

## LD238

### COMPACT SURFACE MOUNTED ADJUSTABLE INTERIOR/EXTERIOR LED SPOTLIGHT



The LD238 is a discreet surface mounted spotlight that is very compact in size but offers a powerful output and large range of features. There are 2 LED engines available. The E3 engine provides the ability to achieve a high output of up to 597lm, whilst the F1 offers a super warm colour temperature of 2200K. Featuring a single optic for superior beam quality, there are a range of beam angles available and a half or full cowl for low glare. With a choice of fixing options, including a ground spike, tree strap and surface mounted base, the versatile LD238 can be used in a range of exterior applications.



## KEY FEATURES

- > Compact exterior spotlight with 105° lockable head tilt adjustment
- > High-power E3 engine featuring NICHIA LED delivering up to 597lm at 700mA
- > F1 LED engine featuring CREE COB with 2200K colour temperature option
- > Wide range of powder coated finishes including: White (RAL 9016), Black (RAL 9005), Classic Bronze (YM262E), Gunmetal Grey (RAL 7021), Textured Mars Bronze, Textured Fir Green (RAL 6009) or any RAL colour
- > Range of beam angles including 12°, 18°, 31°, 55°, 14° x 48°
- > Single light source and optic produces a consistent beam removing multiple shadows
- > Deep recessed LED lens assembly with option of no cowl, full, or half anti-glare cowl and honeycomb louvre
- > Wide range of fixing options including surface mounted base, ground spike and tree strap
- >  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 fixing dimensions please go to page 4.



## WHITE LED ENGINE SPECIFICATION

| Engine                                | E3                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |             | F1                                |            |            |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|-----------------------------------|------------|------------|
| Beam angles                           | 12°, 18°, 31°, 55°, 14° x 48°                                                                                                                                                                                                                                                                                                                                                                                                       |            |             | 21°, 35°, 52°, 17° x 48°          |            |            |
| LED manufacturer                      | NICHIA                                                                                                                                                                                                                                                                                                                                                                                                                              |            |             | CREE                              |            |            |
| Colour temperature                    | 2200K, 2700K, 3000K, 4000K, 5000K                                                                                                                                                                                                                                                                                                                                                                                                   |            |             | 2200K, 2700K, 3000K, 4000K, 5000K |            |            |
| Current [Rated Output]                | 350mA [5W]                                                                                                                                                                                                                                                                                                                                                                                                                          | 500mA [7W] | 700mA [10W] | 350mA [3.5W]                      | 500mA [5W] | 700mA [7W] |
| Typical LED Circuit wattage           | 4.4W                                                                                                                                                                                                                                                                                                                                                                                                                                | 6.4W       | 9.2W        | 3.3W                              | 5W         | 7.2W       |
| Delivered lumens (L <sub>100</sub> )* | 359                                                                                                                                                                                                                                                                                                                                                                                                                                 | 465        | 597         | 254                               | 335        | 442        |
| Delivered lm/Circuit W**              | 81                                                                                                                                                                                                                                                                                                                                                                                                                                  | 72         | 65          | 76                                | 67         | 61         |
| Typical LED Source wattage            | 4W                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5.8W       | 8.3W        | 3W                                | 4.5W       | 6.5W       |
| Source LED lm                         | 574                                                                                                                                                                                                                                                                                                                                                                                                                                 | 740        | 949         | 377                               | 497        | 101        |
| Source lm/W                           | 144                                                                                                                                                                                                                                                                                                                                                                                                                                 | 128        | 114         | 126                               | 110        | 6.5W       |
| Forward voltage (V <sub>100</sub> )   | 11.3V                                                                                                                                                                                                                                                                                                                                                                                                                               | 11.6V      | 11.8V       | 8.7V                              | 9V         | 9.3V       |
| CRI (Typ)                             | 85 90***                                                                                                                                                                                                                                                                                                                                                                                                                            |            |             | 90                                |            |            |
| Colour consistency                    | 2 SDCM                                                                                                                                                                                                                                                                                                                                                                                                                              |            |             | 3 SDCM                            |            |            |
| Peak intensity                        | 6,010 cd                                                                                                                                                                                                                                                                                                                                                                                                                            |            |             | 2,198 cd                          |            |            |
| LOR                                   | 0.63                                                                                                                                                                                                                                                                                                                                                                                                                                |            |             | 0.68                              |            |            |
| TM30                                  | RF85 RG98                                                                                                                                                                                                                                                                                                                                                                                                                           |            |             | RF90 RG103                        |            |            |
| UGR rating ('downlight' mounted)      | 6.4                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7.3        | 8.1         | 7.2                               | 8.2        | 9.1        |
| BUG rating ('downlight' mounted)      | B1-U0-G0                                                                                                                                                                                                                                                                                                                                                                                                                            |            |             | B1-U0-G0                          |            |            |
| LED lifetime                          | L90B5 at 90,000hrs                                                                                                                                                                                                                                                                                                                                                                                                                  |            |             | L90B5 at 90,000hrs                |            |            |
| Applications                          |      |            |             |                                   |            |            |

