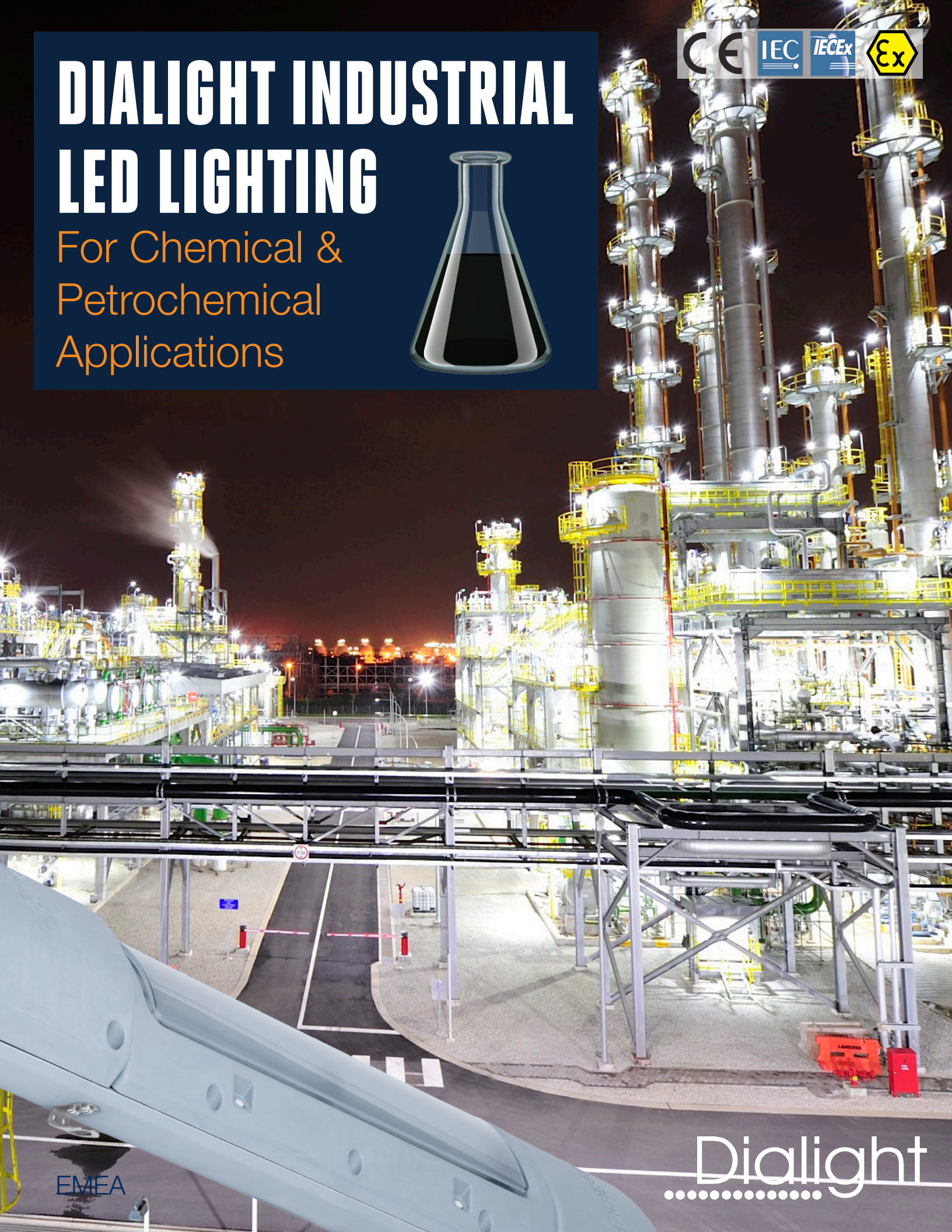


DIALIGHT INDUSTRIAL LED LIGHTING

For Chemical &
Petrochemical
Applications



EMEA

Dialight
.....

WHY LIGHTING MATTERS in Chemical and Petrochemical Applications

Lighting is of critical importance in Chemical and Petrochemical plants to maximise 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.



