



- Isolines**
- |        |
|--------|
| 0.1 lx |
| 0.2 lx |
| 0.5 lx |
| 1.0 lx |
| 2.0 lx |
| 5.0 lx |
- Luminaire Type**
- 13\* DW Windsor Kiriium 3 - 45 LED 1100mA M CLASS 4K (18750lm 164, W)  
Height 10m Tilt -10 Column Type - 0.75m Projection bracket  
Minimum set back 1.5m from edge of Road
  - 1\* DW Windsor Z Kiriium Mini 1LX290 114 05 LED 4K (680 lm 70,W)  
Height 5m Tilt 0 Column Type - Post Top Mounted Lantern  
Minimum Set Back 0.5m from edge of Cycleway
  - 14\* DW Windsor Z Kiriium Mini 1 : 1LX2 Footpath 4K (915lm 10,0w)  
Height 5m Tilt 0 Post Top Mounted Lantern  
Minimum Set Back 0.5m from edge of Cycleway

**\*CYCLE WAY AND WALK WAY TO BUS STOP LIT TO OCC STANDARD OF P4 - 5 LUX AVERAGE MIN 1 LUX**

**\*ROAD WAY AND TOUCAN CROSSING LIT TO OCC STANDARD OF 26 LUX AVERAGE 0.42 UNIFORMITY CATEGORY M3 & C2**

**\*ALL PRIVATE CABLE DUCTS TO BE ORANGE AND DNO CABLE DUCTS IN BLACK**  
**\*SHOULD BE DESIGNED IN ACCORDANCE WITH THE OCC HIGHWAY STANDARD DETAILS "HSD" DOCUMENTS INCLUDING BUT NOT LIMITED TO THE FOLLOWING DOCUMENT NUMBERS,  
 HSD 1300-002, HSD 1300-006, HSD 1300-021, HSD 1400-001, HSD 1400-004,  
 HSD 1400-005, HSD 1400-017, HSD 1400-020, HSD 1400-021, HSD 1400-022,  
 HSD 1400-023, HSD 500-025, HSD 500-165**

**\*THE CONTRACTOR SHOULD SUBMIT DRAWINGS AND DETAILS OF CABLING AND DUCTING TO OCC APPROVAL PRIOR TO COMMENCEMENT WORKS.**  
**\*ALL CABLING AND DUCTING SHOULD BE TO IET BS 7671 REGULATIONS.**



REV	DESCRIPTION	BY	CHK	APP	DATE
	London and Regional				

EXECUTIVE PARK  
 AVALON WAY  
 ANSTLEY  
 LEICESTER  
 LE7 7GR  
 TEL: +44 (0)116 234 8000  
 FAX: +44 (0)116 234 8001  
 e-mail: leicester@wyg.com



Project: Bicester Gateway (Cycleway and Road Way)

Drawing Title: PROPOSED LIGHTING LAYOUT

Scale @	A2	Drawn	Date	Checked	Date	Approved	Date
1:1000	NA	09/07/18	DC	09/07/18	NM	09/07/18	
Project No.	A103271	Office Type	35	Drawing No.	34	Revision	001
							4



**The Kirium Pro range**

Think all street lights are made equal?

think  
again

Introducing the new Kirium Pro – our most comprehensive range of LED street lighting yet. Need performance? Minimal whole life cost? Precise lighting control? Think Kirium Pro. Available in four sizes and with 23 standard optical solutions, it's the most innovative, forward-thinking, and future-proof product we've ever developed.

Whatever your requirements, we have the solution

From 350lm – suitable for residential roads and car parks – to 37000lm, ideal for larger roads and motorways.

Key advantages:

- 4 sizes for true flexibility
- 23 optical solutions to suit any project requirement
- With Diamond+ technology for the ultimate in precise lighting control
- Exceptional thermal performance for increased efficiency and product lifespan
- Impressive energy efficiency delivering a minimal whole life cost solution
- Flexible drive current for tailored performance and accurate lighting levels
- Choice of control options for even greater energy savings
- Tool-free access via quick release latches mean easy installation and maintenance
- Safety first; with automatic electrical disconnect

Applications:



Case Study

Results worth thinking about

Take a look at the example below to see how this innovative new lighting solution compares against older lighting technologies. With significant energy savings achievable over both traditional HID and 1st generation LED light sources.



