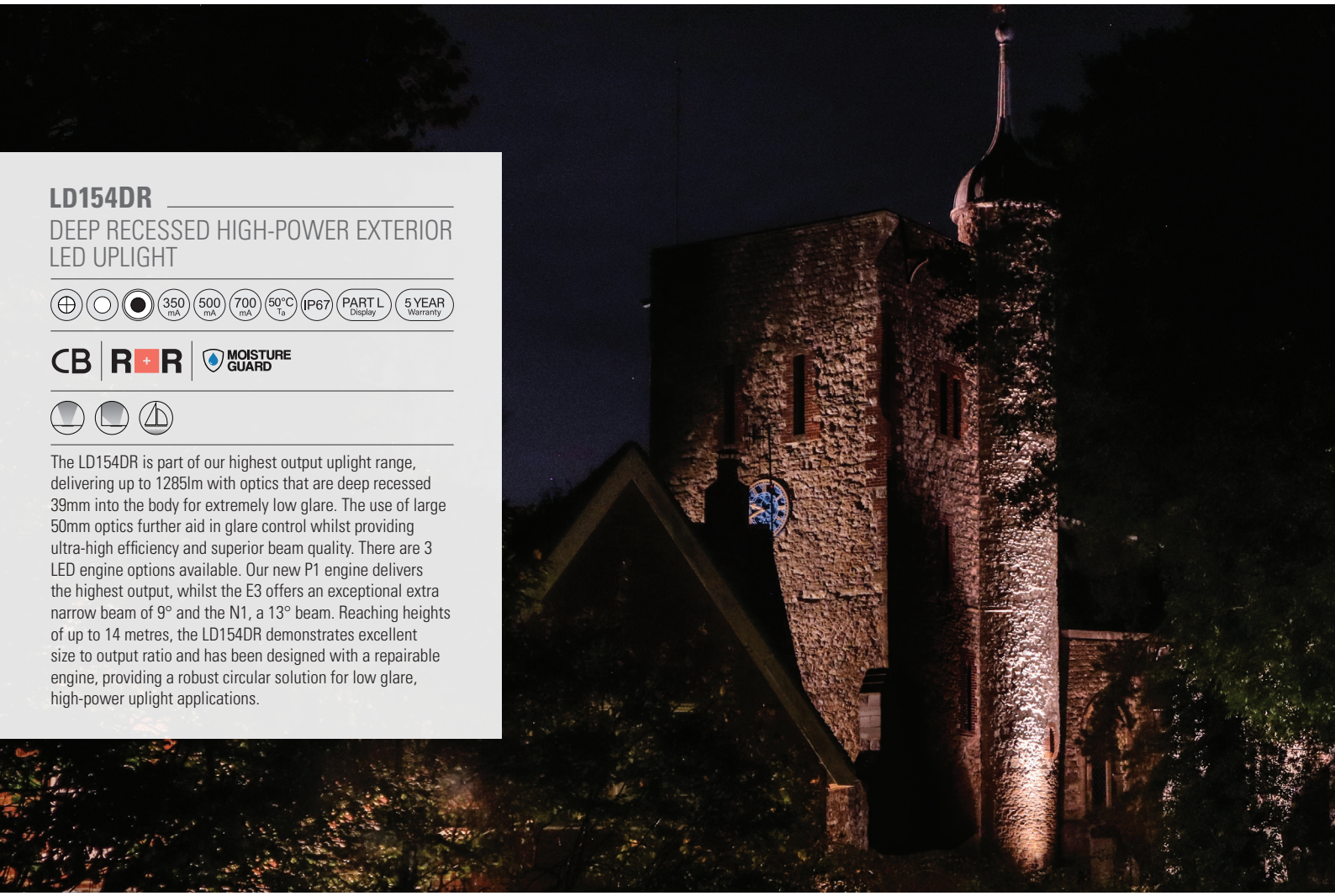


LD154DR

DEEP RECESSED HIGH-POWER EXTERIOR LED UPLIGHT

350 mA | 500 mA | 700 mA | 50°C Ta | IP67 | PART L Display | 5 YEAR Warranty

CB | R+R | MOISTURE GUARD

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 700mA 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			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 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 assocaited with using a 90% efficient driver

