

# DIALIGHT INDUSTRIAL LED LIGHTING

For Wood,  
Pulp & Paper



AMERICAS

Dialight

# WHY LIGHTING MATTERS in Wood, Pulp & Paper

Lighting is of critical importance in Pulp & Paper facilities to maximize both safety and productivity. Pulp & Paper mills are notorious for harsh environments and conditions that can contribute to premature fixture failure:



Airborne substances, including caustic chemicals and vapors, and even explosive risks such as wood dusts



High vibration, high heat and humidity



Noisy de-barkers, chippers, and sawmills that lead workers to rely on visual information



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



Power surges

# THE COST OF POOR LIGHTING in Wood, Pulp & Paper

Poor illumination can contribute to tragic work site accidents and injuries in the Wood, Pulp & Paper sector. Between 2009 and 2018 the US Bureau of Labor statistics cited:



The Wood, Pulp & Paper 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.



## DIALIGHT SOLUTIONS for Wood, Pulp & Paper

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 the largest selection of rugged, cutting edge products ideally suited for environments found within the Pulp & Paper Industry.



## WHERE TO USE DIALIGHT PRODUCTS in Wood, Pulp & Paper

- PAPER MACHINE ROOM (HIGH CEILING)
- CONVEYORS (FOR STANCHION MOUNTS)
- BASEMENTS UNDER PAPER MACHINES
- PROCESS AREA, TANK FARMS, ETC.
- WAREHOUSE, STORE ROOMS, WOOD YARD
- CHEMICAL STORAGE
- 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 Pulp & Paper 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 Wood, Pulp & Paper

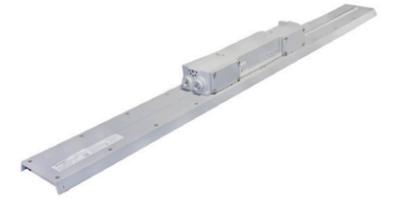
**1 Vigilant® Low Profile High Output High Bay**  
For non-hazardous high ceiling high bay applications typically 40 feet or above



**9 Vigilant® Dual Floodlight**  
For non-hazardous indoor or outdoor high power flood applications (Typical 1,000 watt or better HID replacement)



**8 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



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



**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



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



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



## CASE STUDIES **Kimberly-Clark** *Johor, Malaysia*

Aiming to reduce energy consumption and improve visibility within the plant, the company replaced 114 of its 400W metal halide lighting fixtures with Dialight's DuroSite® LED High Bays. Consuming just 123W, the Dialight High Bays have enabled the company to slash energy consumption and dramatically improve visibility, all while making the work environment more comfortable and safer for employees. The company has been so impressed with the results, it's now considering an upgrade to Dialight fixtures at other areas within the mill premises.

- Two production floors
- Replaced 400W metal halide with 123W Dialight LED High Bays
- 60% energy savings
- Average W/m<sup>2</sup> reduced from 12.49 to 4



## CASE STUDIES **Koehler Paper Group** *Kehl, Germany*

The 164 metal halide lamps were replaced one-for-one with Dialight's DuroSite® Series LED High Bays each drawing only 171W to deliver an immediate cut in energy use and CO<sub>2</sub> emissions of 64%. The LED High Bays carry a five-year continuous performance warranty and are L70 rated for 100,000 hours, so maintenance is eliminated. Additionally the LEDs' low operating temperature avoids the problem of dust accumulation on the lens and consequent variation in color. As sealed fixtures with no end-of-life failures, there is no risk that parts can fall into the production line to contaminate product or cause a fire hazard and with no UV output they will not cause discoloration of product.

- One-for-one replacement of (164) 440W Metal Halide as standard lights with (164) 171W Dialight LED High Bays
- Energy use down by 64% = 436,740kWh annually (17,500 lumen models only)
- CO<sub>2</sub> emissions down by 308 tons annually
- W/m<sup>2</sup> down from 8.66 to 3.12



# 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 400 watt traditional HID fixtures.

*Ideally suited for:*

- PAPER MACHINE ROOMS
- PULP MILLS
- TURBINE DECKS
- STORAGE & 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:*

- PROCESS AREAS
- TANK FARMS
- CHEMICAL STORAGE

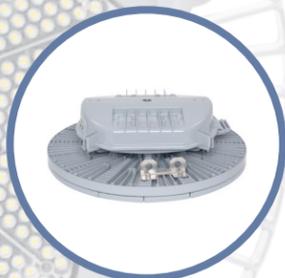


## RELIANT™ HIGH BAY

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® LOW PROFILE 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:*