Airborne substances, including caustic chemicals and vapours



High vibration and humidity



Noisy, complex heavy machinery



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



Power surges and electric shock



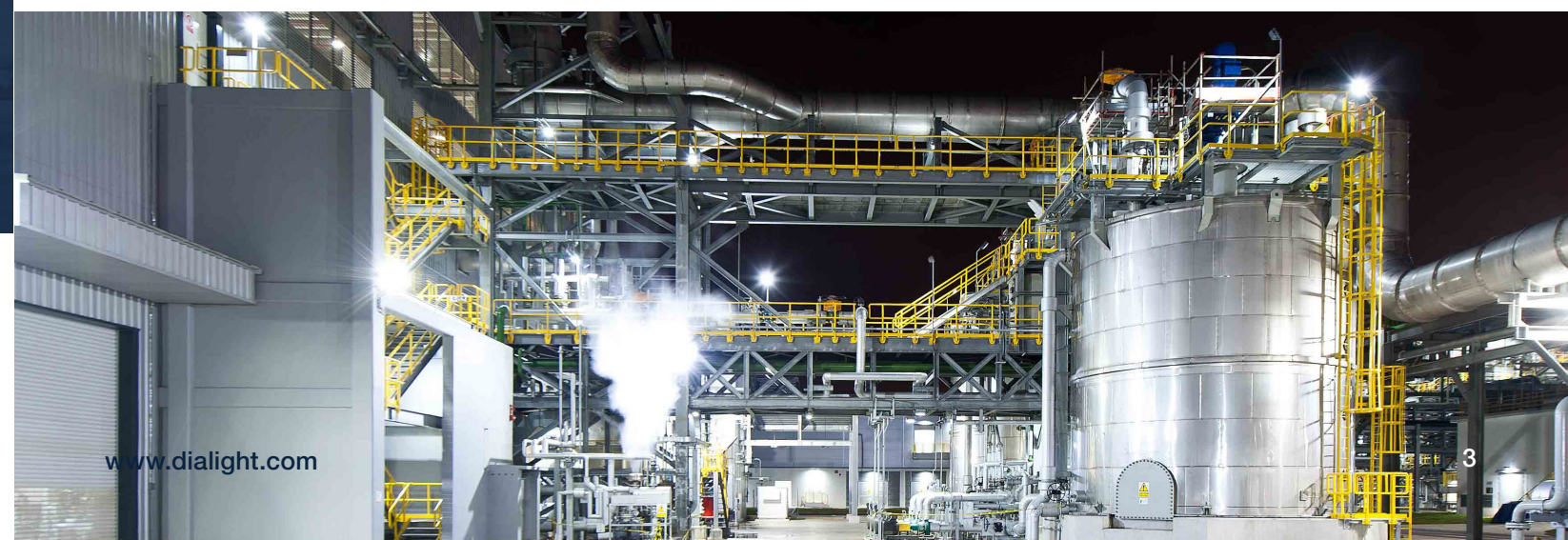
Flammable and explosive environments

INJURIES, ILLNESSES AND WORKPLACE FATALITIES IN EUROPE

Poor illumination can contribute to tragic work site accidents and injuries. In 2017 alone, Eurostat and the International Labour Organization cited:



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 maximise safety while minimising 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 specialise 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 maximising 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
- ELECTRICAL EQUIPMENT ROOMS
- WATER TREATMENT
- WALKWAYS
- 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 optimised thermal dissipation for protection against environmental contaminants and vibration related failures.

