

LD154 / LD154DO

HIGH-POWER RECESSED EXTERIOR LED UPLIGHT



The LD154 is our most powerful fitting to date, delivering up to 1443lm from a minimal body depth of 71mm. It forms a new range of high-power uplight solutions for drive over, low glare (LD154DR) and asymmetric installations (LD154T). 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. The lens assembly features large 50mm optics which offer ultra-high efficiency, superior beam quality and low glare. Reaching heights of up to 14 metres, the LD154 demonstrates excellent size to output ratio and has been designed with a repairable engine, providing a robust circular solution for high-power uplight applications.



KEY FEATURES

- > New high-power P1 engine with CREE COB delivering upto 1443lm at 700mA in 3000K
- > E3 engine with NICHIA LED delivering up to 699lm at 700mA in 3000K, offering an exceptional 9° extra narrow beam with peak intensity reaching 16,000cd
- > N1 engine with CREE COB delivering up to 1028lm 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
- > Low glare product with a choice of accessories to minimise the view of the light source at various angles
- > Repairable engine with integral anti-wicking barrier to increase protection against moisture ingress
- > Chamfered bezel available in 316 Stainless Steel, Polished & Passivated Stainless Steel, a wide range of powder coat paint finishes or any RAL colour
- > LD154DO has been designed for drive over applications with a thickened bezel and dedicated concrete housing to prevent rotation of the fitting
- > For applications requiring super low glare or an asymmetric beam, please view the LD154DR and LD154T data sheets
- > Switched, 0-10V, Casambi, DMX, DALI, or Mains dimmable drivers available

DIMENSIONS



WHITE LED ENGINE SPECIFICATION

Engine	⊕ E3			⊙ N1			⊙ P1	
Beam angles	9°, 11°, 22°, 29°, 42°, 53°, 10° x 56°			13°, 24°, 31°, 45°, 54°, 13° x 58°			20°, 27°, 33°, 47°, 58°, 19° x 60°	
LED manufacturer	NICHIA			CREE			CREE	
Colour temperature*	2700K, 3000K, 4000K, 5000K			2200K, 2700K, 3000K, 4000K, 5000K			2200K, 2700K, 3000K, 4000K, 5000K	
Current	350mA	500mA	700mA	350mA	500mA	700mA	350mA	500mA
LED power (Max)	4.2 (5W**)	6.0 (7W**)	8.4 (10W**)	5.8 (7W**)	8.3 (10W**)	11.6 (14W**)	12.0 (14W**)	18.0 (20W**)
Delivered lumens (L ₁₀₀)	418	557	699	577	776	1028	1050	1443
Lumens per circuit watt	100	93	83	100	93	89	88	80
CRI (Typ)	85			93			93	
Forward voltage (V ₁₀₀)	14V			18.5V			38.5V	
Colour consistency	2 SCDM			2 SCDM			2 SCDM	
Peak intensity	15922 cd			13809 cd			10624 cd	
LED Lumens	840			1393			2303	
LOR	0.83			0.74			0.63	
TM30	RF86	RG98		RF91	RG99		RF90	RG97
UGR***	8.8			10.1			11.9	
LED lifetime	L90B5 @ 90,000hrs							
Applications								

These values are based around a LD154-E3-700-LW30-ENB, LD154-N1-700-LW30-NB and LD154-P1-700-LW30-NB

*Lumen output data applies to all E3 colour temperatures. For N1 and P1 engines, please see lumen variance table to the right.

**Indicates the nominal power for the LED run at that particular current and includes losses associated with using an 85% efficient driver

*** UGR values based on room parameter of 4H 8H, C70 W50 F20

Lumen variance by CCT

2700K	+/- 0%
4000K	+7%
5000K	+16%

MECHANICAL

Ambient temperature	-20°C to 45°C (350mA/500mA/700mA)
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	IK09
Wiring	In-series constant current wiring (pre-wired with 2 core cable at 350mm)

ENVIRONMENTAL

TM65	Available on request
TM66	2.5

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



WHITE (RAL 9016)



BLACK (RAL 9005)



CLASSIC BRONZE (YM262E)



TEXTURED MARS BRONZE (SX350F)



TEXTURED FIR GREEN (RAL 6009)



GUNMETAL GREY (RAL 7021)



