


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			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 LD154DR-E3-700/830/ENB, LD154DR-N1-700/930/NB and LD154DR-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 associated 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

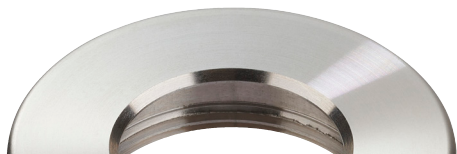
			350mA	500mA	700mA
Ambient temperature 55°C	E3	Soil/Sleeve	-20°C to 55°C	-20°C to 55°C	-20°C to 40°C
		Concrete	-20°C to 55°C	-20°C to 55°C	-20°C to 50°C
	N1	Soil/Sleeve	-20°C to 55°C	-20°C to 50°C	-20°C to 25°C
		Concrete	-20°C to 55°C	-20°C to 55°C	-20°C to 50°C
	P1	Soil/Sleeve	-20°C to 25°C	N/A	-
		Concrete	-20°C to 45°C	-20°C to 25°C	-
Glass	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	 <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>	

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)



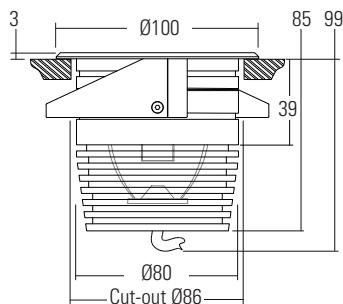
RAL COLOURS

DIMENSIONS AND FIXING OPTIONS

Dimensions in mm

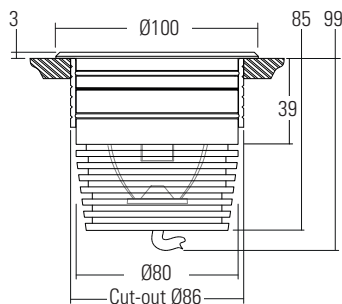
/SC Spring Clips

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.



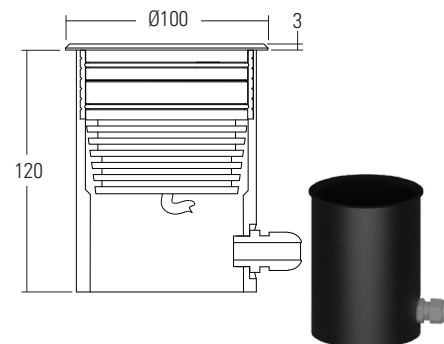
/485S Fixing sleeve and O-rings

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.



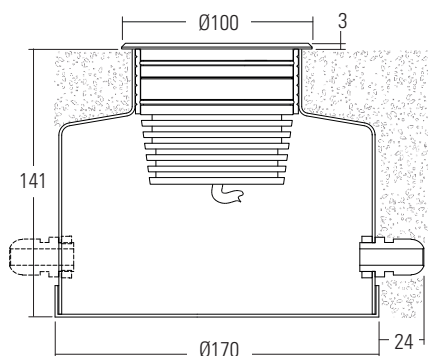
/485GT Ground Tube

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

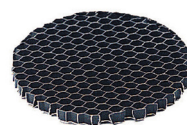
Half-moon glare shield
For applications that require low glare. Lumen output is typically reduced by 60% with no light lost on the lit surface.