LOW MAINTENANCE MECHANICAL DESIGN

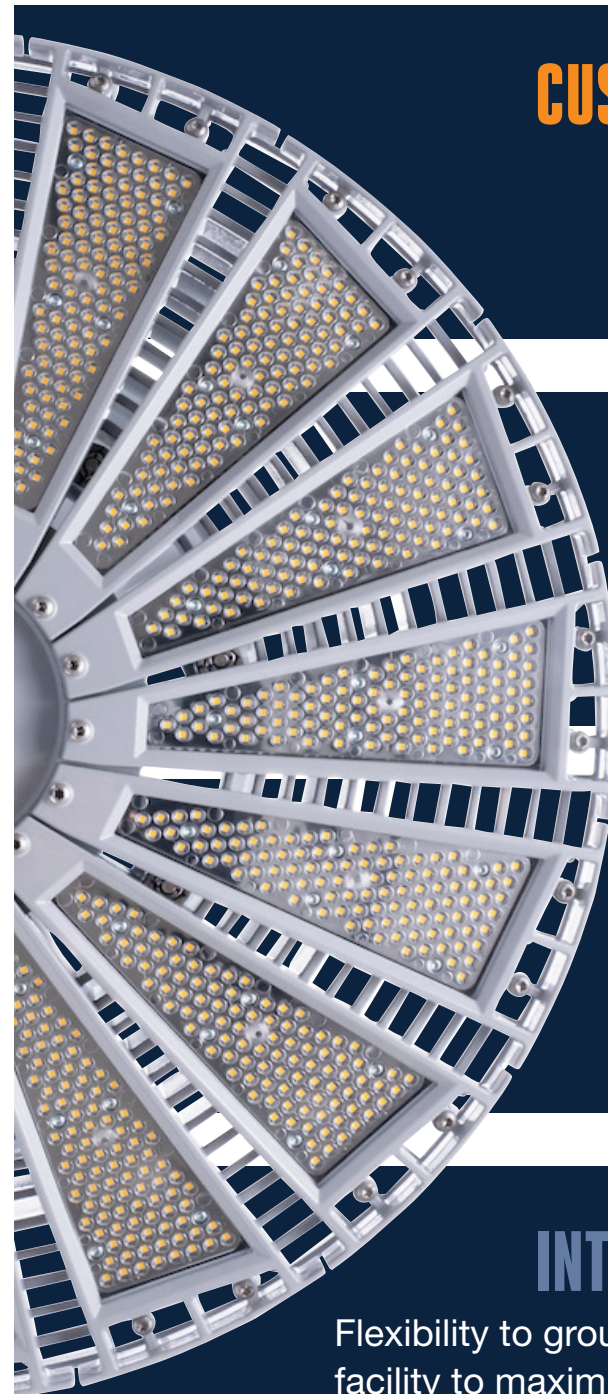
Sealed and optimised to reduce or eliminate the need for maintenance over the life of the fixture. Easy to install and retrofit to existing infrastructure.

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 maximise 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 Vigilant® LED Bulkhead**
For non-hazardous lower ceiling indoor or outdoor applications where wider light distribution is critical



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



- 3 Vigilant® High Bay**
For non-hazardous indoor or outdoor high bay applications over 4.3 metres



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



- 5 DuroSite® Flood Light**
For non-hazardous indoor or outdoor flood lighting applications; multiple beam patterns available



- 6 SafeSite® GRP and Stainless Steel Linears**
For hazardous indoor or outdoor fluorescent strip/vapourite replacements, task or inspection lighting, electrical rooms, shops, and process areas. 764mm and 1244mm versions available



CASE STUDY Rubis Terminal *Rotterdam, The Netherlands*

France-based Rubis Group, the fifth largest independent operator in Europe, operates 14 downstream petroleum and chemical facilities. With the development of its new terminal facility in Rotterdam, The Netherlands, Rubis aimed to bring online one of the world's most operationally and energy efficient facilities of its kind.

At Rubis' other terminals, the combination of fluorescent linear and flood lights is not only inefficient and unacceptable for the new zero-emissions facility at Rotterdam, but they also make it difficult for staff to perform their work without the use of supplemental, temporary, portable lights. In addition, ongoing maintenance is a challenge. Workers must build scaffolding and work at high elevation, in teams of two, with portable lighting. Vibration from equipment takes a heavy toll on the fixtures, causing frequent failures, so maintenance is an on-going process.

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. The goals for these impeccable standards: to reduce total energy consumption, maximise lighting efficiency, improve sustainability and safety, reduce maintenance demand and lower total operating cost. In addition, because of its harbour 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.