RAL

PAINT FINISH - POWDER COAT

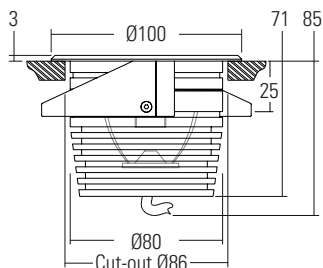
- > The powder coated finish is very matt
- > Not recommended for high traffic in-ground applications, unless placed to one side where the bezel will not be walked on
- > Powder coat paint is generally used on stainless steel or anodised aluminium components
- > Interior and exterior use

DIMENSIONS AND FIXING OPTIONS

Dimensions in mm

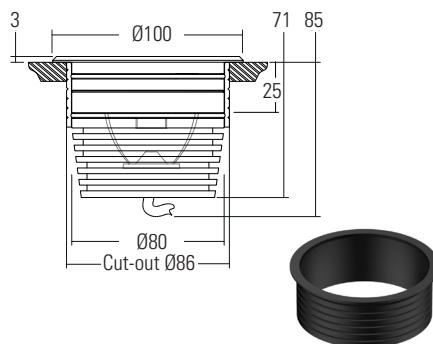
/SC Spring clips

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.



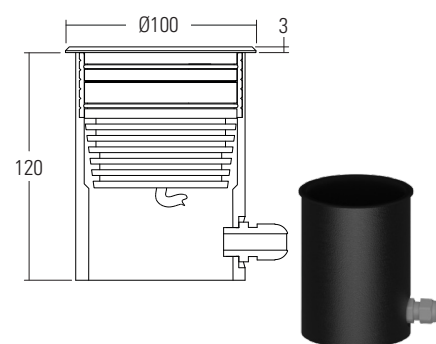
/485S Fixing sleeve and O-rings

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.



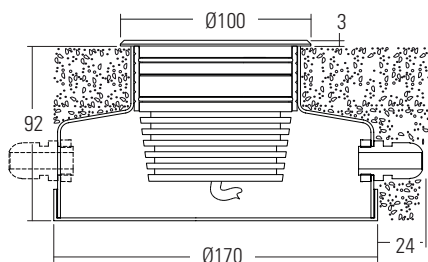
/485GT Ground tube

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.



/485N 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.



/485N
Concrete housing with 1x PG9 IP67 gland

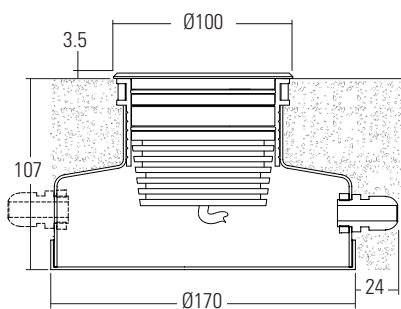


/485N-2
Concrete housing with 2x PG9 IP67 gland

LD154DO (DRIVE OVER APPLICATION)

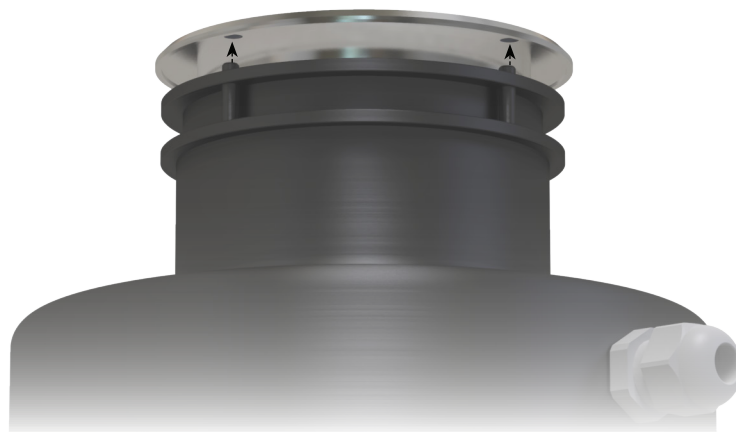
For drive over applications please specify the LD154DO, which is supplied with a drive over bezel and has an increased thickness of 3.5mm. The bezel features pins that secured into the concrete housing, preventing the luminaire from rotating when driven over. When specifying LD154DO, please use the dedicated configurator on page 9.

