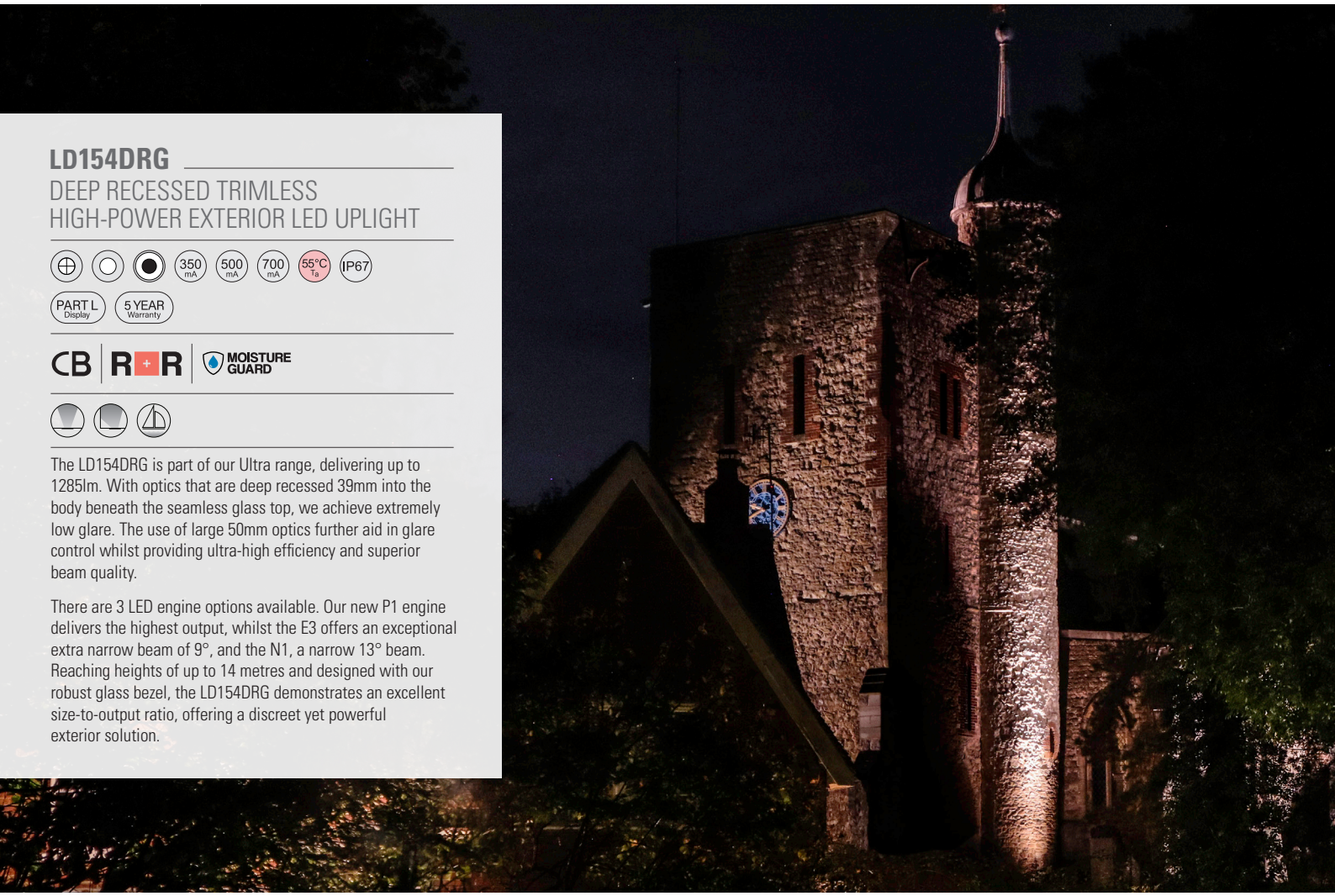


LD154DRG

DEEP RECESSED TRIMLESS
HIGH-POWER EXTERIOR LED UPLIGHT

350 mA | 500 mA | 700 mA | 55°C Ta | IP67 | PART L Display | 5 YEAR Warranty | CB | R+R | MOISTURE GUARD

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.

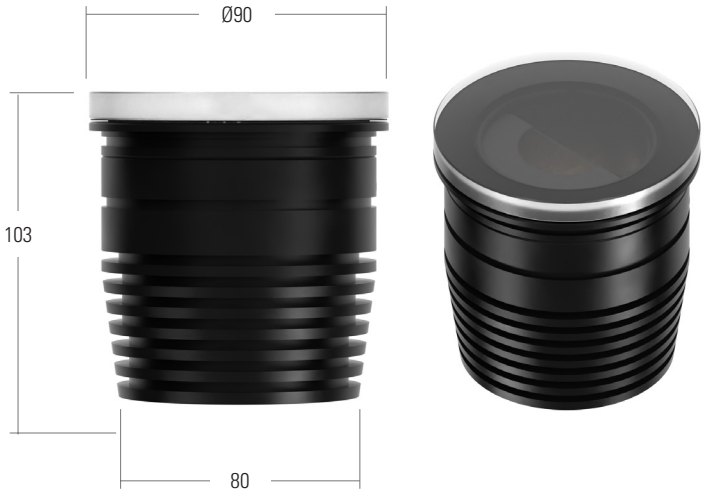
KEY FEATURES

- 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	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 LD154DRG-E3-700-830-ENB, LD154DRG-N1-700-930-NB and LD154DRG-P1-700-930-NB
*See lumen variance table to the right for N1 engine. E3 lumens apply across all colour temperatures
**LED wattage includes losses assocaited with using a 90% efficient driver
***90 CRI available in 2700K/3000K only. Approx. 10% lumen drop will occur compared to 85 CRI variants