This data is based on LD238-E3-700/830/NB and LD238-F1-700/930/MSB

\*Lumen output data applies to all E3 colour temperatures, for F1, please see lumen variance table to the right

\*\*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 |        |
|-----------------------|--------|
| 2700K                 | +/- 0% |
| 4000K                 | +7%    |
| 5000K                 | +16%   |

## MECHANICAL

|                             |                                                                                   | 350mA         | 500mA         | 700mA         |
|-----------------------------|-----------------------------------------------------------------------------------|---------------|---------------|---------------|
| Ambient temperature<br>55°C | E3                                                                                | -20°C to 55°C | -20°C to 50°C | -20°C to 35°C |
|                             | F1                                                                                | -20°C to 55°C | -20°C to 50°C | -20°C to 35°C |
| Glass                       | 2mm thick toughened glass with black ceramic screen print                         |               |               |               |
| Materials                   | Anodised aluminium body                                                           |               |               |               |
| Weight of product           | 0.35kg (with /SMB fixing)                                                         |               |               |               |
| IP rating                   | IP67                                                                              |               |               |               |
| Wiring                      | In-series constant current wiring (pre-wired with 2 core cable at a length of 1m) |               |               |               |

## ENVIRONMENTAL

|                    |                                                                                                                                                                                                                                                                                                            |  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| TM65               | Available on request                                                                                                                                                                                                                                                                                       |  |
| TM66               | 2.8                                                                                                                                                                                                                                                                                                        |  |
| 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*

The LD238 body is machined from aluminium and painted in-house at LightGraphix. Paint finishes are suitable for interior and exterior use on surface mounted products. Our standard colours are below but we can accommodate any RAL request. Please view our full finishes guide online for more information.

### POWDER COAT

Powder coat paint is offered in special textured finishes, which are suitable for interior, exterior and high-saline environments.



**BLACK**  
(RAL 9005)



**WHITE**  
(RAL 9016)



**CLASSIC BRONZE**  
(YM262E)



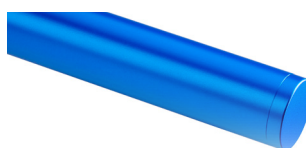
**TEXTURED FIR GREEN**  
(RAL 6009)



**TEXTURED MARS BRONZE**



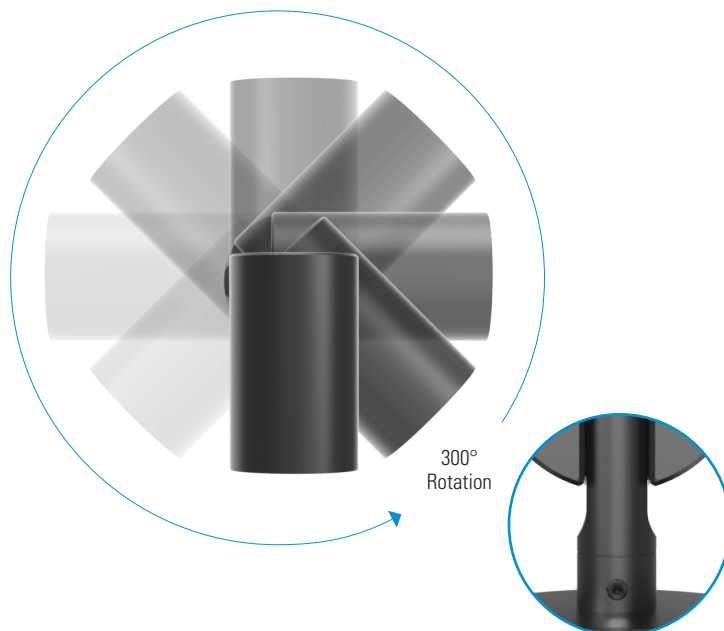
**GUNMETAL GREY**  
(RAL 7021)



**RAL COLOURS**

## ADJUSTABILITY

The LD238 has a lockable upwards tilt of 105° on any fixing option and using the /SMB mounting method can be rotated 300° in any horizontal direction.