/485N-DO Drive over concrete housing with 1x PG9 IP67 gland.



/485N-DO-2

Drive over concrete housing with 2x PG9 IP67 gland.



GLARE CONTROL OPTIONS

/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

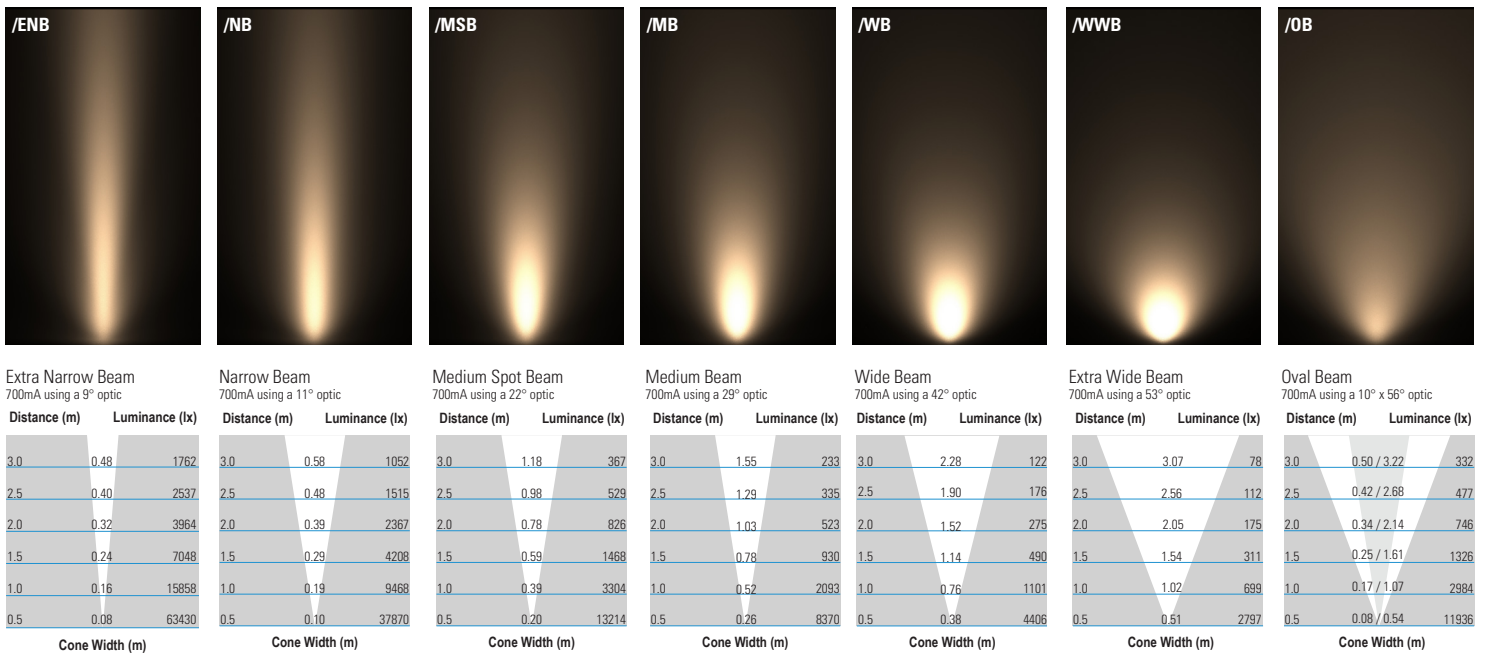
Helps reduce glare from all angles and can be used with glare shields.