Example Scheme Lighting Requirements

EN13201 Lighting Class	P3
Average Illuminance (Eav)	7.50lx
Minimum Illuminance (Emin)	1.50lx

Scheme Overview

Mounting Height	6.0m
Road Width	9.0m
No. of Lanes	2
Set Back	1.0m
Out Reach	0.4m

Results

	70W Son-T	1st Generation LED Product	Kirium Pro 1 24 LEDs, 4000K
Total circuit Watts (W)	85	59	<b>31</b>
Burning hours per year	4400	4400	<b>4400</b>
Average Illuminance (Eav)	7.57	7.53	<b>8.38</b>
Minimum Illuminance (Emin)	2.47	3.07	<b>3.51</b>
Total area (m <sup>2</sup> )	288	288	<b>288</b>
Power Density (mW/lx/m <sup>2</sup> )	38.97	27.22	<b>12.85</b>
AECI (kWh/m <sup>2</sup> )	1.30	0.90	<b>0.47</b>
Kirium Pro Energy Saving	<b>63%</b>	<b>47%</b>	

## Unequaled flexibility. Unequaled choice.

### Kirium Pro Mini

Recommended for mounting at 4-6 metres, available in 4, 8 or 16 LEDs. Kirium Pro Mini is a compact, extremely efficient LED lantern suitable for footpaths, cycleways and minor residential roads.

**Lumen ranges:**  
350-5500lm

### Kirium Pro 1

Recommended for mounting at 5-8 metres, available in 8, 16, 24, or 32 LEDs. Kirium Pro 1 is suitable for footpaths, cycleways, pedestrian crossings and residential roads.

**Lumen ranges:**  
700-11400lm

### Kirium Pro 2

Recommended for mounting at 6-10 metres, available in 32, 48 or 64 LEDs. Kirium Pro 2 is suitable for main roads, car parks and conflict area lighting.

**Lumen ranges:**  
2600-22000lm

### Kirium Pro 3

Recommended for mounting at 8-15 metres, available in 64, 80, 96 or 128 LEDs. Kirium Pro 3 is suitable for major road systems, wide area lighting and large junctions.

**Lumen ranges:**  
5200-37000lm



Footpaths / Cycleways



Residential Road



Car Parks /  
Pedestrian Crossings /  
Conflict Areas



Motorways / Roundabouts

## Introducing Diamond+

### With 23 standard optical distributions for ultimate flexibility and precise lighting control

An evolution of our award-winning and patented Diamond Optic® reflector technology, Diamond+ gives you the ability to create widely different lighting distributions from a single luminaire.

#### Choose Diamond+ for refined lighting distribution

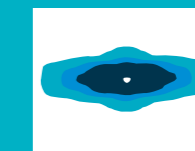
##### Diamond+ A Optic



**Options:**  
A1, A2, A3, A4 or A5

**Typical applications:**  
Wide roads and dual carriageways (M classes)

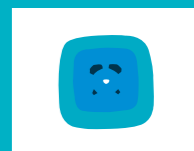
##### Diamond+ B Optic



**Options:**  
B1, B2, B3, B4 or B5

**Typical applications:**  
Narrow roads and footpaths

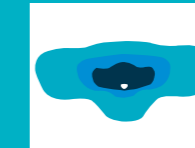
##### Diamond+ C Optic



**Options:**  
C1, C2, C3, C4 or C5

**Typical applications:**  
Area applications

##### Diamond+ D Optic



**Options:**  
D1, D2, D3, D4 or D5

**Typical applications:**  
Standard roads and wide footpaths

##### Diamond+ Z Optic



**Options:**  
ZL, ZR or ZF

**Typical applications:**  
Zebra and pedestrian crossings

Please refer to [dwwindsor.com/thinkagain](http://dwwindsor.com/thinkagain) for full optical configurations





## When it comes to installation and maintenance, the new Kirium Pro really is pain-free.

Tool-less access and an automatic electrical disconnect safety feature maximise productivity during expensive road closures. With quick-release latches, hinged opening and lift-off head all designed to make life a whole lot easier.



Cooling fins

### Automatic electrical disconnection

Safety feature; cuts power to the luminaire when opened

### Cool Zone™ Exceptional thermal performance

Air void and thermal barrier

### Hinged opening and lift-off head

### Performance lighting

LUXEON TX LEDs (from 4 to 128 LED options) up to 130lm/W

### Fully CMS compatible

With room for existing and future Smart City sensors

### Surge protection device

### Tailored control

LED driver with a wide range of control and drive current options

### Quality materials

High pressure die cast aluminium body (LM6)

### Tool-less entry

Quick-release latches for speedy installation and maintenance



### Flexible mounting

Post top [60-76mmØ]  
Side entry [34, 42, 60mmØ]  
Post top/side entry inclination:  
-15° -10° -5° 0° +5° +10° +15°

## Installation and Maintenance



Tool-less quick-release latches for speedy access



Hinged opening



Lift-off head, with automatic electrical disconnect

# Kirium Pro

## IP66 | IK08 | CLASS I | CLASS II

### Features:

Our most comprehensive range of LED road lanterns, available in 4 sizes  
Extensive optical solutions; introducing Diamond+ the ultimate in flexible, precise lighting control. 23 standard optical solutions available  
Simple, speedy and safe installation and maintenance via tool-free, quick-release latches. Lift-off head and automatic electrical disconnect  
Emergency option available