## DIMENSIONS & FIXING OPTIONS

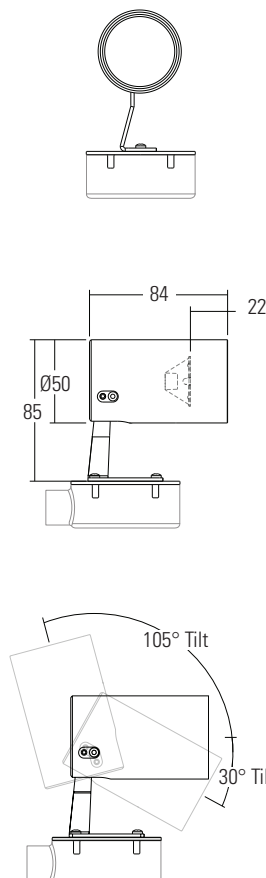
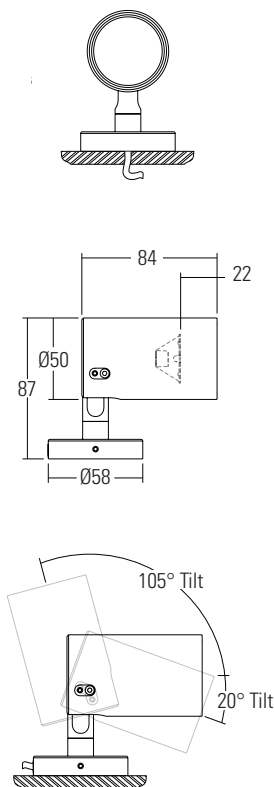
Dimensions in mm

### /SMB Surface mount base

Surface mount base offers hidden wiring and a machined pivot arm with lockable tilt and rotation of the fitting. Cable length: 1200mm Weight: 0.68kg

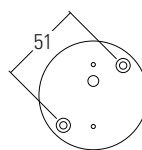
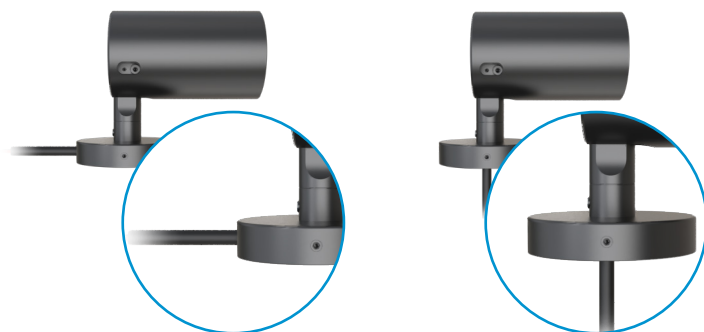
### /BB Besa box mount

Supplied with a plate for mounting to the front of a besa conduit box to allow mounting to pre-existing conduit installations or for projects with a more industrial aesthetic. Cable length: 1200mm Weight: 0.27kg



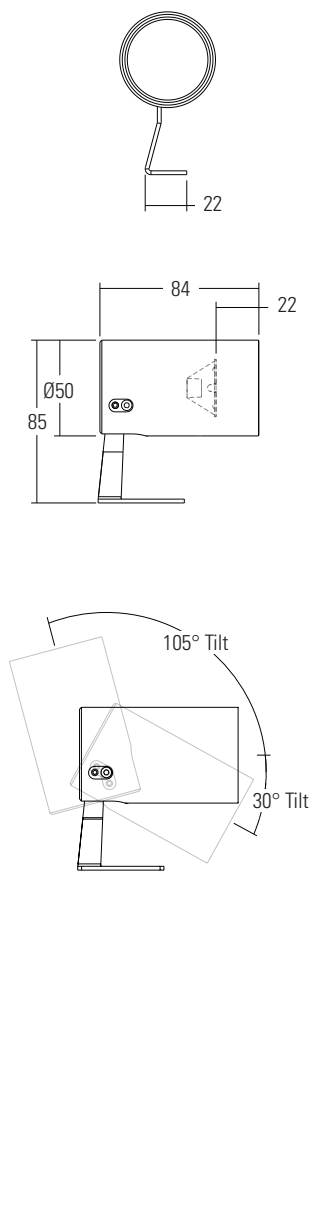
### /SMB cable mounting options

There are two cable exit hole options when specifying a surface mount base. This includes the cable remaining hidden within the base of the fixing and entering through the mounting surface below, or using the horizontal exit hole on the side of the base, if the cable is not able to pass directly through its mounting surface.