CONE DIAGRAMS

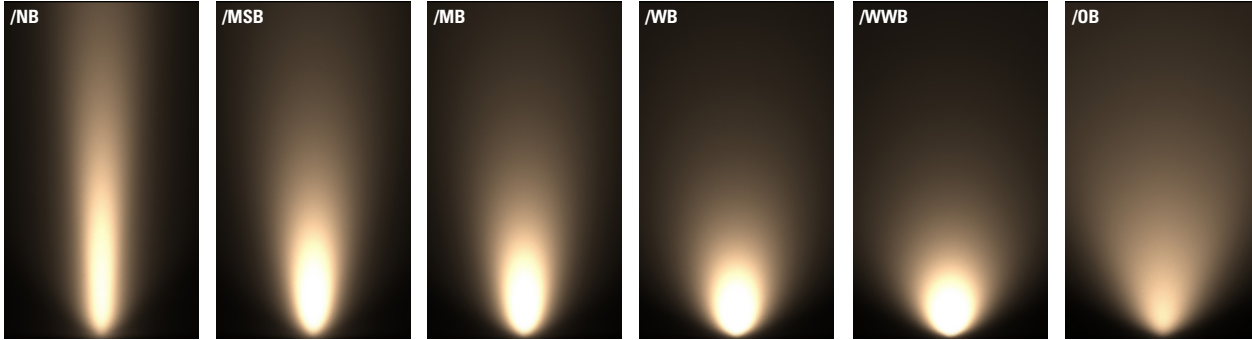
E3 LED Engine

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 LD154 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 LD154 product page on the website.



Narrow Beam
700mA using a 13° optic

Distance (m)	Cone Width (m)	Luminance (lx)
3.0	0.68	1533
2.5	0.57	2207
2.0	0.46	3448
1.5	0.34	6131
1.0	0.23	13794
0.5	0.11	55176

Cone Width (m)

Medium Spot Beam
700mA using a 24° optic

Distance (m)	Cone Width (m)	Luminance (lx)
3.0	1.28	497
2.5	1.06	715
2.0	0.85	1118
1.5	0.64	1987
1.0	0.43	4470
0.5	0.21	17882

Cone Width (m)

Medium Beam
700mA using a 31° optic

Distance (m)	Cone Width (m)	Luminance (lx)
3.0	1.62	307
2.5	1.35	442
2.0	1.08	690
1.5	0.81	1227
1.0	0.54	2760
0.5	0.27	11041

Cone Width (m)

Wide Beam
700mA using a 45° optic

Distance (m)	Cone Width (m)	Luminance (lx)
3.0	2.53	145
2.5	2.11	209
2.0	1.69	327
1.5	1.27	581
1.0	0.84	1308
0.5	0.42	5232

Cone Width (m)

Extra Wide Beam
700mA using a 54° optic

Distance (m)	Cone Width (m)	Luminance (lx)
3.0	3.16	108
2.5	2.64	156
2.0	2.11	243
1.5	1.58	432
1.0	1.05	972
0.5	0.53	3890

Cone Width (m)

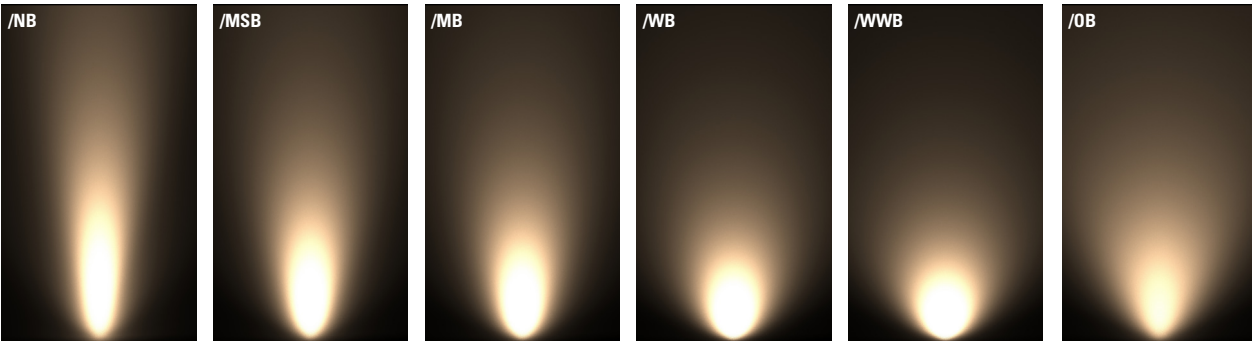
Oval Beam
700mA using a 13° x 58° optic

Distance (m)	Cone Width (m)	Luminance (lx)
3.0	0.69 / 3.38	358
2.5	0.58 / 2.82	515
2.0	0.46 / 2.25	805
1.5	0.35 / 1.69	1432
1.0	0.23 / 1.13	3222
0.5	0.12 / 0.56	12887

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 LD154 product page on the website.



