


## LD154DR

### DEEP RECESSED HIGH-POWER EXTERIOR LED UPLIGHT



The LD154DR is part of our highest output uplight range, delivering up to 1285lm with optics that are deep recessed 39mm into the body for extremely low glare. The use of large 50mm optics further aid in glare control whilst providing ultra-high efficiency and superior beam quality. There are 3 LED engine options available. Our new P1 engine delivers the highest output, whilst the E3 offers an exceptional extra narrow beam of 9° and the N1, a 13° beam. Reaching heights of up to 14 metres, the LD154DR demonstrates excellent size to output ratio and has been designed with a repairable engine, providing a robust circular solution for low glare, high-power uplight applications.

## KEY FEATURES




- > Extremely low glare, high-output uplight solution with optics deep recessed 39mm
- > New high-power P1 engine with CREE COB delivering upto 1285lm at 500mA in 3000K
- > E3 engine with NICHIA LED delivering up to 684lm in 3000K offering an exceptional 9° extra narrow beam with peak intensity reaching 15,096cd
- > N1 engine with CREE COB delivering up to 853lm at 700mA in 3000K offering a 13° narrow beam
- > Utilises large 50mm low glare optics, chosen for efficiency, quality of beam and ability to produce narrow beams at high outputs
- >  Contains our integral moisture guard (anti-wicking barrier), stopping water ingress from going up the cable into the product from incorrect IP-rated connections
- > Chamfered bezel available in 316 Stainless Steel, Polished & Passivated Stainless Steel and a wide range of powder coat paint finishes or any RAL colour
- > Switched, 0-10V, Casambi, DMX, DALI, or Mains dimmable drivers available

## DIMENSIONS

For full dimensions please go to page 4.



## WHITE LED ENGINE SPECIFICATION

| Engine                                | E3  |            | E3-90        |  | N1                                 |             |             | P1                                 |             |
|---------------------------------------|---|------------|--------------|--|------------------------------------|-------------|-------------|------------------------------------|-------------|
| Beam angles                           | 9°, 11°, 22°, 29°, 42°, 56°, 10° x 39°  |            |              |  | 13°, 24°, 31°, 41°, 55°, 14° x 39° |             |             | 20°, 27°, 31°, 42°, 55°, 19° x 41° |             |
| LED manufacturer                      | NICHIA  |            |              |  | CREE                               |             |             | CREE                               |             |
| Colour temperature                    | 2200K, 2700K, 3000K, 4000K, 5000K   |            | 2700K, 3000K |  | 2200K, 2700K, 3000K, 4000K, 5000K  |             |             | 2200K, 2700K, 3000K, 4000K, 5000K  |             |
| Current [Rated Output]                | 350mA [5W]  | 500mA [7W] | 700mA [10W]  |  | 350mA [7W]                         | 500mA [10W] | 700mA [14W] | 350mA [14W]                        | 500mA [20W] |
| Typical LED Circuit wattage           | 4.4W  | 6.4W       | 9.2W         |  | 6.4W                               | 9.3W        | 13.3W       | 13.3W                              | 19.6W       |
| Delivered lumens (L <sub>100</sub> )* | 389   | 516        | 684          |  | 457                                | 626         | 853         | 903                                | 1285        |
| Delivered lm/Circuit W**              | 88  | 80         | 74           |  | 71                                 | 67          | 64          | 68                                 | 66          |
| Typical LED Source wattage            | 4W  | 5.8W       | 8.3W         |  | 5.8W                               | 8.4W        | 12.0W       | 12.0W                              | 17.6W       |
| Source LED lm                         | 574   | 740        | 949          |  | 694                                | 937         | 1264        | 1449                               | 1983        |
| Source lm/W                           | 144   | 128        | 114          |  | 120                                | 112         | 105         | 121                                | 113         |
| Forward voltage (V <sub>100</sub> )   | 11.3V   | 11.6V      | 11.8V        |  | 16.6V                              | 16.8V       | 17.1V       | 34.3V                              | 35.2V       |
| CRI                                   | 85  |            | 90           |  | 93                                 |             |             | 90                                 |             |
| Colour consistency                    | 2 SDCM  |            |              |  | 2 SDCM                             |             |             | 3 SDCM                             |             |
| Peak intensity                        | 15,096 cd   |            |              |  | 11,052 cd                          |             |             | 10,624 cd                          |             |
| LOR                                   | 0.72  |            |              |  | 0.67                               |             |             | 0.65                               |             |
| TM30                                  | RF86   RG98   |            |              |  | RF91   RF99                        |             |             | RF90   RG97                        |             |
| UGR rating ('downlight' mounted)      | 4   | 5          | 5.8          |  | 5.3                                | 6.3         | 7.3         | 6.8                                | 7.9         |
| BUG rating ('uplight' mounted)        | B0-U3-G0  | B0-U4-G0   |              |  | B0-U4-G0                           |             | B0-U5-G0    | B0-U5-G0                           |             |
| LED lifetime                          | L90B5 at 90,000hrs  |            |              |  |                                    |             |             |                                    |             |
| Applications                          |    |            |              |  |                                    |             |             |                                    |             |