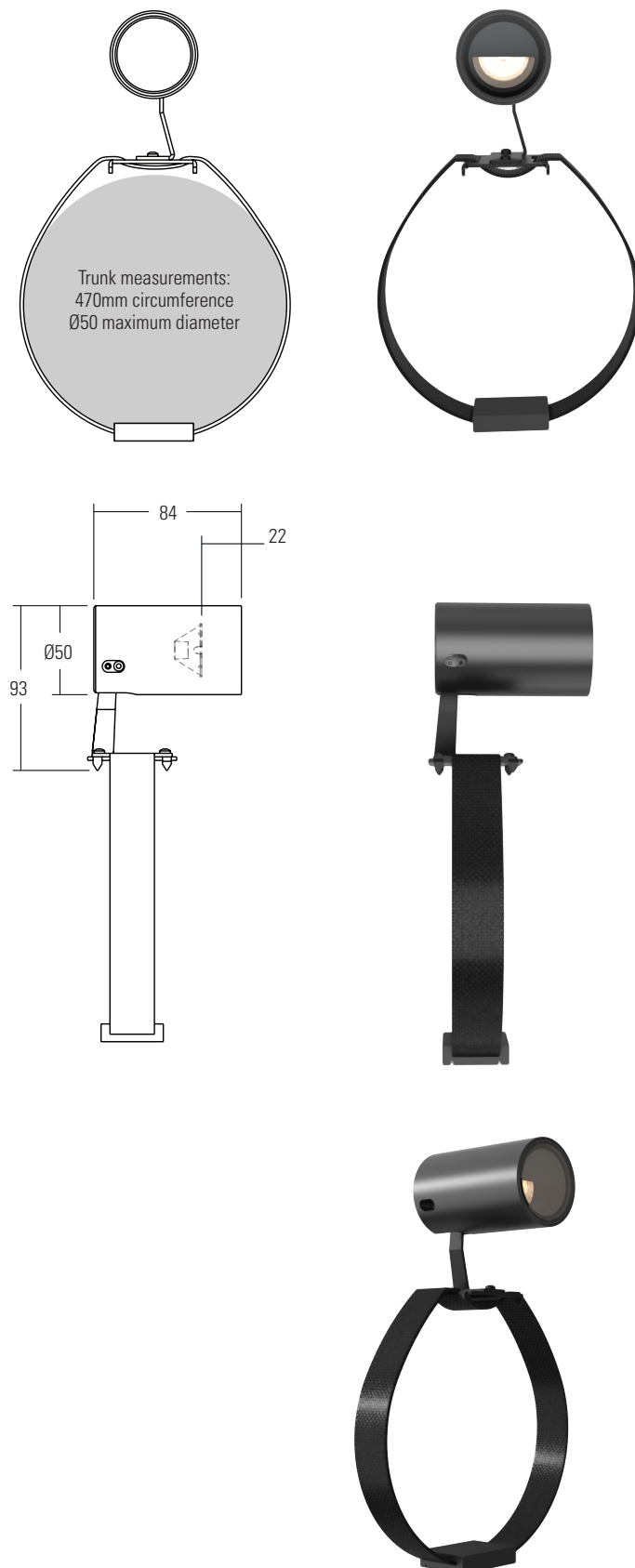
#### /SAM Surface adjustable mount

Surface adjustable mounting is screwed to the surface via a strong mounting stand which allows for minor rotational adjustment. The fitting tilt adjustment is lockable via the socket head screw located on the side. Cable length: 1200mm Weight: 0.26kg



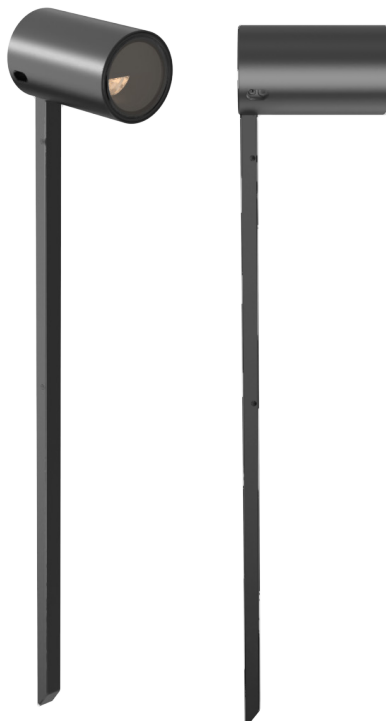
#### /TS Tree strap

Tree strap with lockable fitting tilt adjustment, has a customisable arm length. It can be specified between 130mm and 600mm to the centre of the fitting. Suitable for vertical and horizontal mounting. Cable length: 1200mm Weight: 1.31kg



