

LD154DRG


DEEP RECESSED TRIMLESS
HIGH-POWER EXTERIOR LED UPLIGHT



The LD154DRG is part of our Ultra range, delivering up to 1285lm. With optics that are deep recessed 39mm into the body beneath the seamless glass top, we achieve 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 narrow 13° beam. Reaching heights of up to 14 metres and designed with our robust glass bezel, the LD154DRG demonstrates an excellent size-to-output ratio, offering a discreet yet powerful exterior solution.

KEY FEATURES

- > Extremely low glare, high-output uplight solution with optics deep recessed 39mm
- > 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
- > Durable all glass bezel, suitable for a wide range of applications
- > Utilises large 50mm low glare optics, chosen for efficiency, quality of beam and ability to produce narrow beams at high outputs
- > Fixing options include rebated trimless fixing sleeve, concrete housing and trimless ground tube
- >  Contains our integral moisture guard (anti-wicking barrier), stopping water ingress from going up the cable into the product from incorrect IP-rated connections
- > Switched, 0-10V, Casambi, DMX, DALI, or Mains dimmable drivers available




DIMENSIONS

Dimensions in mm

For fixings and dimensions please go to page 3.



WHITE LED ENGINE SPECIFICATION

| Engine | E3 | | | 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 | | | 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 ₁₀₀)* | 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 ₁₀₀) | 11.3V | 11.6V | 11.8V | 16.6V | 16.8V | 17.1V | 34.3V | 35.2V |
| CRI | 85 | | | 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 LD154DRG-E3-700-LW30-ENB, LD154DRG-N1-700-LW30-NB and LD154DRG-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

| | | | 350mA | 500mA | 700mA |
|-------------------------------|--|-------------|---------------|---------------|---------------|
| Ambient temperature ○ 55°C | E3 | Soil/Sleeve | -20°C to 55°C | -20°C to 55°C | -20°C to 40°C |
| | | Concrete | -20°C to 55°C | -20°C to 55°C | -20°C to 50°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 | 6mm thick toughened glass with black ceramic screen print | | | | |
| Materials | Black anodised aluminium body with black anodised bezel and glass front | | | | |
| Weight of product | 0.52kg | | | | |
| 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 |  <p>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.</p> | |

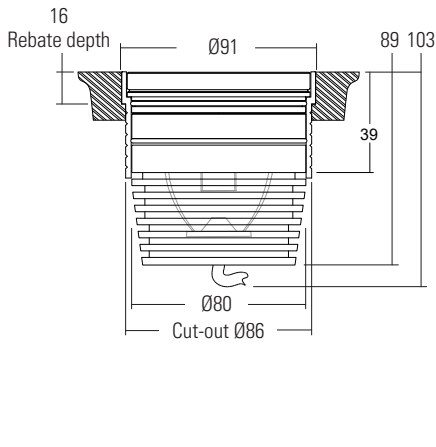
DIMENSIONS AND FIXING OPTIONS

Dimensions in mm

/485SG

Rebated trimless fixing sleeve

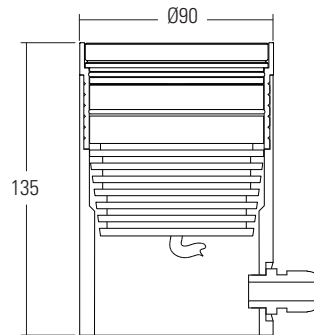
The sleeve is bonded into the mounting surface first and the fitting is held in with an O-ring. We recommend this method for mounting in exterior in-ground applications. Mounting surface will require an 16mm rebate to allow for flush installation. Fixing ring available with a passivated stainless steel or powder coat black finish.*