They selected Dialight, the world leader in high-efficiency LED lighting for industrial applications. Rubis' E/I & A Supervisor Arthur Wrana said, "Dialight's product outshone the competition for its rugged but appealing look, reliability and light efficacy. The outstanding warranty made this the smartest investment for our new state-of-the-art terminal."

Due to upgrading to Dialight's next-generation LED fixtures, Rubis expects to reduce energy lighting consumption, along with the greenhouse gases produced as a result, at the new facility by 60% compared to conventional lighting. Based on maintenance expenditures at other similar facilities, the company also expects save an impressive €100,000 per year on maintenance, for lights that are guaranteed to last, multiplying the annual savings accordingly. Because the Dialight fixtures are highly resistant to salt-spray corrosion, they'll hold up much better to the harsh environment along the North Sea. And, because they provide a much higher CRI and quality of light compared to conventional fixtures, coupled with strategic light placement to ensure clarity and visibility for workers, the Dialight fixtures create a safe, comfortable and welcoming environment for everyone at the site.

The powerful combination of energy and maintenance savings is expected to generate a payback period of less than four years, creating a substantial ROI for Rubis at this new facility. The outstanding efficiency and sustainability of the LED fixtures also allows the company to more easily meet annual governmental energy audit requirements, and achieve its goal of operating a zero-emissions facility. The project has been so successful, the company plans to expand the project to retrofit existing terminals with new, state-of-the-art Dialight LED fixtures.

"We've been extremely pleased with the Dialight products," Wrana said. "They not only give us the high efficiency and low emissions we needed to meet our specifications, but they also give our facility a modern, safe and vibrant look, which our staff and customers both appreciate."

- New petrochem terminal in Rotterdam
- Zero-emissions facility
- Sought alternative to failure-prone fluorescent fixtures
- Installed over 270 ATEX certified and non-hazardous fixtures
- Reduced energy consumption 60%
- €100,000 euros annual maintenance savings



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:

STORAGE/WAREHOUSE

MAINTENANCE SHOPS

BOILER ROOM



SAFESITE® HIGH BAY

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

Ideally suited for:

PROCESS AREAS

CHEMICAL STORAGE

WATER TREATMENT

LOADING/UNLOADING

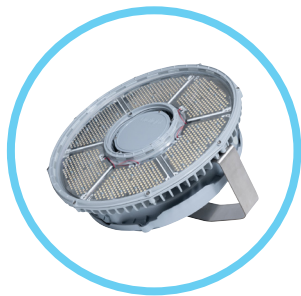


VIGILANT® HIGH OUTPUT HIGH BAY

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



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

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 Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
Vigilant® High Bay*							
HEE4MC2ADHWNGN	CE, ENEC	10,750	80	134	5000K (cool white)	Clear Polycarbonate	Medium
HEE4MC2BDHWNGN	CE, ENEC	13,750	102	135	5000K (cool white)	Clear Polycarbonate	Medium
HEE4MC2CDHWNGN	CE, ENEC	18,750	129	145	5000K (cool white)	Clear Polycarbonate	Medium
HEE4MC2EDHWNGN	CE, ENEC	25,250	186	136	5000K (cool white)	Clear Polycarbonate	Medium
H6E7MC2NDHNNGN	CE, ENEC	60,000	414	145	5000K (cool white)	Tempered Glass	Medium
SafeSite® High Bay							
HEA9MC4DNKCG	IECEX / ATEX (Zone 1, Zone 2)	9,650	88	110	5000K (cool white)	Glass - Clear	Medium
HEA9MC4GNKCG	IECEX / ATEX (Zone 1, Zone 2)	12,500	112	110	5000K (cool white)	Glass - Clear	Medium
HEA9MC4KNKCG	IECEX / ATEX (Zone 1, Zone 2)	16,000	144	110	5000K (cool white)	Glass - Clear	Medium
HEA9MC4PNKCG	IECEX / ATEX (Zone 1, Zone 2)	23,500	212	110	5000K (cool white)	Glass - Clear	Medium
SafeSite® Hydrogen High Bay							
HEH9MC4DNKCG	IECEX / ATEX (Zone 1, Zone 2)	11,250	80	141	5000K (cool white)	Glass - Clear	Medium
HEH9MC4GNKCG	IECEX / ATEX (Zone 1, Zone 2)	14,250	102	140	5000K (cool white)	Glass - Clear	Medium
HEH9MC4KNKCG	IECEX / ATEX (Zone 1, Zone 2)	19,500	129	151	5000K (cool white)	Glass - Clear	Medium
HEH9MC4PNKCG	IECEX / ATEX (Zone 1, Zone 2)	22,500	186	141	5000K (cool white)	Glass - Clear	Medium
Reliant™ High Bay*							
RRE4MC2ADHNNGN	CE / ENEC	10,600	71	149	5000K (cool white)	Clear Polycarbonate	Medium
RRE4MC2BDHNNGN	CE / ENEC	13,400	91	147	5000K (cool white)	Clear Polycarbonate	Medium
RRE4MC2CDHNNGN	CE / ENEC	16,900	114	148	5000K (cool white)	Clear Polycarbonate	Medium
RRE4MC2EDHNNGN	CE / ENEC	22,800	159	143	5000K (cool white)	Clear Polycarbonate	Medium
RRE4MC2GDHNNGN	CE / ENEC	28,200	191	148	5000K (cool white)	Clear Polycarbonate	Medium
RRE4MC2JDHNNGN	CE / ENEC	33,800	232	146	5000K (cool white)	Clear Polycarbonate	Medium

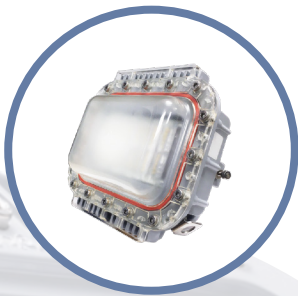
Neutral white options available, please consult local Dialight sales office for availability.

*Polycarbonate lens options available. Consult product spec sheet for more information.

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PRODUCT PORTFOLIO

Area Lights, Bulkheads



VIGILANT® AREA LIGHT

This extremely versatile fixture series can be used in non-hazardous indoor and outdoor applications. See technical spec sheet for more information and additional accessories.

Ideally suited for:

- WALKWAYS
- COOLING TOWERS
- LOADING/UNLOADING
- CONVEYORS



SAFESITE® AREA LIGHT

For use in hazardous classified applications where chemical vapours or explosive dusts are present. See technical spec sheet for hazardous certifications and more information on additional accessories.

Ideally suited for:

- PROCESS AREAS
- WALKWAYS
- CONVEYORS
- LOADING/UNLOADING
- CHEMICAL STORAGE



VIGILANT® BULKHEAD

For use in non-hazardous indoor and outdoor applications, ideal for any industrial retrofit or greenfield environment.

Ideally suited for:

- WALKWAYS
- ROADWAYS/PARKING AREAS
- STAIRWAYS
- PLATFORMS

PRODUCT PORTFOLIO

Area Lights, Bulkheads

Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
Vigilant® Area Light							
ALE7AC26DBJUGN	CE, ENEC	5,500	40	138	5000K (cool white)	Glass - Clear	180°
ALE7AC27DBJUGN	CE, ENEC	7,100	52	137	5000K (cool white)	Glass - Clear	180°
ALE7AC29DBJUGN	CE, ENEC	8,800	66	133	5000K (cool white)	Glass - Clear	180°
ALE7BC26DBJUGN	CE, ENEC	5,700	40	143	5000K (cool white)	Glass - Clear	360°
ALE7BC27DBJUGN	CE, ENEC	7,300	52	140	5000K (cool white)	Glass - Clear	360°
ALE7BC29DBJUGN	CE, ENEC	9,000	66	136	5000K (cool white)	Glass - Clear	360°
SafeSite® Area Light							
HZJA8C2N	IECEEx/ATEX (Zone 1, 21, Zone 2, 22)	5,600	58	97	5000K (cool white)	Tempered Glass	180°
HZJA9C2N	IECEEx/ATEX (Zone 1, 21, Zone 2, 22)	6,000	58	103	5000K (cool white)	Tempered Glass	360°
Vigilant® Bulkhead							
BHE4UC23NFNVGN	CE	3,100	22	144	5000K (cool white)	Clear Polycarbonate	Ultra-Wide (Type 1)
BHE4UC26NFNVGN	CE	6,400	45	142	5000K (cool white)	Clear Polycarbonate	Ultra-Wide (Type 1)
BHE4UCG3NFNVGG*	CE	3,100	25	124	5000K (cool white)	Clear Polycarbonate	Ultra-Wide (Type 1)
BHE4UCG6NFNVGG*	CE	6,400	48	133	5000K (cool white)	Clear Polycarbonate	Ultra-Wide (Type 1)

