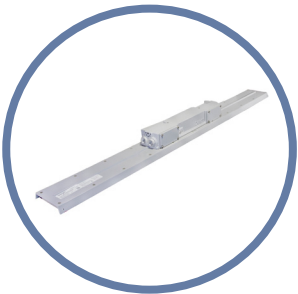
Part Number	Certification	Fixture Lumen	Wattage	lm/W	CCT	Lens	Beam Distribution
Vigilant® Area Light							
ALU5BC23DSNNGN	UL 1598/A, CSA, NOM	2,800	24	117	5000K (cool white)	Diffused Polycarbonate	360°
ALU5BC27DWNNGN	UL 1598/A, CSA, NOM	6,700	52	129	5000K (cool white)	Diffused Polycarbonate	360°
ALU7BC29DNWNGN	UL 1598/A, CSA, NOM	9,000	66	136	5000K (cool white)	Glass - Clear	360°
SafeSite® Area Light							
ALF5BC26DSNNGN	UL 844 (CID2, CII, CIII)	5,300	40	133	5000K (cool white)	Diffused Polycarbonate	360°
ALC7BC26DNWNGN	UL 844 (CID1)	5,400	40	135	5000K (cool white)	Clear Tempered Glass	360°
ALD7BC27DVNNGN	UL 844 (CID2, CIII)	7,300	52	140	5000K (cool white)	Glass - Clear	360°
ALD7BC27DSNNGN	UL 844 (CID2, CIII)	7,300	52	140	5000K (cool white)	Glass - Clear	360°
Accessories							
HZXW3	316 stainless steel adjustable mounting bracket						

For more details on product specifications including mounting information, and our full suite of retrofit adapters, please visit www.dialight.com.

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PRODUCT PORTFOLIO

Linear Lights

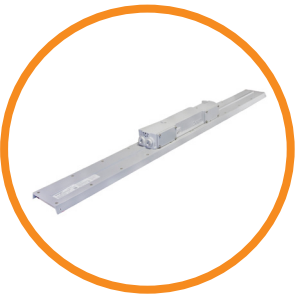


VIGILANT® LP/TC LINEAR

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:

- ELECTRICAL ROOMS
- WAREHOUSES



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:

- PUMP STATIONS
- CHEMICAL STORAGE

Part Number	Certification	Fixture Lumen	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
SafeSite® Low Profile Linear							
LKD4MC27DNNNGN	UL 844 (CID2, CIID2, CIII)	7,250	52	139	5000K (cool white)	Clear Polycarbonate	Medium
Accessories							
LPXW4LP	Low profile mounting bracket, can be angled at 0 and 15 degrees						

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

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PRODUCT PORTFOLIO

Floodlights



DUROSITE®

10/15K FLOODLIGHT

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

Ideally suited for:

- TANK FARMS
- CHEMICAL STORAGE UNITS
- SLUDGE PITS
- ROADWAYS/PARKING AREAS



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 Lumen	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
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.

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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 because flammable gases or vapors are present in the air in quantities sufficient to produce explosive or ignitable mixtures
Class II	Hazardous because combustible or conductive dusts are present
Class III	Hazardous because ignitable fibers or flying's are present, but not likely to be in suspension in sufficient quantities to produce ignitable mixtures. Typical wood chips, cotton, flax and nylon. Group classifications are not applied to this class

Divisions

The division defines the probability of hazardous material being present in an ignitable concentration in the surrounding atmosphere.

Division	Presence of Hazardous Material
Division 1	The substance referred to by class is present during normal conditions
Division 2	The substance referred to by class is present only in abnormal conditions, such as a container failure or system breakdown

Groups

The group defines the hazardous material in the surrounding atmosphere.

Group	Hazardous Material in Surrounding Atmosphere
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, ether, hydrogen sulfide, morphine, 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
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, carbon black, coal black, charcoal, coal or coke dusts that have more than 8% total entrapped volatiles or dusts that have been sensitized by other material so they present an explosion hazard
Group G	Flour dust, grain dust, flour, starch, sugar, wood, plastic and chemicals

Reference:
http://www.engineeringtoolbox.com/hazardous-areas-classification-d_347.html

DISCLAIMER. All product information provided is, to the best of Dialight's knowledge, accurate as of the date of publication. When ordering, refer to www.dialight.com for current versions of: (a) relevant product documentation (including the relevant product data sheets); (b) Dialight terms and conditions of sale; and, (c) the relevant product warranty. To the extent that any contract is deemed formed between Dialight and the purchaser of Dialight products and/or an end-user, versions of documents available at www.dialight.com as at the date of sale shall be the versions incorporated therein. In the event of any discrepancy between this document or information provided at www.dialight.com, the latter shall prevail.

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WARNING / DISCLAIMERS:

Installation & secondary retention. The use of this product without proper installation (including secondary retention / netting) and periodic inspections, could cause severe injury or death. Dialight recommends that all installations should use secondary retention / netting (appropriate to the installation environment) as applicable. Dialight products are intended for ultimate purchase, installation and operation by knowledgeable persons trained in the functional assessment, installation, use and maintenance of such products and all customers (including but not limited to end customers) are responsible for assessing the suitability of Dialight products for any given installation requirement. It is the exclusive responsibility of the contractor, installer and/or end-user to: (a) determine the suitability of the product for its intended application; and, (b) ensure that the product is safely installed (with secondary retention / netting as appropriate) and in compliance with all applicable laws and regulations.

Product specifications & warranties. All product information provided is, to the best of Dialight's knowledge, accurate as of the date of publication. All values and performance data herein are design or typical values when measured under laboratory conditions. The information herein is subject to change without notice. The products / software detailed herein are subject to applicable warranties and terms and conditions of use/purchase. Unless agreed otherwise in writing by an authorized representative of Dialight, Dialight does not represent that its products are fit for any particular purpose and accepts no liability for the installation and/or unauthorised use of its products. When ordering, refer to www.dialight.com for current versions of: (a) relevant product documentation (including relevant product data sheets); (b) Dialight terms and conditions of sale; and, (c) the relevant product warranties. To the extent that any contract is deemed formed between Dialight and the purchaser of Dialight products and/or an end-user, versions of documents available at www.dialight.com as at the date of sale shall be the versions incorporated therein. In the event of any discrepancy between this document and information provided at www.dialight.com, the latter shall prevail.

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