/485GTG

Trimless Ground tube fixing

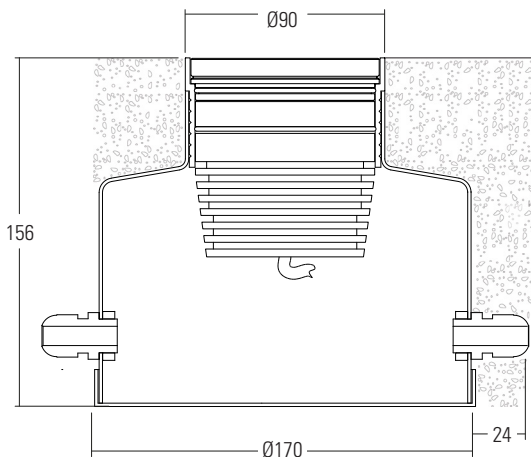
Designed for soil or gravel surfaces. It is supplied with the fixing sleeve bonded into the tube and can be cut down on site. The tube can be buried with the necessary wiring via the PG9 IP67 gland and then the fitting installed after the landscaping work has been completed. Fixing ring available with a passivated stainless steel or powder coat black finish.*



/485NG or /485NG-2

Trimless 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 the housing and a second gland is available for cabling onto the next luminaire. The housing can be buried with the necessary wiring, and then the fitting installed after the landscaping work has been completed. Weight: 2.90kg. Fixing ring available with a passivated stainless steel or powder coat black finish.*



/486NG

Trimless concrete housing with 1x PG9 IP67 gland



/486NG-2

Trimless concrete housing with 2x PG9 IP67 gland



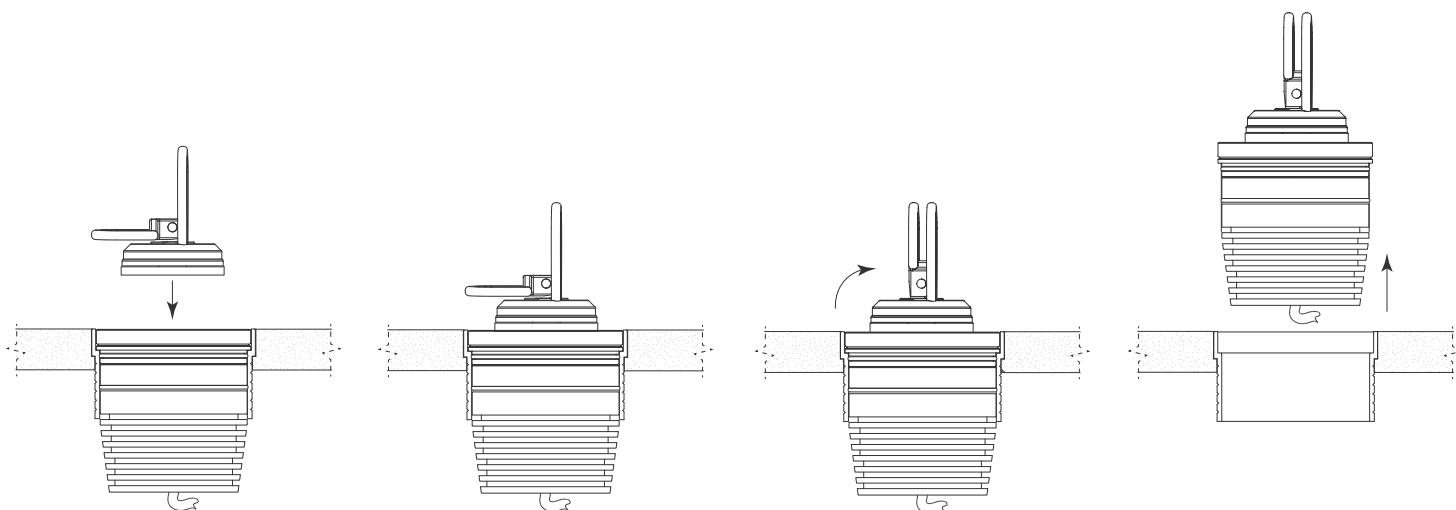
/HT-154-G Trimless Family Hand tool

Our Trimless family fittings use a hand tool for easy installation and removal that can be ordered separately. Use the /HT-154-G suction cup or a similar suction tool for the removal of the fittings from their fixing options. Please contact your LightGraphix sales representative for more information.