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

MECHANICAL

Ambient temperature	E3	Soil	-20°C to 50°C (350mA-500mA) or -20°C to 35°C (700mA)
		Concrete	-20°C to 50°C (350mA-700mA) in concrete
	N1	Soil	-20°C to 50°C (350mA), -20°C to 45°C (500mA) or -20°C to 25°C (700mA)
		Concrete	-20°C to 50°C (350mA-700mA) in concrete
	P1	Soil	-20°C to 25°C (350mA)
		Concrete	-20°C to 50°C (350mA) or -20°C to 25°C (500mA) in concrete
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	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.

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

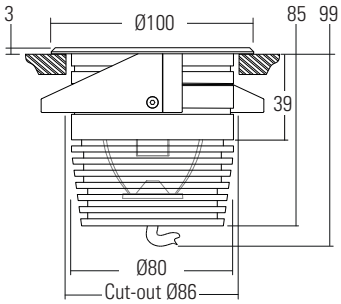
DIMENSIONS AND FIXING OPTIONS

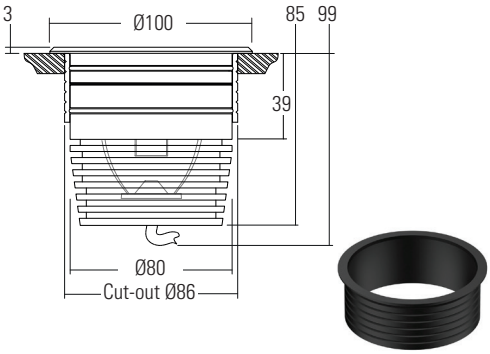
Dimensions in mm

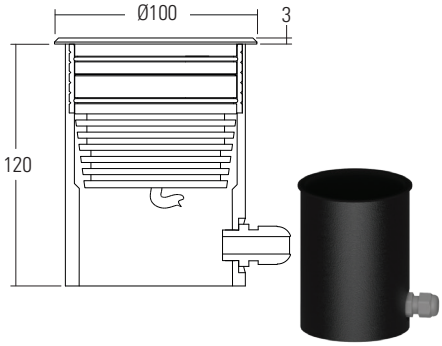
/SC Spring Clips
Suitable for use in surfaces with a thickness of 1mm – 25mm. Spring clips provide a simple, single fix mounting method. We recommend that spring clips are only used in interior applications.

/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.

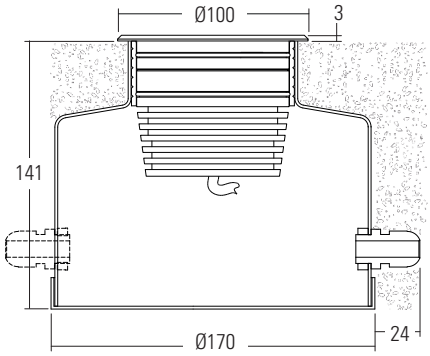
/485GT Ground Tube
Designed for soil or gravel surfaces. It is supplied with the fixing sleeve bonded into the tube and can be cut down on site. The tube can be buried with the necessary wiring via the PG9 IP67 gland and then the fitting installed after the landscaping work has been completed.







/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

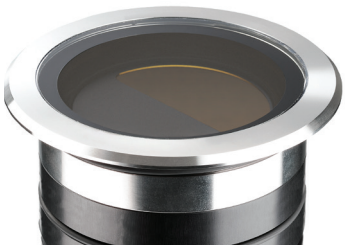
GLARE CONTROL OPTIONS

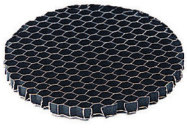
/GS154 Glare shield
Standard glare shield, which provides an excellent balance between glare control and light output. This accessory works well in most applications.

/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.