Narrow Beam
500mA using a 20° optic

Distance (m)	Cone Width (m)	Luminance (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)	Cone Width (m)	Luminance (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 33° optic

Distance (m)	Cone Width (m)	Luminance (lx)
3.0	1.80	366
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 47° optic

Distance (m)	Cone Width (m)	Luminance (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	6589

Cone Width (m)

Extra Wide Beam
500mA using a 58° optic

Distance (m)	Cone Width (m)	Luminance (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 60° optic

Distance (m)	Cone Width (m)	Luminance (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	1389
1.0	0.34 / 1.15	3147
0.5	0.17 / 0.57	12580

Cone Width (m)

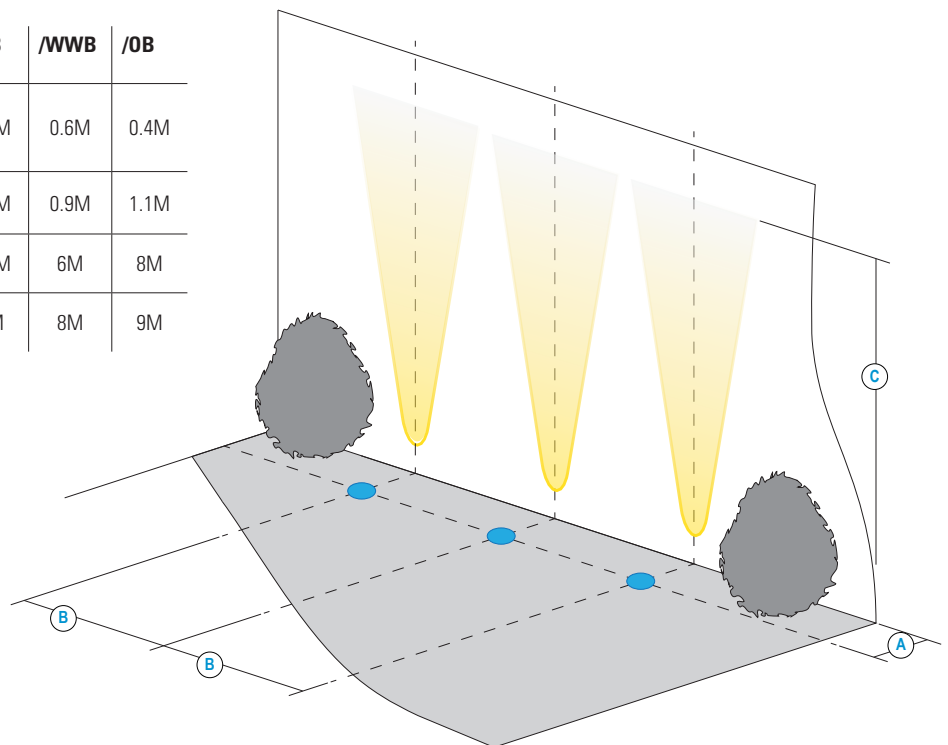
INSTALLATION GUIDE

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 LD154 product page on our website.

LD154-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	0.6M	0.3M
B	Spacing for an even wash	0.4M	0.45M	0.5M	0.7M	0.8M	0.9M	1.1M
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

LD154-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	1.1M
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

LD154-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 - LD154

Example: LD154-E3-700 / LW30 / OB / GS0B154 / 316 STAINLESS STEEL / SC

Light engine & drive current		LED colour		Beam angle		Accessory		Finish		Fixing	
LD154 -											

E3

5W LED at 350mA	LD154-E3-350	<table border="1"> <tr><td>Extra Warm White (2700K)</td><td>/LW27</td></tr> <tr><td>Warm White (3000K)</td><td>/LW30</td></tr> <tr><td>White (4000K) - on request</td><td>/LW40</td></tr> <tr><td>Cool White (5000K)</td><td>/LW50</td></tr> </table>	Extra Warm White (2700K)	/LW27	Warm White (3000K)	/LW30	White (4000K) - on request	/LW40	Cool White (5000K)	/LW50	<table border="1"> <tr><td>9° Extra Narrow</td><td>/ENB</td></tr> <tr><td>11° Narrow</td><td>/NB</td></tr> <tr><td>22° Medium Spot</td><td>/MSB</td></tr> <tr><td>29° Medium</td><td>/MB</td></tr> <tr><td>42° Wide</td><td>/WB</td></tr> <tr><td>53° Extra Wide</td><td>/WWB</td></tr> <tr><td>10° x 56° Oval</td><td>/OB</td></tr> </table>	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
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7W LED at 500mA	LD154-E3-500																								
10W LED at 700mA	LD154-E3-700																								