How to use the hand tool

- 1 Place suction cup over the glass surface and lock in place by pulling the lever into a vertical position.
- 2 Once secured, pull the fitting from its fixing accessory. Apply force vertically to ensure the suction cup does not detach.



When adjusting or rotating the fitting do not use the HT-154-G hand tool to move in situ. Remove the fitting entirely, realign and then place the fitting back into its fixing option.

Note: Rotating the fitting while still in place may result in a compromised IP seal.

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 LD154DRG product page on the website.

Extra Narrow Beam
700mA using a 9° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 0.51 / 1636 |
| 2.5 | 0.43 / 2355 |
| 2.0 | 0.34 / 3680 |
| 1.5 | 0.26 / 6542 |
| 1.0 | 0.17 / 14720 |
| 0.5 | 0.09 / 58878 |

Cone Width (m)

Narrow Beam
700mA using a 11° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 0.63 / 976 |
| 2.5 | 0.53 / 1405 |
| 2.0 | 0.42 / 2196 |
| 1.5 | 0.32 / 3904 |
| 1.0 | 0.21 / 8784 |
| 0.5 | 0.11 / 35136 |

Cone Width (m)

Medium Spot Beam
700mA using a 22° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 1.22 / 338 |
| 2.5 | 1.02 / 487 |
| 2.0 | 0.81 / 761 |
| 1.5 | 0.61 / 1353 |
| 1.0 | 0.41 / 3044 |
| 0.5 | 0.20 / 12175 |

Cone Width (m)

Medium Beam
700mA using a 29° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 1.56 / 211 |
| 2.5 | 1.30 / 304 |
| 2.0 | 1.04 / 475 |
| 1.5 | 0.78 / 844 |
| 1.0 | 0.52 / 1899 |
| 0.5 | 0.26 / 7594 |

Cone Width (m)

Wide Beam
700mA using a 42° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 2.26 / 102 |
| 2.5 | 1.88 / 147 |
| 2.0 | 1.50 / 229 |
| 1.5 | 1.13 / 407 |
| 1.0 | 0.75 / 916 |
| 0.5 | 0.38 / 3665 |

Cone Width (m)

Extra Wide Beam
700mA using a 56° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 3.26 / 62 |
| 2.5 | 2.71 / 90 |
| 2.0 | 2.17 / 140 |
| 1.5 | 1.63 / 250 |
| 1.0 | 1.09 / 562 |
| 0.5 | 0.54 / 2247 |

Cone Width (m)

Oval Beam
700mA using a 10° x 39° optic

| Distance (m) | Illuminance (lx) |
|--------------|---------------------|
| 3.0 | 0.55 / 2.16 / 372 |
| 2.5 | 0.46 / 1.80 / 536 |
| 2.0 | 0.36 / 1.44 / 837 |
| 1.5 | 0.27 / 1.08 / 1488 |
| 1.0 | 0.18 / 0.72 / 3347 |
| 0.5 | 0.09 / 0.36 / 13390 |

Cone Width (m)

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 LD154DRG product page on the website.