These values are based on LD154DR-E3-700-LW30-ENB, LD154DR-N1-700-LW30-NB and LD154DR-P1-700-LW30-NB

\*See lumen variance table to the right for N1 engine. E3 lumens apply across all colour temperatures

\*\*LED wattage includes losses associated with using a 90% efficient driver

| Lumen variance by CCT |        |
|-----------------------|--------|
| 2200K                 | -7%    |
| 2700K                 | +/- 0% |
| 4000K                 | +7%    |
| 5000K                 | +16%   |

## MECHANICAL

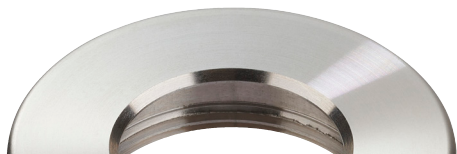
| Ambient temperature<br>55°C |  E3 / E3-90 | Soil/Sleeve | 350mA         | 500mA         | 700mA         |
|-----------------------------|--|-------------|---------------|---------------|---------------|
|                             |  | Concrete    | -20°C to 55°C | -20°C to 55°C | -20°C to 40°C |
|                             |  N1         | Soil/Sleeve | -20°C to 55°C | -20°C to 50°C | -20°C to 25°C |
|                             |  | Concrete    | -20°C to 55°C | -20°C to 55°C | -20°C to 45°C |
|                             |  P1       | Soil/Sleeve | -20°C to 25°C | N/A           | -             |
|                             |  | Concrete    | -20°C to 45°C | -20°C to 25°C | -             |
| Glass                       | 8mm thick, low iron glass  |             |               |               |               |
| Materials                   | Black hard anodised aluminium body, 316 Stainless Steel bezel                                  |             |               |               |               |
| Weight of product           | 0.68kg   |             |               |               |               |
| IP rating                   | IP67   |             |               |               |               |
| IK rating                   | IK08   |             |               |               |               |
| Wiring                      | In-series constant current wiring (pre-wired with 2 core cable at a length of 250mm)           |             |               |               |               |

## ENVIRONMENTAL

|                    |   |  |
|--------------------|---|--|
| TM65               | Available on request  |  |
| TM66               | 2.5   |  |
| Repair + Refurbish |  This product is included in our Repair and Refurbish scheme. This offers customers the ability to send back products to us for repair or refurbishment to extend their life without having to buy new fittings. |  |

## AVAILABLE FINISHES

*Please refer to our finishes guide for full details*



### 316 STAINLESS STEEL

- > Marine grade 316 Stainless Steel
- > Standard machined finish
- > Extremely durable
- > Passivation recommended for marine environments to prevent corrosion and build up of brown stains caused by oxidation
- > Interior & exterior use



### POLISHED & PASSIVATED 316 STAINLESS STEEL

- > Marine Grade 316 Stainless Steel
- > Pristine mirror like finish
- > Recommended for pools and marine applications
- > Extremely durable with very high corrosion resistance
- > Passivated to extensively prolong resistance to corrosion and brown stains caused by oxidation in marine environments
- > Interior & exterior use

### PAINT FINISH - POWDER COAT

- > The powder coated finish is very matt
- > Not recommended for high traffic in-ground applications, unless placed to one side where the bezel will not be walked on
- > Powder coat paint is generally used on stainless steel or anodised aluminium components
- > Interior and exterior use