- PAPER MACHINE ROOMS
- PULP MILLS
- TURBINE DECKS
- 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:*

- UTILITIES/BOILER AREAS
- BASEMENTS
- PROCESS AREAS



## 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

Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
<b>Vigilant® High Bay</b>							
HEU-7MC2-ENNW-NGN	UL 1598, CSA	27,500	185	149	5000K (cool white)	Glass - Clear	Medium
HEU-LMC2-ENNW-NGN	UL 1598, CSA	27,000	185	146	5000K (cool white)	Polycarbonate Dome - Diffused	Medium
HEU-7MC2-CNNW-NGN	UL 1598, CSA	19,800	130	152	5000K (cool white)	Glass - Clear	Medium
HEU-LMC2-CNNW-NGN	UL 1598, CSA	19,400	130	149	5000K (cool white)	Polycarbonate Dome - Diffused	Medium
HEU-7MC2-BNNW-NGN	UL 1598, CSA	14,900	100	149	5000K (cool white)	Glass - Clear	Medium
<b>Reliant™ High Bay*</b>							
RHU-7MC2-CDCN-NGN	UL 1598, CSA	18,000	123	146	5000K (cool white)	Tempered Glass	Medium
RHU-7MC2-EDCN-NGN	UL 1598, CSA	23,520	163	144	5000K (cool white)	Tempered Glass	Medium
RHU-7MC2-FDCN-NGN	UL 1598, CSA	29,400	199	148	5000K (cool white)	Tempered Glass	Medium
<b>Vigilant® Low Bay</b>							
LEU-LUC2-9NNW-NGN	UL 1598, CSA	9,200	78	118	5000K (cool white)	Polycarbonate Dome - Diffused	Ultra Wide
LEU-LUC2-6NNW-NGN	UL 1598, CSA	6,400	50	128	5000K (cool white)	Polycarbonate Dome - Diffused	Ultra Wide
<b>Vigilant® Low Profile High Output High Bay</b>							
H7U-7MC2-NDNN-NGN	UL 1598, CSA	61,200	418	146	5000K (cool white)	Glass	Medium
H7U-4MC2-NDNN-NGN	UL 1598, CSA	57,100	418	137	5000K (cool white)	Polycarbonate	Medium
H7U-7MC2-KDNN-NGN	UL 1598, CSA	46,000	300	153	5000K (cool white)	Glass	Medium
H7U-4MC2-KDNN-NGN	UL 1598, CSA	42,900	300	143	5000K (cool white)	Polycarbonate	Medium

For Hazardous Location part numbers please refer to Product Specification Sheet.

**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.

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# PRODUCT PORTFOLIO Area Lights

# PRODUCT PORTFOLIO Area Light Accessories



## 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
- PROCESS AREAS
- GENERAL AREAS
- BASEMENTS
- TUNNELS & NARROW SPACES

Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
<b>Vigilant® Area Light</b>							
ALU-7BC2-7DNW-NGN	UL 1598, CSA	7,300	52	140	5000K (cool white)	Glass	360°
ALU-5BC2-7DNW-NGN	UL 1598, CSA	6,700	52	129	5000K (cool white)	Polycarbonate Diffused	360°
ALU-7BC2-6DNW-NGN	UL 1598, CSA	5,700	40	143	5000K (cool white)	Glass	360°
ALU-5BC2-6DNW-NGN	UL 1598, CSA	5,300	40	133	5000K (cool white)	Polycarbonate Diffused	360°

For Hazardous Location part numbers please refer to Product Specification Sheet.

For more details on product specifications, and our full suite of retrofit adapters, please visit [www.dialight.com](http://www.dialight.com).

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## 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
- TANK FARMS



## 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				
Pendant	Ceiling	Wall	Stanchion	Quad Mount
APM2	CM2	TWM2	JM5	QM25
APM3	CM3	TWM3	PM5	
HPM2				

Holophane® Petrolux II, III Retrofit Kit - HZXTHP3				
Pendant	Universal	Stanchion	Ceiling	Wall
PD	UN	SA	CD	WL
GH		ST	CE	W
P		A	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	

Killark® Certilite® & Certilite® V Retrofit Kit - HZXTHKL			
Pendant	Ceiling	Wall	Stanchion
VMA2B & VMA-2	VMX2B & VMX-2	VMB2B & VMB-2	VMD4B
VMA3B & VMA-3	VMX3B & VMX-3	VMB3B & VMB-3	VMD5B
VMC2B & VMC-2	VMX6B, 7B, 8B, 9B		VMS5B
VMC3B & VMC-3			
VMF2B, 3B			

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
KPCH-75, 100			KPST-125
			KPST-150



## 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.

Thomas & Betts Hazlux® Retrofit Kit - HZXHTB				
Pendant	Pendant Cone	Flexible Pendant	Ceiling	Wall
3P	3F	3C	3W	5S
4P	4F		4W	6S
				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	VL5	VL5-VIB

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



UMA Area Light  
ALx-xxxx-xxUx-xxN



Stanchion 45°  
HZXS45



Wall 45°  
HZXW45



Wall 0°  
HZXW01



Conveyor  
HZXCV34



Ceiling  
HZXFM

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

# PRODUCT PORTFOLIO Linear Lights



## SAFESITE® 10/15K FLOODLIGHT

Traditional square flood light designed to replace 400 watt HID units in hazardous certified areas where chemical vapors or explosive dusts are present. See technical spec sheet for hazardous certifications and more information on additional accessories and optical patterns.