Narrow Beam
700mA using a 13° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 0.73 / 1216 |
| 2.5 | 0.61 / 1751 |
| 2.0 | 0.49 / 2736 |
| 1.5 | 0.36 / 4863 |
| 1.0 | 0.24 / 10942 |
| 0.5 | 0.12 / 43768 |

Cone Width (m)

Medium Spot Beam
700mA using a 24° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 1.26 / 393 |
| 2.5 | 1.05 / 567 |
| 2.0 | 0.84 / 885 |
| 1.5 | 0.63 / 1574 |
| 1.0 | 0.42 / 3541 |
| 0.5 | 0.21 / 14164 |

Cone Width (m)

Medium Beam
700mA using a 31° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 1.60 / 257 |
| 2.5 | 1.33 / 371 |
| 2.0 | 1.06 / 579 |
| 1.5 | 0.80 / 1029 |
| 1.0 | 0.53 / 2316 |
| 0.5 | 0.27 / 9263 |

Cone Width (m)

Wide Beam
700mA using a 41° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 2.27 / 127 |
| 2.5 | 1.89 / 182 |
| 2.0 | 1.51 / 285 |
| 1.5 | 1.13 / 507 |
| 1.0 | 0.76 / 1140 |
| 0.5 | 0.38 / 4561 |

Cone Width (m)

Extra Wide Beam
700mA using a 55° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 3.18 / 78 |
| 2.5 | 2.65 / 112 |
| 2.0 | 2.12 / 176 |
| 1.5 | 1.59 / 312 |
| 1.0 | 1.06 / 703 |
| 0.5 | 0.53 / 2811 |

Cone Width (m)

Oval Beam
700mA using a 14° x 39° optic

| Distance (m) | Illuminance (lx) |
|--------------|---------------------|
| 3.0 | 0.74 / 2.16 / 362 |
| 2.5 | 0.61 / 1.80 / 521 |
| 2.0 | 0.49 / 1.44 / 814 |
| 1.5 | 0.37 / 1.08 / 1446 |
| 1.0 | 0.25 / 0.72 / 3254 |
| 0.5 | 0.12 / 0.36 / 13017 |

Cone Width (m)

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 LD154DRG product page on the website.

Narrow Beam
500mA using a 20° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 1.05 / 1065 |
| 2.5 | 0.87 / 1533 |
| 2.0 | 0.70 / 2395 |
| 1.5 | 0.52 / 4258 |
| 1.0 | 0.35 / 9582 |
| 0.5 | 0.17 / 38326 |

Cone Width (m)

Medium Spot Beam
500mA using a 27° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 1.47 / 513 |
| 2.5 | 1.23 / 738 |
| 2.0 | 0.98 / 1153 |
| 1.5 | 0.74 / 2050 |
| 1.0 | 0.49 / 4614 |
| 0.5 | 0.25 / 18454 |

Cone Width (m)

Medium Beam
500mA using a 31° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 1.80 / 356 |
| 2.5 | 1.50 / 513 |
| 2.0 | 1.20 / 802 |
| 1.5 | 0.90 / 1425 |
| 1.0 | 0.60 / 3207 |
| 0.5 | 0.30 / 12829 |

Cone Width (m)

Wide Beam
500mA using a 42° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 2.65 / 183 |
| 2.5 | 2.21 / 264 |
| 2.0 | 1.76 / 412 |
| 1.5 | 1.32 / 733 |
| 1.0 | 0.88 / 1650 |
| 0.5 | 0.44 / 6599 |

Cone Width (m)

Extra Wide Beam
500mA using a 55° optic

| Distance (m) | Illuminance (lx) |
|--------------|------------------|
| 3.0 | 3.33 / 136 |
| 2.5 | 2.77 / 195 |
| 2.0 | 2.22 / 305 |
| 1.5 | 1.66 / 542 |
| 1.0 | 1.11 / 1220 |
| 0.5 | 0.56 / 4879 |

Cone Width (m)

Oval Beam
500mA using a 19 x 41° optic

| Distance (m) | Illuminance (lx) |
|--------------|---------------------|
| 3.0 | 1.03 / 3.44 / 350 |
| 2.5 | 0.85 / 2.86 / 504 |
| 2.0 | 0.68 / 2.29 / 787 |
| 1.5 | 0.51 / 1.72 / 1399 |
| 1.0 | 0.34 / 1.15 / 3147 |
| 0.5 | 0.17 / 0.57 / 12590 |