**WHITE**  
(RAL 9016)



**BLACK**  
(RAL 9005)



**CLASSIC BRONZE**  
(YM262E)



**TEXTURED MARS BRONZE**



**TEXTURED FIR GREEN**  
(RAL 6009)



**GUNMETAL GREY**  
(RAL 7021)



**RAL COLOURS**

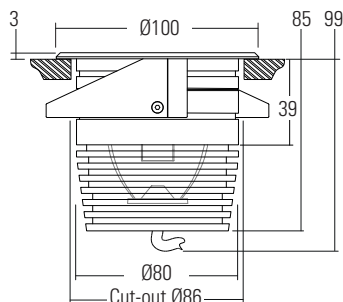


## DIMENSIONS AND FIXING OPTIONS

Dimensions in mm

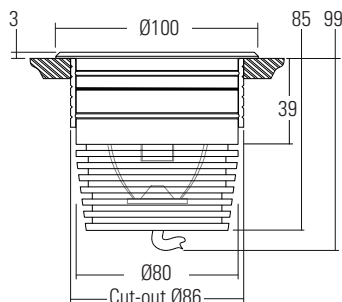
### /SC Spring Clips

Suitable for use in surfaces with a thickness of 1mm – 25mm. Spring clips provide a simple, single fix mounting method. We recommend that spring clips are only used in interior applications.



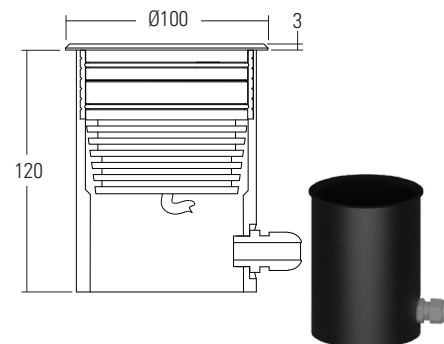
### /485S Fixing sleeve and O-rings

Acetal sleeve is bonded into the mounting surface first and the fitting is held in with O-rings. We recommend this method for mounting in exterior in-ground applications.



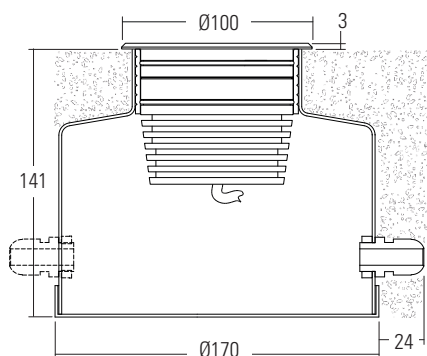
### /485GT Ground Tube

Designed for soil or gravel surfaces. It is supplied with the fixing sleeve bonded into the tube and can be cut down on site. The tube can be buried with the necessary wiring via the PG9 IP67 gland and then the fitting installed after the landscaping work has been completed.



### /486N Concrete Housing

The aluminium housing is used as a heat sink which keeps the LED fitting cool through the thermal transfer of the heat within the housing to the surrounding concrete. The housings are big enough for IP rated connections to be made inside and a second gland is available for cabling onto the next luminaire.



**/486N**  
Concrete housing with 1x PG9 IP67 gland



**/486N-2**  
Concrete housing with 2x PG9 IP67 gland

## GLARE CONTROL OPTIONS

### /NGS

#### No glare shield

No glare shield. Low glare optic and matt black anodised optic holder aids in glare reduction.

### /GS154

#### Glare shield

Standard glare shield, which provides an excellent balance between glare control and light output. This accessory works well in most applications.

### /GSHM154

#### Half-moon glare shield

For applications that require low glare. Lumen output is typically reduced by 60% with no light lost on the lit surface.

### /GSOB154

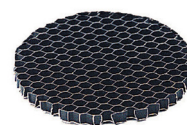
#### Oval beam glare shield

Reduces the angles at which glare is visible without compromising the oval output of the beam. Useful when used in applications where glare can be seen from two sides, for example archways.