Neutral white options available, please consult local Dialight sales office for availability.

*Emergency Battery Backup Model

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

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PRODUCT PORTFOLIO Floodlights



VIGILANT®
DUAL FLOODLIGHT

Round high lumen dual floodlight to replace up to 1500 watt HID units in non-hazardous areas. See technical spec sheet for more information on additional accessories, optical patterns, and hazardous certified options.

Ideally suited for:

- GENERAL FLOOD LIGHTING
- LOADING/UNLOADING AREAS



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



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
Vigilant® Dual Floodlight							
FLEB66MC2NG	CE	56,000	385	145	5000K (cool white)	Clear Tempered Glass	35°
FLEBM0MC2NG	CE	54,000	385	140	5000K (cool white)	Clear Tempered Glass	92°
DuroSite® Floodlight							
FLE276MC2NG	CE	11,500	106	108	5000K (cool white)	Clear Tempered Glass	105° x 70°
FLE467MC4NG	CE	14,750	135	109	5000K (cool white)	Clear Tempered Glass	70° x 105°
FLE476MC4NG	CE	14,750	135	109	5000K (cool white)	Clear Tempered Glass	105° x 70°
FLE466MC4NG	CE	15,000	135	111	5000K (cool white)	Clear Tempered Glass	45°
StreetSense® Street Light							
SLA3C4CG	IECEX/ATEX (Zone 2)	5,500	65	85	5000K (cool white)	Glass - Clear	Type III
SLA3C4HG	IECEX/ATEX (Zone 2)	10,900	131	83	5000K (cool white)	Glass - Clear	Type III
SLA3C4SG	IECEX/ATEX (Zone 2)	20,250	252	80	5000K (cool white)	Glass - Clear	Type III

Neutral white options available, please consult local Dialight sales office for availability.
For more details on product specifications, please visit www.dialight.com.

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PRODUCT PORTFOLIO Linear Lights



SAFESITE®
GRP LINEAR

The latest addition to the linear family, featuring extremely durable glass reinforced polyester and our exclusive 10 year warranty. Available in 764mm and 1244mm varieties. For use in indoor and outdoor hazardous certified linear and low mounting height applications where explosive gases may be present. Refer to Dialight website for more information.

Ideally suited for:

- LABORATORIES
- PROCESS AREAS



SAFESITE®
STAINLESS STEEL LINEAR

Available in 764mm and 1244mm varieties. For use in indoor and outdoor hazardous certified linear and low mounting height applications where explosive gases may be present. Refer to Dialight website for more information.

Ideally suited for:

- ELECTRICAL ROOMS
- WALKWAYS
- SHOP AREAS

Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
SafeSite® GRP Linear							
P2ABMC23A54WGN	IECEX/ATEX (Zone 1, 2, 21 & 22), CE	2,875	25	115	5000K (cool white)	Textured Polycarbonate	Circular
P4ABMC26A54WGN	IECEX/ATEX (Zone 1, 2, 21 & 22), CE	5,750	47	123	5000K (cool white)	Textured Polycarbonate	Circular
P2BBMC23A54WGN	IECEX/ATEX (Zone 2, 21 & 22), CE	2,875	25	115	5000K (cool white)	Textured Polycarbonate	Circular
P4BBMC26A54WGN	IECEX/ATEX (Zone 2, 21 & 22), CE	5,750	47	123	5000K (cool white)	Textured Polycarbonate	Circular
P2ABMCG3A54WGG*	IECEX/ATEX (Zone 1, 2, 21 & 22), CE	2,875	29	99	5000K (cool white)	Textured Polycarbonate	Circular
P4ABMCG6A54WGG*	IECEX/ATEX (Zone 1, 2, 21 & 22), CE	5,750	51	113	5000K (cool white)	Textured Polycarbonate	Circular
P2BBMC23A54WGG*	IECEX/ATEX (Zone 2, 21 & 22), CE	2,875	29	99	5000K (cool white)	Textured Polycarbonate	Circular
P4BBMC26A54WGG*	IECEX/ATEX (Zone 2, 21 & 22), CE	5,750	51	113	5000K (cool white)	Textured Polycarbonate	Circular
SafeSite® Stainless Steel Linear							
ELA1C6MSSCB4	IECEX/ATEX (Zone 1, 21, Zone 2, 22)	2,600	34	76	5000K (cool white)	Clear Polycarbonate	Medium
ELA1C6RSSCB4	IECEX/ATEX (Zone 1, 21, Zone 2, 22)	5,100	67	76	5000K (cool white)	Clear Polycarbonate	Medium
ELEA2C7MSSCB4	IECEX/ATEX (Zone 1, 21, Zone 2, 22)	2,600	35	74	5000K (cool white)	Clear Tempered Glass	Medium
ELEA2C7RSSCB4	IECEX/ATEX (Zone 1, 21, Zone 2, 22)	5,100	70	73	5000K (cool white)	Clear Polycarbonate	Medium

Neutral white options available, please consult local Dialight sales office for availability.
For more details on product specifications, please visit www.dialight.com.
*Emergency Battery Backup Model

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HAZARDOUS AREA RATINGS



Fixed and portable fixtures for installation and use in hazardous areas.

Zones

The zone defines the probability of hazardous material being present in an explosive concentration in the atmosphere.

Zone	Hazardous Material in Surrounding Atmosphere
Zone 0, 20	Area in which an explosive gas / dust mixture is continuously present or present for long periods
Zone 1, 21	Area in which an explosive gas / dust mixture is likely to occur for short periods in normal operation
Zone 2, 22	Area in which an explosive gas / dust mixture is present for a very short time due to an abnormal condition

Protection Types

The protection types are used to denote the protection concept utilised in the devices.

Ex	Presence of Hazardous Material	Zones
Ex d	Flameproof (Explosion proof) Enclosure	1, 21, 2, 22
Ex e	Increased Safety	1, 21, 2, 22
Ex m	Encapsulation	1, 21, 2, 22
Ex n or N	Non incandive or/and normally no sparking circuits	2, 22

Temperature Ratings

Certified equipment is tested for maximum temperature rating by approval agencies.

Equipment for Group II receives a temperature code indicating the maximum temperatures of the product.

Temperature Rating	
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

Groups (Gas & Dust)

Equipment is tested for suitability in specified gas groups and dust groups.

Gas groups IIA, IIB, IIC. Dust groups IIIA, IIIB, IIIC

Group	Hazardous Material in Surrounding Atmosphere
Group IIA	Propane group
Group IIB	Ethylene group
Group IIC	Hydrogen group
Group IIIA	Combustible flyings
Group IIIB	Non-conductive dust
Group IIIC	Conductive dust

Dialight Europe Ltd

Leaf C, Level 36, Tower 42

25 Old Broad Street

London, EC2N 1HQ, United Kingdom

Tel: +44 (0) 203 058 3540

Customer Service: +44 (0) 163 866 6541

sales-emea@dialight.com

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 authorised 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.

Exclusion of liability. To the extent permissible under the relevant law, Dialight disclaims all liability for personal injury and/or other damage resulting from any dislodgment or other dislocation of its products. Whilst Dialight has used its reasonable endeavours to ensure the completeness and accuracy of information herein, Dialight does not assume any liability for damages resulting from use of this information or for any third-party representations made in relation to Dialight products.