Cone Width (m)

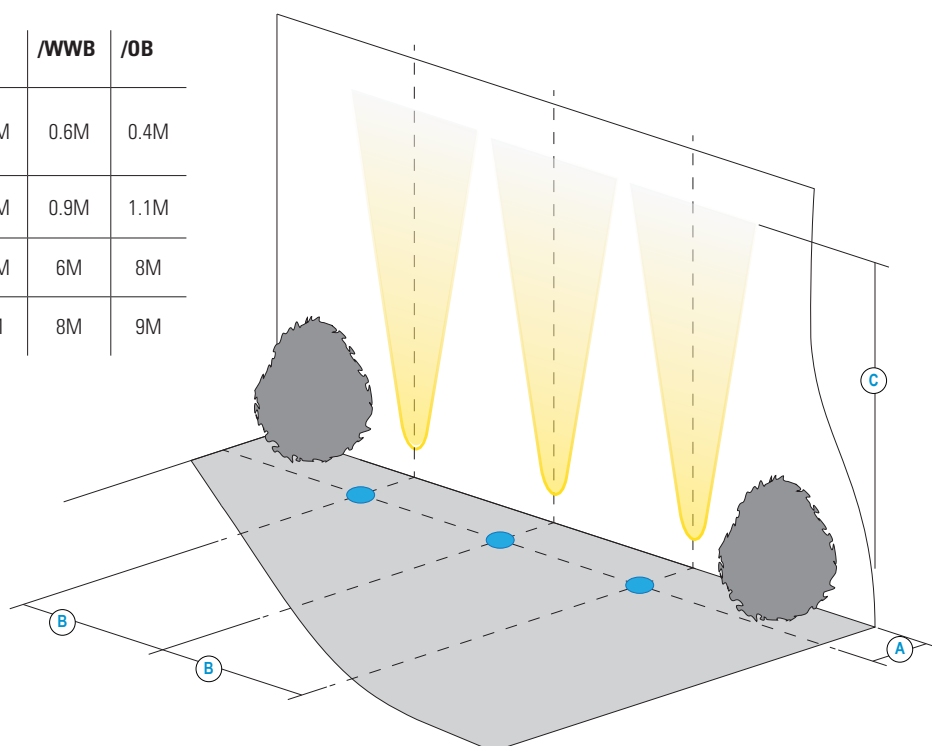
INSTALLATION GUIDE

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 LD154DRG product page on our website.

| LD154DRG-E3 | | /ENB* | /NB* | /MSB | /MB | /WB | /WWB | /OB |
|-------------|--|-------|-------|-------|------|------|-------|------|
| A | 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 | Spacing for an even wash | 0.4M | 0.45M | 0.5M | 0.7M | 0.8M | 0.85M | 1M |
| C | 500mA lit distance** | 10M | 7M | 6.5M | 5.5M | 4.5M | 4M | 6M |
| C | 700mA lit distance** | 11M | 8M | 7M | 6M | 5M | 4.5M | 7M |

| LD154DRG-N1 | | /NB* | /MSB | /MB | /WB | /WWB | /OB |
|-------------|--|-------|-------|------|------|------|------|
| A | Distance from the centre of the fitting to the lit surface | 0.3M | 0.35M | 0.4M | 0.5M | 0.6M | 0.3M |
| B | Spacing for an even wash | 0.45M | 0.5M | 0.7M | 0.8M | 0.9M | 0.8M |
| C | 500mA lit distance** | 10M | 8M | 6.5M | 5.5M | 5M | 7M |
| C | 700mA lit distance** | 11.5M | 9M | 7.5M | 6.5M | 6M | 7.5M |

| LD154DRG-P1 | | /NB* | /MSB | /MB | /WB | /WWB | /OB |
|-------------|--|-------|------|-------|------|------|------|
| A | Distance from the centre of the fitting to the lit surface | 0.35M | 0.4M | 0.45M | 0.5M | 0.6M | 0.4M |
| B | Spacing for an even wash | 0.5M | 0.7M | 0.75M | 0.8M | 0.9M | 1.1M |
| C | 350mA lit distance** | 11M | 9M | 9M | 7.5M | 6M | 8M |
| C | 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 - LD154DRG