### /HL

#### Honeycomb Louvre

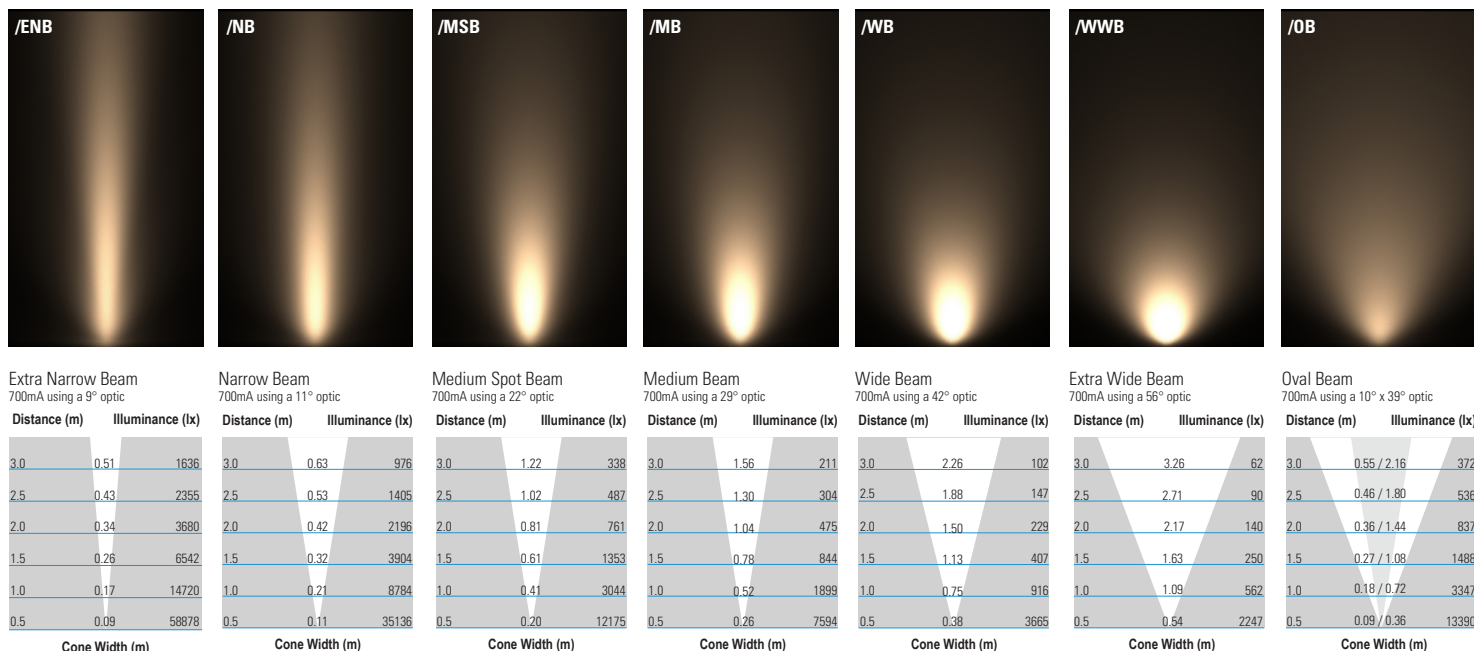
Helps reduce glare from all angles and can be used with glare shields.