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 50°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)				

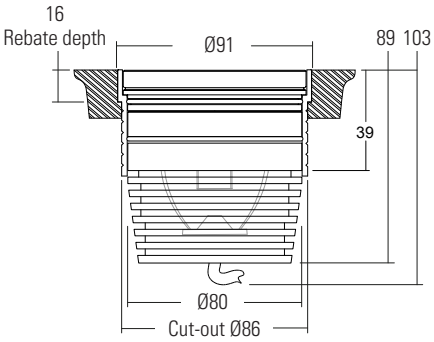
ENVIRONMENTAL

TM65	Available on request
TM66	2.5
Repair + Refurbish	R+R 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.

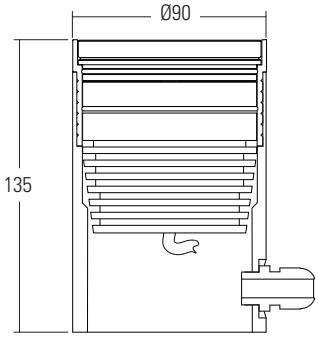
DIMENSIONS AND FIXING OPTIONS

Dimensions in mm

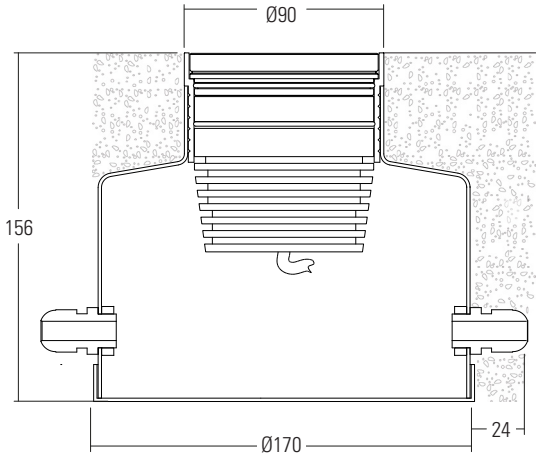
/485SG
Rebated trimless fixing sleeve
The sleeve is bonded into the mounting surface first and the fitting is held in with an O-ring. We recommend this method for mounting in exterior in-ground applications.
Mounting surface will require an 16mm rebate to allow for flush installation. Fixing ring available 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

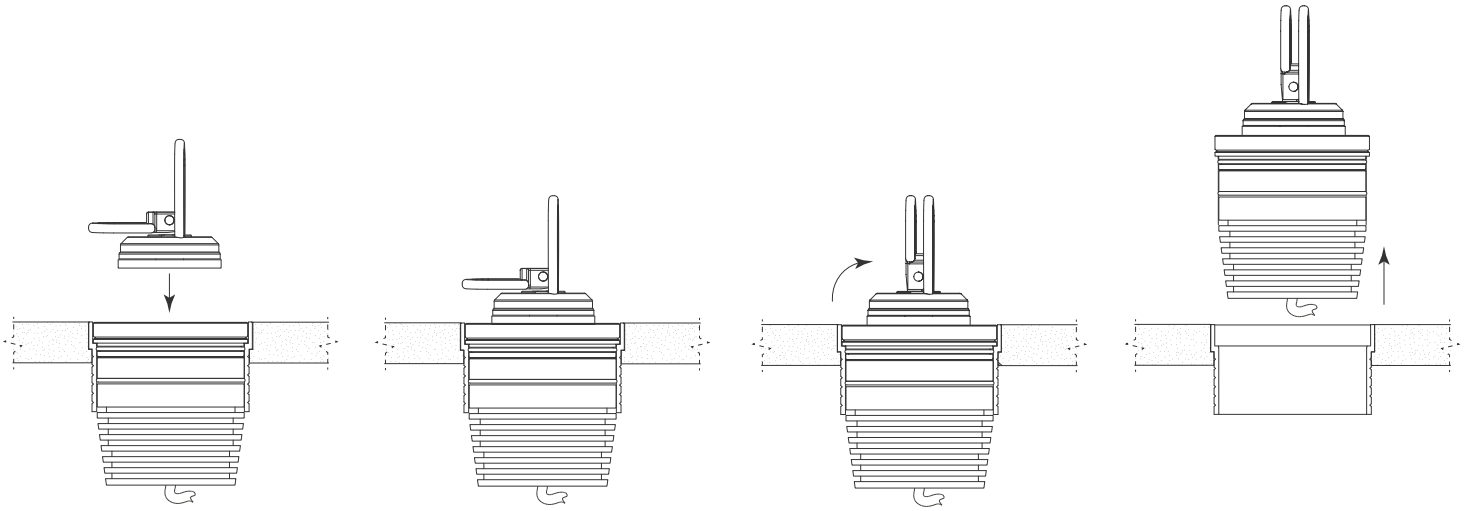
/486NG-2
Trimless concrete housing with 2x PG9 IP67 gland