Example: LD154DRG-E3-700/LW30/OB/GSOB154/485SG/Paint finish black

| Light engine & drive current | LED Colour | Beam Angle | Accessory | Finish | Fixing |
|------------------------------|------------|------------|-----------|--------|--------|
| LD154DRG - | / | / | / | / | / |


Ambient temperature key: ● 55°C

E3


| | |
|------------------|-----------------|
| 5W LED at 350mA | LD154DRG-E3-350 |
| 7W LED at 500mA | LD154DRG-E3-500 |
| 10W LED at 700mA | LD154DRG-E3-700 |

| | |
|--------------------------|-------|
| Super Warm White (2200K) | /LW22 |
| Extra Warm White (2700K) | /LW27 |
| Warm White (3000K) | /LW30 |
| White (4000K) on request | /LW40 |
| Cool White (5000K) | /LW50 |

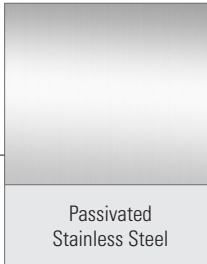
| | |
|-----------------|------|
| 9° Extra Narrow | /ENB |
| 11° Narrow | /NB |
| 22° Medium Spot | /MSB |
| 29° Medium | /MB |
| 42° Wide | /WB |
| 53° Extra Wide | /WWB |
| 10° x 56° Oval | /OB |




/NGS




/485SG



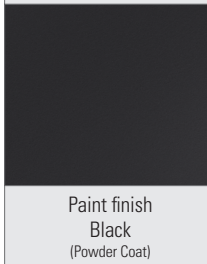
Passivated
Stainless Steel



/GS154



/485GTG



Paint finish
Black
(Powder Coat)


N1

| | |
|-------------------|-----------------|
| 7W LED at 350mA | LD154DRG-N1-350 |
| 10W LED at 500mA* | LD154DRG-N1-500 |
| 14W LED at 700mA | LD154DRG-N1-700 |


| | |
|--------------------------|-------|
| Super Warm White (2200K) | /LW22 |
| Extra Warm White (2700K) | /LW27 |
| Warm White (3000K) | /LW30 |
| White (4000K) on request | /LW40 |
| Cool White (5000K) | /LW50 |

| | |
|-----------------|------|
| 13° Narrow | /NB |
| 24° Medium Spot | /MSB |
| 31° Medium | /MB |
| 45° Wide | /WB |
| 54° Extra Wide | /WWB |
| 13° x 58° Oval | /OB |


*55°C ambient when placed in a 485N / 485N-2 concrete can in concrete.




/GSHM154



/486NG



/GSOB154




/486NG-2

P1

| | |
|------------------|-----------------|
| 14W LED at 350mA | LD154DRG-P1-350 |
| 20W LED at 500mA | LD154DRG-P1-500 |

| | |
|--------------------------|-------|
| Super Warm White (2200K) | /LW22 |
| Extra Warm White (2700K) | /LW27 |
| Warm White (3000K) | /LW30 |
| White (4000K) on request | /LW40 |
| Cool White (5000K) | /LW50 |

| | |
|-----------------|------|
| 20° Narrow | /NB |
| 27° Medium Spot | /MSB |
| 33° Medium | /MB |
| 47° Wide | /WB |
| 58° Extra Wide | /WWB |
| 19° x 60° Oval | /OB |



/HL

Drivers

Use with 350mA, 500mA & 700mA constant current LED drivers

We have a range of dimmable LED drivers DMX and DALI compatible. Please see the downloads section on our website.