## CONE DIAGRAMS

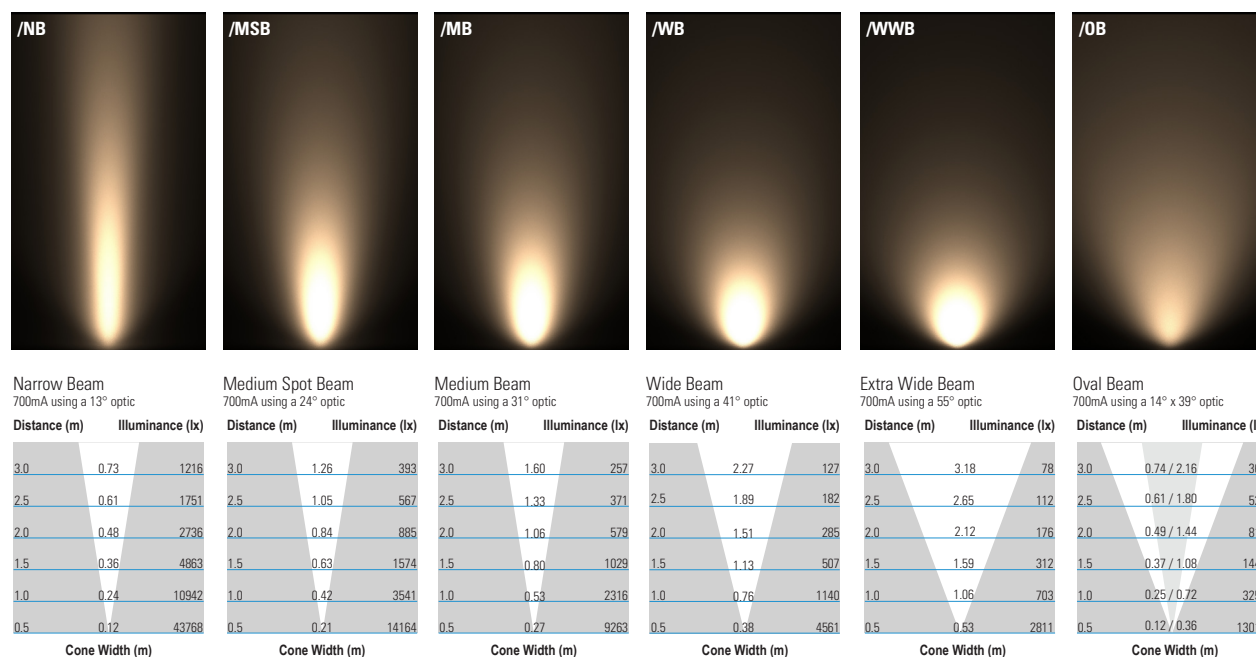
### E3 LED Engine

Cone diagrams below are based on a 3000K E3 LED engine run at maximum output 700mA, 10W. Images below represents beam outputs when wall washing a 3m wall, spaced 125mm away from the lit surface. Photometric files (LDT) are included in the design pack which can be downloaded from the LD154DR product page on the website.



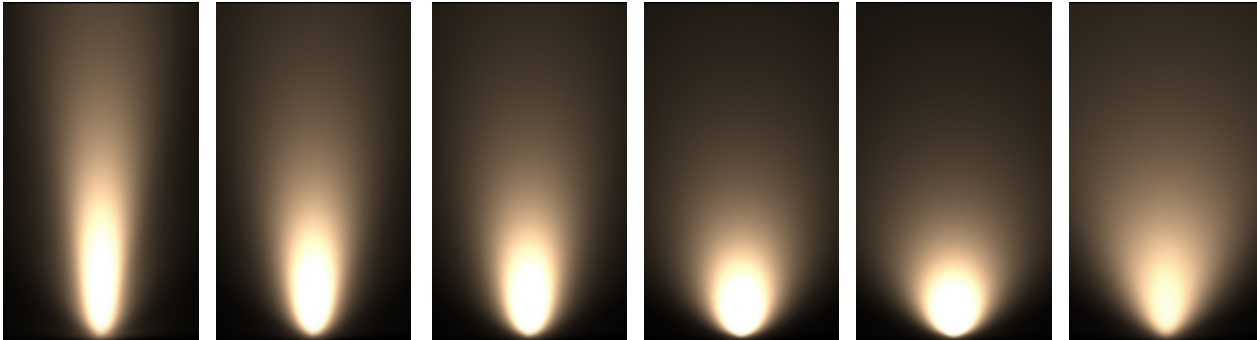
### N1 LED Engine

Cone diagrams below are based on a 3000K N1 LED engine run at maximum output 700mA, 14W. Images below represents beam outputs when wall washing a 3m wall, spaced 125mm away from the lit surface. Photometric files (LDT) are included in the design pack which can be downloaded from the LD154DR product page on the website.



#### P1 LED Engine

Cone diagrams below are based on a 3000K P1 LED engine run at maximum output 500mA, 20W. Images below represents beam outputs when wall washing a 3m wall, spaced 125mm away from the lit surface. Photometric files (LDT) are included in the design pack which can be downloaded from the LD154DR product page on the website.