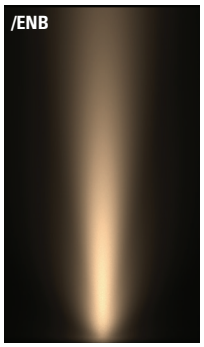




CONE DIAGRAMS

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.



Extra Narrow Beam
700mA using a 9° optic

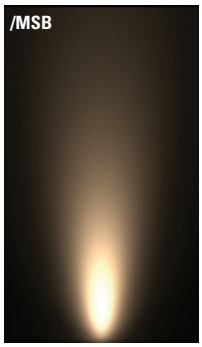
Distance (m)	Illuminance (lx)	
3.0	0.51	1636
2.5	0.43	2355
2.0	0.34	3680
1.5	0.26	6542
1.0	0.17	14720
0.5	0.09	58878

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

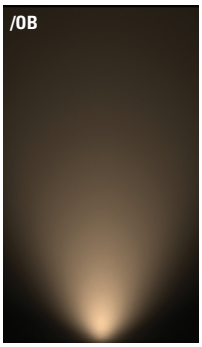
Distance (m)	Illuminance (lx)	
3.0	2.26	102
2.5	1.88	147
2.0	1.50	229
1.5	1.13	407
1.0	0.75	916
0.5	0.38	3665

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)



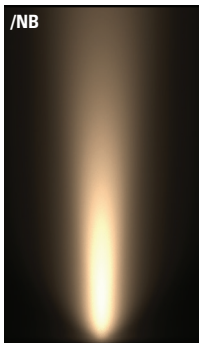
Oval Beam
700mA using a 10° x 39° optic

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

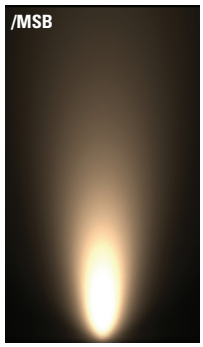
Cone diagrams below are based on a 3000K N1 LED engine run at maximum output 700mA, 14W. Images below represents beam outputs when wall washing a 3m wall, spaced 125mm away from the lit surface. Photometric files (LDT) are included in the design pack which can be downloaded from the LD154DR product page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

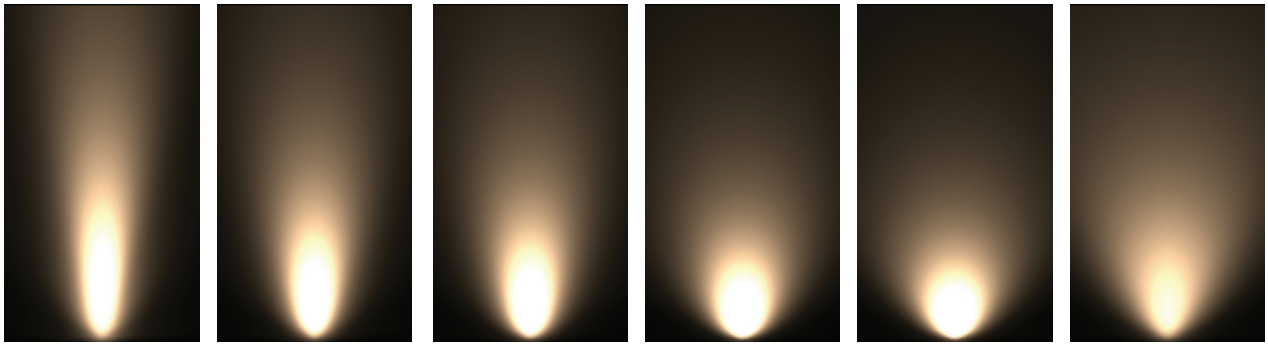
Oval Beam
700mA using a 14° x 39° optic

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 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)