/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

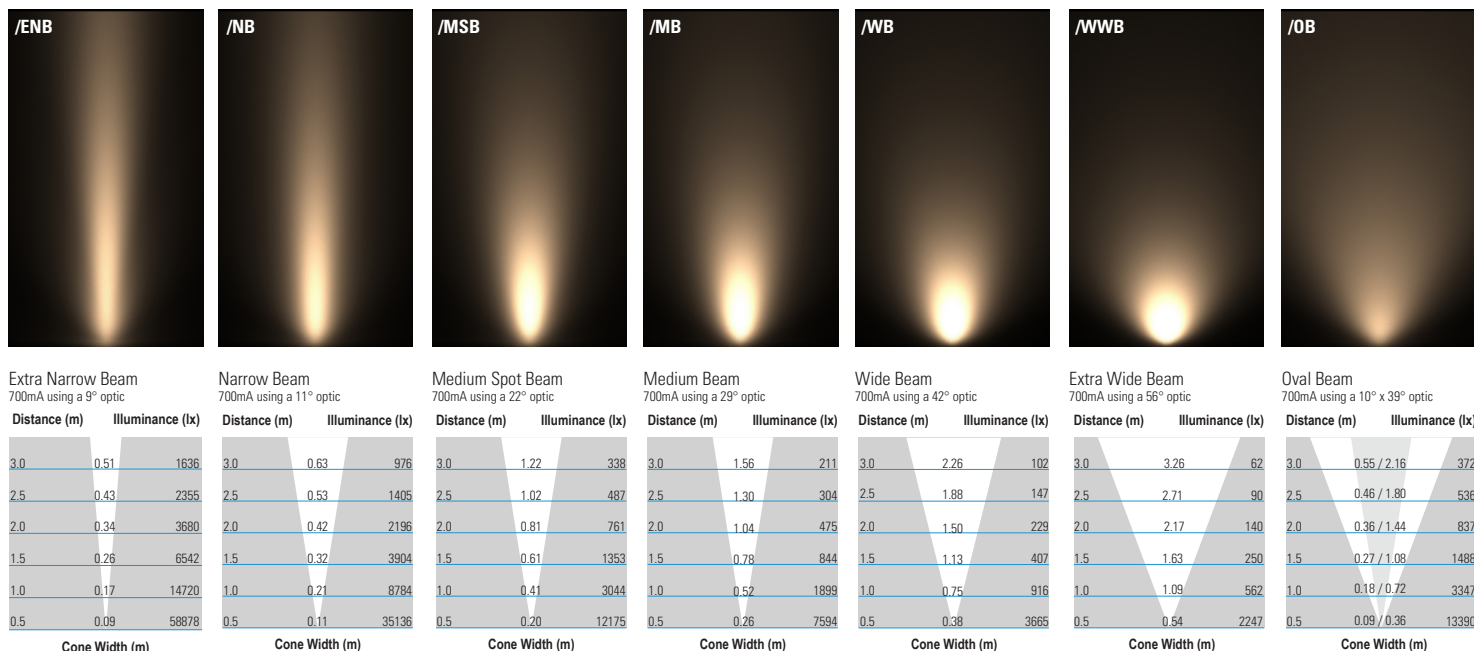
Honeycomb Louvre
Helps reduce glare from all angles and can be used with glare shields.