**Narrow Beam**  
500mA using a 20° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0          | 1.05 / 951       |
| 2.5          | 0.87 / 1370      |
| 2.0          | 0.70 / 2141      |
| 1.5          | 0.52 / 3805      |
| 1.0          | 0.35 / 8562      |
| 0.5          | 0.17 / 34249     |

Cone Width (m)

**Medium Spot Beam**  
500mA using a 27° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0          | 1.42 / 477       |
| 2.5          | 1.18 / 687       |
| 2.0          | 0.95 / 1073      |
| 1.5          | 0.71 / 1908      |
| 1.0          | 0.47 / 4293      |
| 0.5          | 0.24 / 17171     |

Cone Width (m)

**Medium Beam**  
500mA using a 31° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0          | 1.69 / 331       |
| 2.5          | 1.41 / 477       |
| 2.0          | 1.12 / 745       |
| 1.5          | 0.84 / 1325      |
| 1.0          | 0.56 / 2981      |
| 0.5          | 0.28 / 11922     |

Cone Width (m)

**Wide Beam**  
500mA using a 42° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0          | 2.35 / 173       |
| 2.5          | 1.96 / 249       |
| 2.0          | 1.57 / 388       |
| 1.5          | 1.18 / 691       |
| 1.0          | 0.78 / 1554      |
| 0.5          | 0.39 / 6216      |

Cone Width (m)

**Extra Wide Beam**  
500mA using a 55° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0          | 3.16 / 110       |
| 2.5          | 2.64 / 159       |
| 2.0          | 2.11 / 248       |
| 1.5          | 1.58 / 441       |
| 1.0          | 1.05 / 993       |
| 0.5          | 0.53 / 3972      |

Cone Width (m)

**Oval Beam**  
500mA using a 19 x 41° optic

| Distance (m) | Illuminance (lx)    |
|--------------|---------------------|
| 3.0          | 1.04 / 2.24 / 392   |
| 2.5          | 0.86 / 1.87 / 564   |
| 2.0          | 0.69 / 1.50 / 881   |
| 1.5          | 0.52 / 1.12 / 1567  |
| 1.0          | 0.35 / 0.75 / 3525  |
| 0.5          | 0.17 / 0.37 / 14100 |

Cone Width (m)