/HT-154-G Trimless Family Hand tool

Our Trimless family fittings use a hand tool for easy intallation 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 leaver into a vertical postion.
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 comprimised 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	0.48	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	0.55	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)

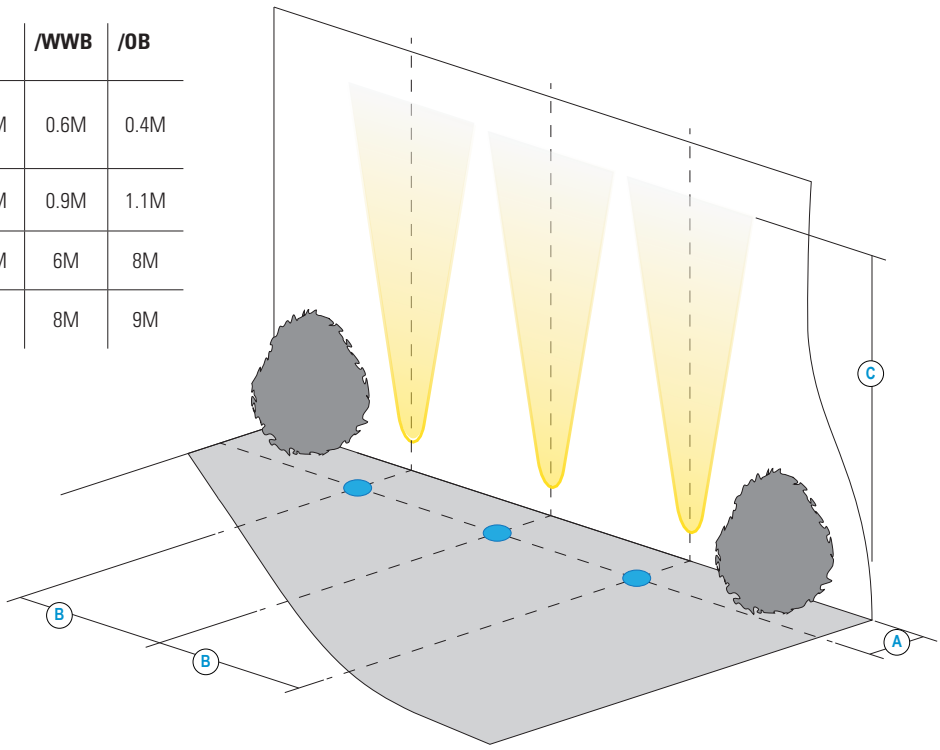
INSTALLATION GUIDE

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-E3-700/830/OB/GSOB154/485SG/Paint finish black

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

Ambient temperature key: 55°C

E3

Light engine	Code
5W LED at 350mA (55°C Ta)	LD154DRG-E3-350
7W LED at 500mA* (55°C Ta)	LD154DRG-E3-500
10W LED at 700mA**	LD154DRG-E3-700

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

**50°C ambient when placed in a 485N / 485N-2 concrete can in concrete.

LED Colour	Code
2200K 85+ CRI	/822
2700K 85+ CRI	/827
3000K 85+ CRI	/830
4000K 85+ CRI on request	/840
5000K 85+ CRI	/850
2700K 90+ CRI	/927
3000K 90+ CRI	/930

Beam Angle	Code
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

N1

Light engine	Code
7W LED at 350mA (55°C Ta)	LD154DRG-N1-350
10W LED at 500mA* (55°C Ta)	LD154DRG-N1-500
14W LED at 700mA**	LD154DRG-N1-700

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

**50°C ambient when placed in a 485N / 485N-2 concrete can in concrete.

LED Colour	Code
2200K 93+ CRI	/922
2700K 93+ CRI	/927
3000K 93+ CRI	/930
4000K 93+ CRI on request	/940
5000K 93+ CRI	/950

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

P1

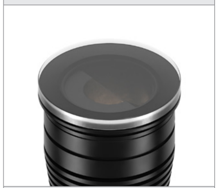
Light engine	Code
14W LED at 350mA	LD154DRG-P1-350
20W LED at 500mA	LD154DRG-P1-500

LED Colour	Code
2200K 90+ CRI	/922
2700K 90+ CRI	/927
3000K 90+ CRI	/930
4000K 90+ CRI on request	/940
5000K 90+ CRI	/950

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

Accessory


/NGS


/GS154

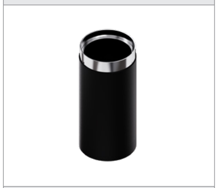

/GSHM154


/GSOB154


/HL

Finish


/485SG


/485GTG


/486NG


/486NG-2

Fixing

Passivated Stainless Steel

Paint finish Black (Powder Coat)

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.