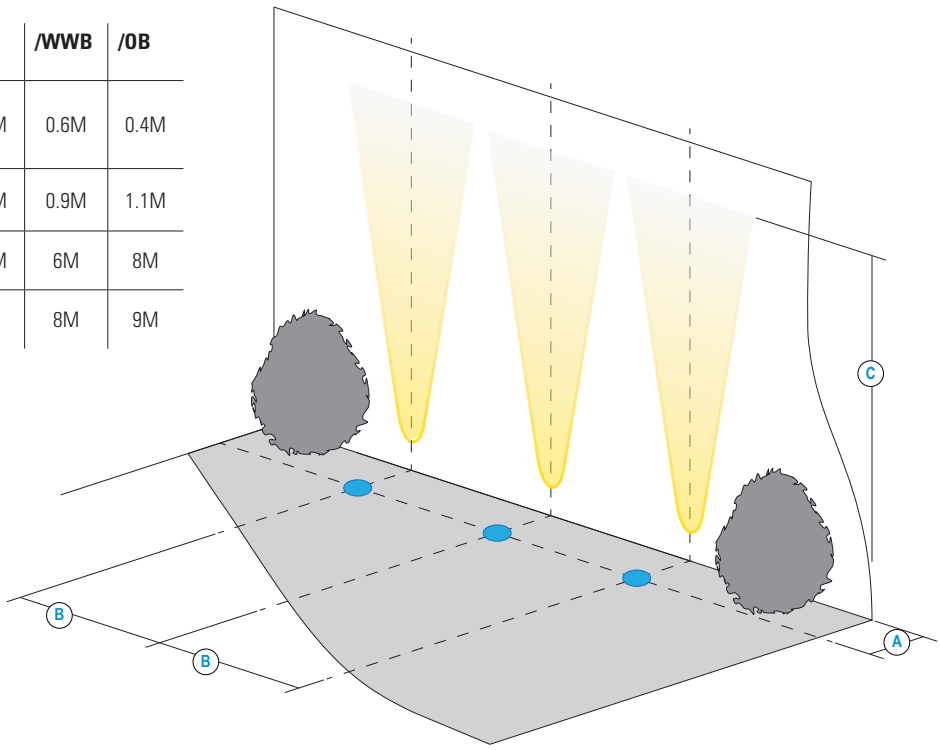
INSTALLATION GUIDE

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
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

LD154DR-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

LD154DR-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

Example: LD154DR-E3-700 / LW30 / OB / GSOB154 / 316 STAINLESS STEEL / SC

Light engine & drive current		LED Colour		Beam Angle		Accessory		Finish		Fixing
LD154DR -	/		/		/		/		/	

E3

5W LED at 350mA	LD154DR-E3-350
7W LED at 500mA	LD154DR-E3-500
10W LED at 700mA	LD154DR-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
56° Extra Wide	/WWB
10° x 39° Oval	/OB

N1

7W LED at 350mA	LD154DR-N1-350
10W LED at 500mA	LD154DR-N1-500
14W LED at 700mA	LD154DR-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

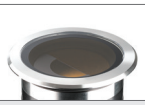
13° Narrow	/NB
24° Medium Spot	/MSB
31° Medium	/MB
41° Wide	/WB
55° Extra Wide	/WWB
14° x 39° Oval	/OB

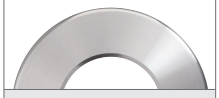
P1

14W LED at 350mA	LD154DR-P1-350
20W LED at 500mA	LD154DR-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
31° Medium	/MB
42° Wide	/WB
55° Extra Wide	/WWB
19° x 41° Oval	/OB

Accessory
 /NGS
 /GSHM154
 /GSOB154
 /HL

Finish
 316 Stainless Steel
 Polished & Passivated 316 Stainless Steel (for marine environments)
 Paint Finish White (RAL 9016)
 Paint Finish Black (RAL 9005)
 Paint Finish Classic Bronze (YM262E)
 Paint Finish Textured Mars Bronze
 Paint Finish Textured Fir Green (RAL 6009)
 Paint Finish Gunmetal Grey (RAL 7021)
 Paint Finish - RAL

Fixing
 /SC
 /485S
 /486N
 /486N-2
 /485GT

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.