CONE DIAGRAMS

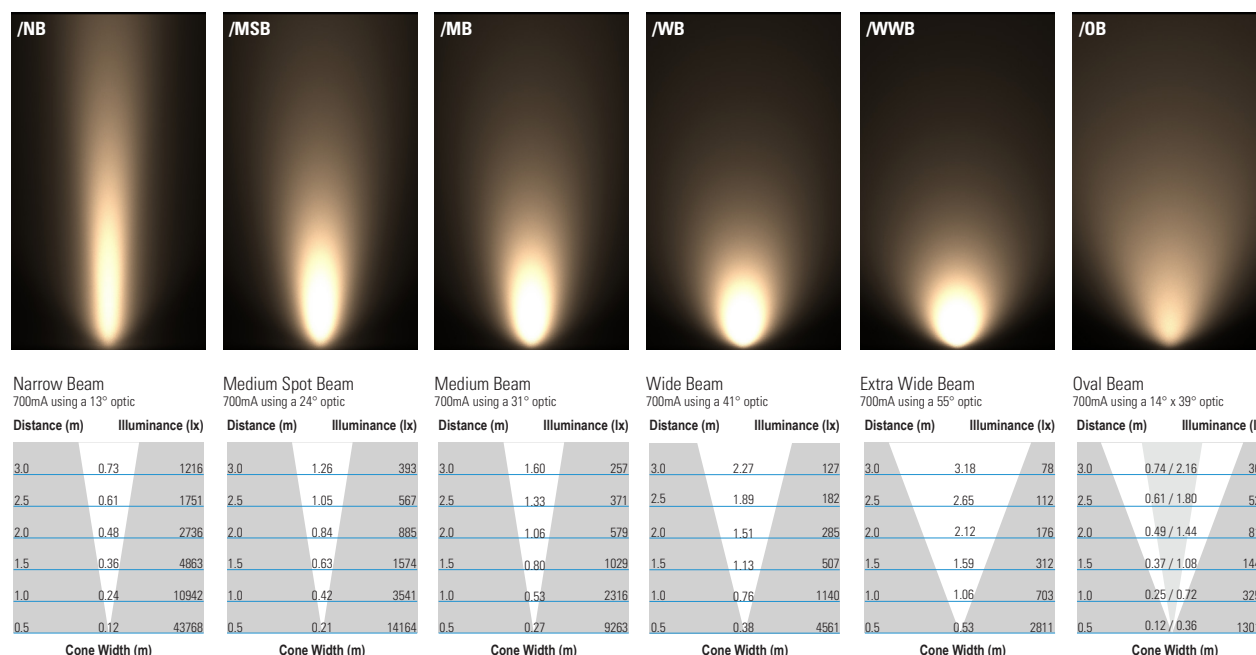
E3 LED Engine

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.



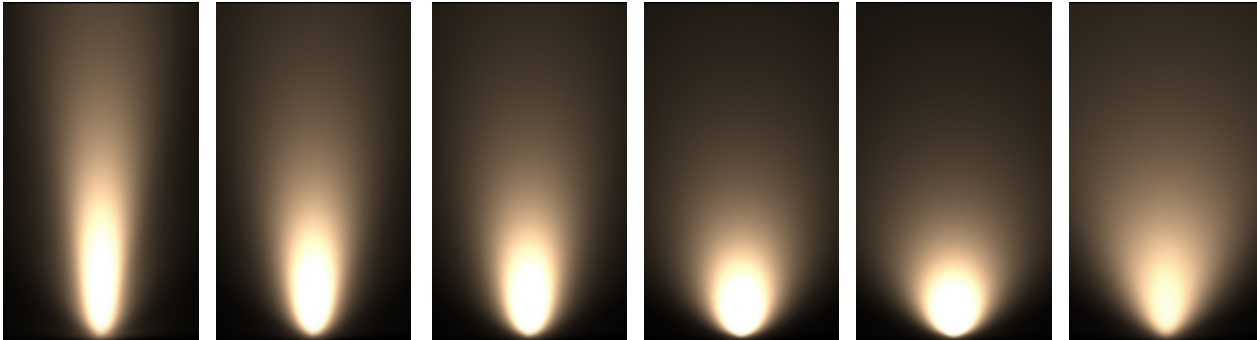
N1 LED Engine

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)	Beam Diameter (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)	Beam Diameter (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)	Beam Diameter (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)	Beam Diameter (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)	Beam Diameter (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)	Beam Dimensions (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)