*Ideally suited for:*

- PAPER MACHINE ROOMS
- PULP MILLS
- TURBINE DECKS
- WOOD YARDS
- ROADWAYS/PARKING AREAS



## VIGILANT® DUAL FLOODLIGHT

For use in non-hazardous indoor and outdoor high output or high mounted flood lighting applications. Replaces up to 1,500 watt traditional HID fixtures.

*Ideally suited for:*

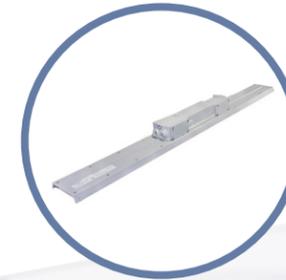
- PAPER MACHINE ROOMS
- PULP MILLS
- TURBINE DECKS
- WOOD YARDS
- ROADWAYS/PARKING AREAS

Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
<b>DuroSite® Floodlight</b>							
FLW266NC2NG	UL 1598, CSA	11,250	106	106	5000K (cool white)	Tempered Glass	NEMA 6 (115°)
FLW466NC4NG	UL 1598, CSA	14,750	135	109	5000K (cool white)	Tempered Glass	NEMA 6x7 (115°x140°)
<b>Vigilant® Dual Floodlight</b>							
FDU76C2MDSNNGN	UL 1598, CSA	56,000	385	145	5000K (cool white)	Clear Tempered Glass	NEMA 6
FDU76C2HDSNNGN	UL 1598, CSA	39,000	270	144	5000K (cool white)	Clear Tempered Glass	NEMA 6
<b>StreetSense® Street Light</b>							
SL3C5SLGG	UL 1598, CSA	20,250	252	80	5000K (cool white)	Tempered Glass	Type III

For Hazardous Location part numbers please refer to Product Specification Sheet.

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

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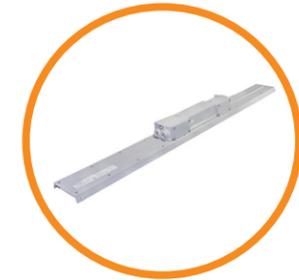


## VIGILANT® LP/TC LINEAR

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:*

- TASK LIGHTING
- PROCESS & INSPECTION AREAS
- MAINTENANCE AREAS
- SWITCHGEAR ROOMS
- STORAGE & GENERAL AREAS
- BASEMENTS



## 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:*

- PROCESS AREAS
- MAINTENANCE AREAS
- CHEMICAL STORAGE

Part Number	Certification	Fixture Lumens	Wattage	lm/W	CCT	Lens	Beam Distribution
<b>DuroSite® Linear</b>							
LPM3C4D2P	UL 1598, CSA	3,600	33	109	5000K (cool white)	Clear Polycarbonate	Medium
LPM3C4M2P	UL 1598, CSA	7,250	66	110	5000K (cool white)	Clear Polycarbonate	Medium
LPM3C4B2W	UL 1598, CSA	3,300	33	100	5000K (cool white)	Diffused Polycarbonate	Medium
LPM3C4H2W	UL 1598, CSA	6,700	66	102	5000K (cool white)	Diffused Polycarbonate	Medium
<b>Vigilant® Linear</b>							
LJU4MC25DNNGN	UL 1598, CSA	4,750	37	128	5000K (cool white)	Clear Polycarbonate	Medium
LKU4MC27DNNGN	UL 1598, CSA	7,250	52	139	5000K (cool white)	Clear Polycarbonate	Medium
LJU5MC25DNNGN	UL 1598, CSA	4,450	37	120	5000K (cool white)	Diffused Polycarbonate	Medium
LKU5MC27DNNGN	UL 1598, CSA	6,550	52	126	5000K (cool white)	Diffused Polycarbonate	Medium

For Hazardous Location part numbers please refer to Product Specification Sheet.

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
<b>Class I Groups</b>	
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
<b>Class II Groups</b>	
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

**North American HQ**  
1501 Route 34 South  
Farmingdale, NJ 07727  
Tel: 732-919-3119  
Fax: 732-751-5778  
info@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 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](http://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](http://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](http://www.dialight.com), the latter shall prevail.

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