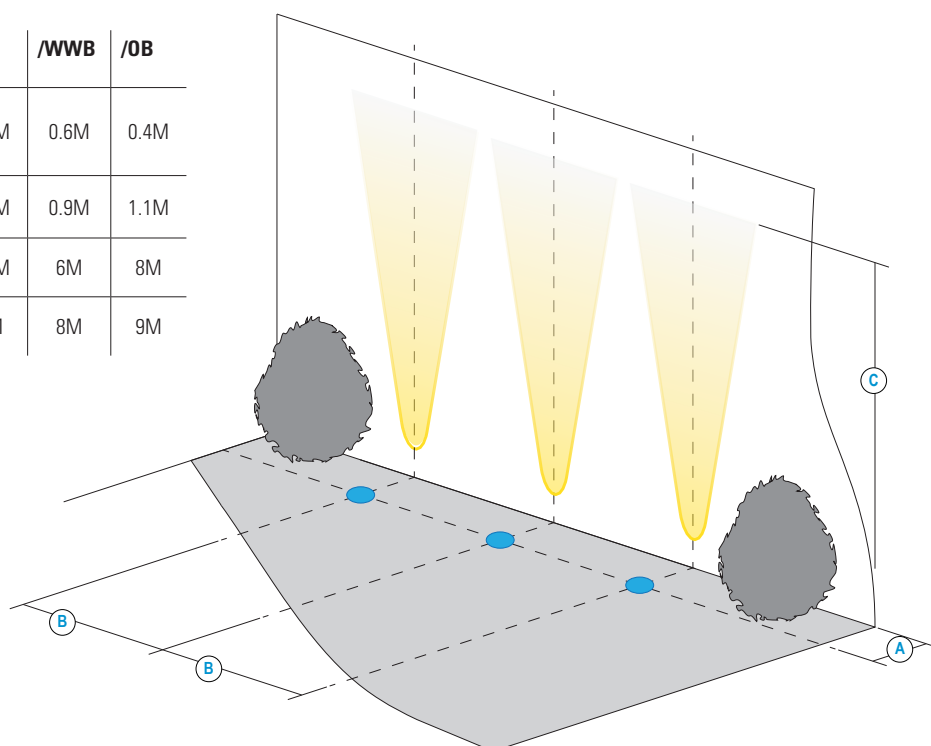
## INSTALLATION GUIDE

Below is an uplighting application guide with suggested luminaire mounting positions for an even wall wash. Every project and lighting scenario will be different and the table below is to be used as a starting point. Please use our photometric files to further test the desired effect for your application. Files are available on the LD154DR product page on our website.

| LD154DR-E3 |  | /ENB* | /NB*  | /MSB  | /MB  | /WB  | /WWB  | /OB  |
|------------|--|-------|-------|-------|------|------|-------|------|
| <b>A</b>   | Distance from the centre of the fitting to the lit surface | 0.25M | 0.3M  | 0.35M | 0.4M | 0.5M | 0.55M | 0.4M |
| <b>B</b>   | Spacing for an even wash                                   | 0.4M  | 0.45M | 0.5M  | 0.7M | 0.8M | 0.85M | 1M   |
| <b>C</b>   | 500mA lit distance**                                       | 10M   | 7M    | 6.5M  | 5.5M | 4.5M | 4M    | 6M   |
| <b>C</b>   | 700mA lit distance**                                       | 11M   | 8M    | 7M    | 6M   | 5M   | 4.5M  | 7M   |

| LD154DR-N1 |  | /NB*  | /MSB  | /MB  | /WB  | /WWB | /OB  |
|------------|--|-------|-------|------|------|------|------|
| <b>A</b>   | Distance from the centre of the fitting to the lit surface | 0.3M  | 0.35M | 0.4M | 0.5M | 0.6M | 0.3M |
| <b>B</b>   | Spacing for an even wash                                   | 0.45M | 0.5M  | 0.7M | 0.8M | 0.9M | 0.8M |
| <b>C</b>   | 500mA lit distance**                                       | 10M   | 8M    | 6.5M | 5.5M | 5M   | 7M   |
| <b>C</b>   | 700mA lit distance**                                       | 11.5M | 9M    | 7.5M | 6.5M | 6M   | 7.5M |

| LD154DR-P1 |  | /NB*  | /MSB | /MB   | /WB  | /WWB | /OB  |
|------------|--|-------|------|-------|------|------|------|
| <b>A</b>   | Distance from the centre of the fitting to the lit surface | 0.35M | 0.4M | 0.45M | 0.5M | 0.6M | 0.4M |
| <b>B</b>   | Spacing for an even wash                                   | 0.5M  | 0.7M | 0.75M | 0.8M | 0.9M | 1.1M |
| <b>C</b>   | 350mA lit distance**                                       | 11M   | 9M   | 9M    | 7.5M | 6M   | 8M   |
| <b>C</b>   | 500mA lit distance**                                       | 14M   | 11M  | 10.5M | 9M   | 8M   | 9M   |






















\*Wall washing using narrow beam optics should only be used if the designer requires long distance lighting up the lit surface.

\*\*Illuminated distance is calculated based on achieving 10% of the initial lux calculated at the start of the beam.