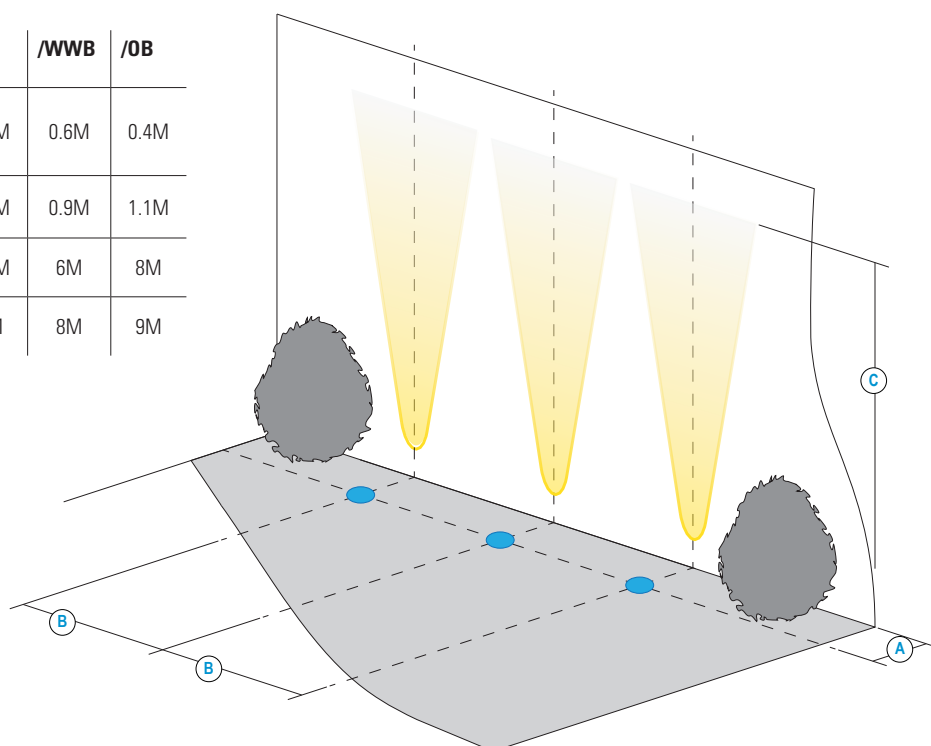
INSTALLATION GUIDE

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-E3-700/830/OB/GSOB154/316 Stainless Steel/SC

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

Ambient temperature key: 55°C

E3

55°C Ta	5W LED at 350mA	LD154DR-E3-350
55°C Ta	7W LED at 500mA*	LD154DR-E3-500
	10W LED at 700mA**	LD154DR-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.

2200K 85+ CRI	/822	9° Extra Narrow	/ENB
2700K 85+ CRI	/827	11° Narrow	/NB
3000K 85+ CRI	/830	22° Medium Spot	/MSB
4000K 85+ CRI on request	/840	29° Medium	/MB
5000K 85+ CRI	/850	42° Wide	/WB
2700K 90+ CRI	/927	53° Extra Wide	/WWB
3000K 90+ CRI	/930	10° x 56° Oval	/OB

/NGS	316 Stainless Steel	/SC
/GS154	Polished & Passivated 316 Stainless Steel (for marine environments)	/485S
/GSHM154	Paint Finish White (RAL 9016)	/486N
/GSOB154	Paint Finish Black (RAL 9005)	/486N-2
/HL	Paint Finish Classic Bronze (YM262E)	/485GT

N1

55°C Ta	7W LED at 350mA	LD154DR-N1-350
55°C Ta	10W LED at 500mA*	LD154DR-N1-500
	14W LED at 700mA**	LD154DR-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.

2200K 93+ CRI	/922	13° Narrow	/NB
2700K 93+ CRI	/927	24° Medium Spot	/MSB
3000K 93+ CRI	/930	31° Medium	/MB
4000K 93+ CRI on request	/940	45° Wide	/WB
5000K 93+ CRI	/950	54° Extra Wide	/WWB
		13° x 58° Oval	/OB

P1

14W LED at 350mA	LD154DR-P1-350
20W LED at 500mA	LD154DR-P1-500

2200K 90+ CRI	/922	20° Narrow	/NB
2700K 90+ CRI	/927	27° Medium Spot	/MSB
3000K 90+ CRI	/930	33° Medium	/MB
4000K 90+ CRI on request	/940	47° Wide	/WB
5000K 90+ CRI	/950	58° Extra Wide	/WWB
		19° x 60° Oval	/OB

Paint Finish Textured Mars Bronze
Paint Finish Textured Fir Green (RAL 6009)
Paint Finish Gunmetal Grey (RAL 7021)
Paint Finish - RAL

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.