N1

7W LED at 350mA	LD154-N1-350	<table border="1"> <tr><td>Super Warm White (2200K)</td><td>/LW22</td></tr> <tr><td>Extra Warm White (2700K)</td><td>/LW27</td></tr> <tr><td>Warm White (3000K)</td><td>/LW30</td></tr> <tr><td>White (4000K) - on request</td><td>/LW40</td></tr> <tr><td>Cool White (5000K)</td><td>/LW50</td></tr> </table>	Super Warm White (2200K)	/LW22	Extra Warm White (2700K)	/LW27	Warm White (3000K)	/LW30	White (4000K) - on request	/LW40	Cool White (5000K)	/LW50	<table border="1"> <tr><td>13° Narrow</td><td>/NB</td></tr> <tr><td>24° Medium Spot</td><td>/MSB</td></tr> <tr><td>31° Medium</td><td>/MB</td></tr> <tr><td>45° Wide</td><td>/WB</td></tr> <tr><td>54° Extra Wide</td><td>/WWB</td></tr> <tr><td>13° x 58° Oval</td><td>/OB</td></tr> </table>	13° Narrow	/NB	24° Medium Spot	/MSB	31° Medium	/MB	45° Wide	/WB	54° Extra Wide	/WWB	13° x 58° Oval	/OB
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10W LED at 500mA	LD154-N1-500																								
14W LED at 700mA	LD154-N1-700																								

P1

14W LED at 350mA	LD154-P1-350	<table border="1"> <tr><td>Super Warm White (2200K)</td><td>/LW22</td></tr> <tr><td>Extra Warm White (2700K)</td><td>/LW27</td></tr> <tr><td>Warm White (3000K)</td><td>/LW30</td></tr> <tr><td>White (4000K) - on request</td><td>/LW40</td></tr> <tr><td>Cool White (5000K)</td><td>/LW50</td></tr> </table>	Super Warm White (2200K)	/LW22	Extra Warm White (2700K)	/LW27	Warm White (3000K)	/LW30	White (4000K) - on request	/LW40	Cool White (5000K)	/LW50	<table border="1"> <tr><td>20° Narrow</td><td>/NB</td></tr> <tr><td>27° Medium Spot</td><td>/MSB</td></tr> <tr><td>33° Medium</td><td>/MB</td></tr> <tr><td>47° Wide</td><td>/WB</td></tr> <tr><td>58° Extra Wide</td><td>/WWB</td></tr> <tr><td>19° x 60° Oval</td><td>/OB</td></tr> </table>	20° Narrow	/NB	27° Medium Spot	/MSB	33° Medium	/MB	47° Wide	/WB	58° Extra Wide	/WWB	19° x 60° Oval	/OB
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20W LED at 500mA	LD154-P1-500																								

ORDER CODES & OPTIONS - LD154DO

Example: LD154DO-E3-700 / LW30 / OB / GS0B154 / 316 STAINLESS STEEL / 485N-DO

Light engine & drive current	LED colour	Beam angle	Accessory	Finish	Fixing
LD154DO-	/	/	/	/	/

E3

5W LED at 350mA	LD154DO-E3-350
7W LED at 500mA	LD154DO-E3-500
10W LED at 700mA	LD154DO-E3-700

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



/GSHM154



/GS0B154



/HL



316 Stainless Steel



/485N-DO



/485N-DO-2

N1

7W LED at 350mA	LD154DO-N1-350
10W LED at 500mA	LD154DO-N1-500
14W LED at 700mA	LD154DO-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

P1

14W LED at 350mA	LD154DO-P1-350
20W LED at 500mA	LD154DO-P1-500

Super Warm White (2200K)	/LW22
Extra Warm White (2700K)	/LW27
Warm White (3000K)	/LW30
White (4000K) - on request	/LW40
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20° Narrow	/NB
27° Medium Spot	/MSB
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