## ORDER CODES & OPTIONS

Example: LD154DR-E3-700 / LW30 / OB / GS0B154 / 316 STAINLESS STEEL / SC

| Light engine & drive current  |                   | LED Colour                  |       | Beam Angle         |      | Accessory  |  | Finish  |  | Fixing  |  |
|---|-------------------|-----------------------------|-------|--------------------|------|--|--|---|--|---|--|
| LD154DR -   |                   |                             |       |                    |      |  |  |   |  |   |  |
| Ambient temperature key: <span style="color: #e91e63;">●</span> 55°C  |                   |                             |       |                    |      |  |  |   |  |   |  |
| <div><div></div><div>E3</div></div>   |                   |                             |       |                    |      |  |  |   |  |   |  |
| 5W LED<br>at 350mA  | LD154DR-E3-350    | Super Warm<br>White (2200K) | /LW22 | 9°<br>Extra Narrow | /ENB |    |  |    |  |    |  |
| 7W LED<br>at 500mA  | LD154DR-E3-500    | Extra Warm<br>White (2700K) | /LW27 | 11°<br>Narrow      | /NB  |    |  |    |  |    |  |
| 10W LED<br>at 700mA   | LD154DR-E3-700    | Warm White<br>(3000K)       | /LW30 | 22°<br>Medium Spot | /MSB |    |  |    |  |    |  |
|   |                   | White (4000K)<br>on request | /LW40 | 29°<br>Medium      | /MB  |  |  |  |  |  |  |
|   |                   | Cool White<br>(5000K)       | /LW50 | 42°<br>Wide        | /WB  |   |  |  |  |  |  |
|   |                   |                             |       | 53°<br>Extra Wide  | /WWB |  |  |   |  |   |  |
|   |                   |                             |       | 10° x 56°<br>Oval  | /OB  |  |  |   |  |   |  |
| <div><div></div><div>E3-90</div></div>  |                   |                             |       |                    |      |  |  |   |  |   |  |
| 5W LED<br>at 350mA  | LD154DR-E3-90-350 | Extra Warm<br>White (2700K) | /LW27 | 13°<br>Narrow      | /NB  |  |  |   |  |   |  |
| 7W LED<br>at 500mA  | LD154DR-E3-90-500 | Warm White<br>(3000K)       | /LW30 | 24°<br>Medium Spot | /MSB |  |  |   |  |   |  |
| 10W LED<br>at 700mA   | LD154DR-E3-90-700 |                             |       | 31°<br>Medium      | /MB  |  |  |   |  |   |  |
|   |                   | White (4000K)<br>on request | /LW40 | 45°<br>Wide        | /WB  |  |  |   |  |   |  |
|   |                   | Cool White<br>(5000K)       | /LW50 | 54°<br>Extra Wide  | /WWB |  |  |   |  |   |  |
|   |                   |                             |       | 13° x 58°<br>Oval  | /OB  |  |  |   |  |   |  |
| <div><div></div><div>N1</div></div>   |                   |                             |       |                    |      |  |  |   |  |   |  |
| 7W LED<br>at 350mA  | LD154DR-N1-350    | Super Warm<br>White (2200K) | /LW22 | 20°<br>Narrow      | /NB  |  |  |   |  |   |  |
| 10W LED<br>at 500mA*  | LD154DR-N1-500    | Extra Warm<br>White (2700K) | /LW27 | 27°<br>Medium Spot | /MSB |  |  |   |  |   |  |
| 14W LED<br>at 700mA   | LD154DR-N1-700    | Warm White<br>(3000K)       | /LW30 | 33°<br>Medium      | /MB  |  |  |   |  |   |  |
|   |                   | White (4000K)<br>on request | /LW40 | 47°<br>Wide        | /WB  |  |  |   |  |   |  |
|   |                   | Cool White<br>(5000K)       | /LW50 | 58°<br>Extra Wide  | /WWB |  |  |   |  |   |  |
|   |                   |                             |       | 19° x 60°<br>Oval  | /OB  |  |  |   |  |   |  |
| <div><div></div><div>P1</div></div>   |                   |                             |       |                    |      |  |  |   |  |   |  |
| 14W LED<br>at 350mA   | LD154DR-P1-350    | Super Warm<br>White (2200K) | /LW22 |                    |      |  |  |  |  |   |  |
| 20W LED<br>at 500mA   | LD154DR-P1-500    | Extra Warm<br>White (2700K) | /LW27 |                    |      |  |  |  |  |   |  |
|   |                   | Warm White<br>(3000K)       | /LW30 |                    |      |  |  |  |  |   |  |
|   |                   | White (4000K)<br>on request | /LW40 |                    |      |  |  |  |  |   |  |
|   |                   | Cool White<br>(5000K)       | /LW50 |                    |      |  |  |   |  |   |  |
| <div>Drivers</div> <div>Use with 350mA, 500mA &amp; 700mA constant current LED drivers</div> <div>We have a range of dimmable LED drivers DMX and DALI compatible. Please see the downloads section on our website.</div> |                   |                             |       |                    |      |  |  |   |  |   |  |