### Options:

**Kirium Pro Mini (4 / 8 / 16 LEDs)** for mounting at 4-6 metres  
**Kirium Pro 1 (8 / 16 / 24 / 32 LEDs)** for mounting at 5-8 metres  
**Kirium Pro 2 (32 / 48 / 64 LEDs)** for mounting at 6-10 metres  
**Kirium Pro 3 (64 / 80 / 96 / 128 LEDs)** for mounting at 8+ metres

### Diamond+ Optical Control:

Diamond+ A Optic – Wide Road (A1, A2, A3, A4, A5)  
Diamond+ B Optic – Footpath (B1, B2, B3, B4, B5)  
Diamond+ C Optic – Area (C1, C2, C3, C4, C5)  
Diamond+ D Optic – Standard Road (D1, D2, D3, D4, D5)  
Diamond+ Z Optic – Pedestrian Crossing (ZL, ZR, ZF)  
Optional obtrusive light shield(s) available and can be fitted post installation without opening the luminaire

### Light Source:

LEDs: LUXEON TX

### L90 lifetime prediction:

In excess of 100,000 hours

### Total luminaire lumens:

Kirium Pro Mini: 350-5900lm (4-55W)  
Kirium Pro 1: 700-11400lm (7-105W)  
Kirium Pro 2: 2600-22000lm (22-198W)  
Kirium Pro 3: 5200-37000lm (41-312W)

### Colour temperature:

2700K (very warm white)  
3000K (warm white)  
4000K (neutral white)

### Colour rendering index:

70Ra

### Luminaire efficacy:

Up to 130lm/W (total measured luminaire efficacy)

### Drive current:

From 200mA - 1000mA (in 50mA increments)

### Mounting:

Post top [60-76mm Ø]  
Side entry [34, 42, 60mm Ø]  
Post top/side entry inclination: -15° -10° -5° 0° +5° +10° +15°  
Adaptors available for various spigot diameters

### Control:

CLO: Constant Light Output enabled - for energy savings and dependable light throughout the lifetime of the luminaire  
Smart City Sensor Ready: Able to support new Sensor Ready (SR) equipment currently under development  
Switch: On/off through conventional PEC, Miniature or Nema  
Dim: Factory set dimmed / customer specified dimming  
CMS: Compatible with all available CMS systems

### Colours:

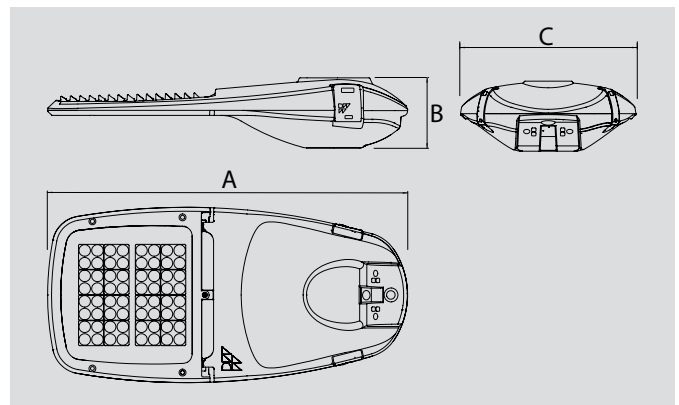
RAL 9005 Black  
RAL 7046 Grey  
RAL 7035 Light Grey  
Other RAL colours on special request

### Materials:

**Body:** High pressure die cast aluminium (LM6)  
**Glazing:** 4mm toughened low iron glass  
**Seals:** Silicone  
**Finish:** Polyester powder coat

### Installation and maintenance:

Available with various cable tail options prefitted  
New short form UMS codes available now  
Operational temperature range: -45°C to +50°C  
Surge protection: 6-8kV as standard (dependent on product variant)  
10kV available on request



	Dimensions (mm)			Weight (kg)	Windage m <sup>2</sup>
	A	B	C		
Kirium Pro Mini	390	110	227	3.6	0.020
Kirium Pro 1	610	140	350	8.5	0.048
Kirium Pro 2	720	140	350	9.8	0.052
Kirium Pro 3	1010	167	415	17.1	0.0867

Kirium® Pro is a registered design

Due to continuous product development the details within this brochure are subject to change at any time, please contact us for the most up-to-date information or visit: [www.dwwindsor.com](http://www.dwwindsor.com)

### DW Windsor

Pindar Road, Hoddesdon, Hertfordshire, EN11 ODX  
T: +44 (0) 1992 474600 | E: [info@dwwindsor.com](mailto:info@dwwindsor.com)  
[dwwindsor.com](http://dwwindsor.com)