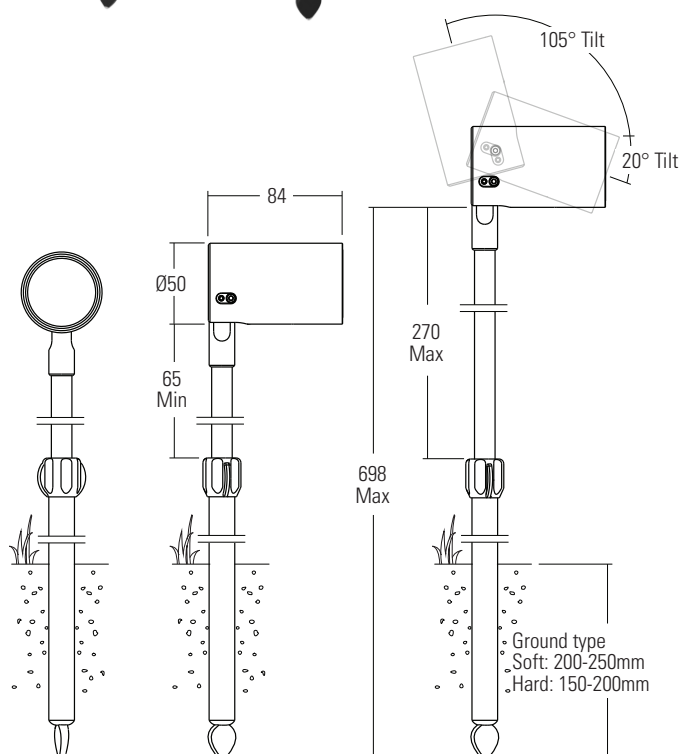
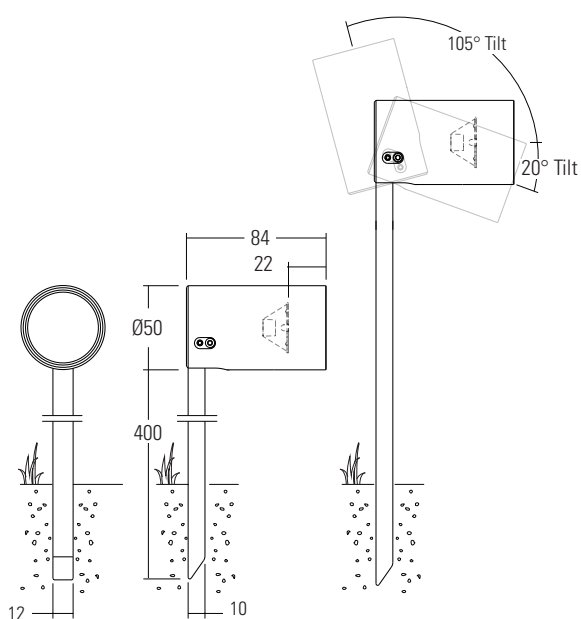
**/GSF** Ground spike fixed

Fixed height 400mm in-ground spike. The fitting tilt adjustment is lockable via the socket head screw located on the side. Cable length: 1200mm Weight: 1.39kg



**/GSA** Adjustable ground spike

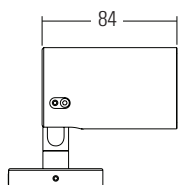
Adjustable ground spike with a lockable fitting tilt adjustment, for in-ground applications. Height adjustment of 490mm to 695mm to the centre of the fitting. Cable length: 2200mm Weight: 1.47kg



## GLARE CONTROL OPTIONS

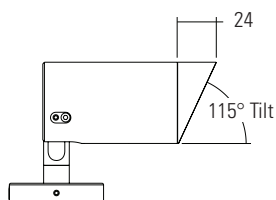
### /NC No Cowl

The LD238 has been designed with optics recessed 22mm into the body for low glare and is suitable for use without a cowl.



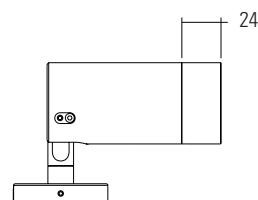
### /HC Anti-glare half cowl

The half cowl can be rotated in any direction to further reduce glare.



### /FC Anti-glare full cowl

A full cowl will reduce glare from all angles.



### /GS238 Glare shield

Standard glare shield, which provides an excellent balance between glare control and light output. This accessory works well in most applications. Not recommended for use with an anti-glare cowl.



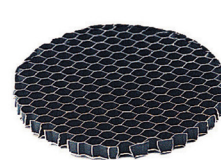
### /GSHM Half moon glare shield

Half-moon glare shield for applications that require very low glare. Lumen output is typically reduced by 60% with no light lost on the lit surface. Not recommended for use with an anti-glare cowl.



### /HL Honeycomb louvre

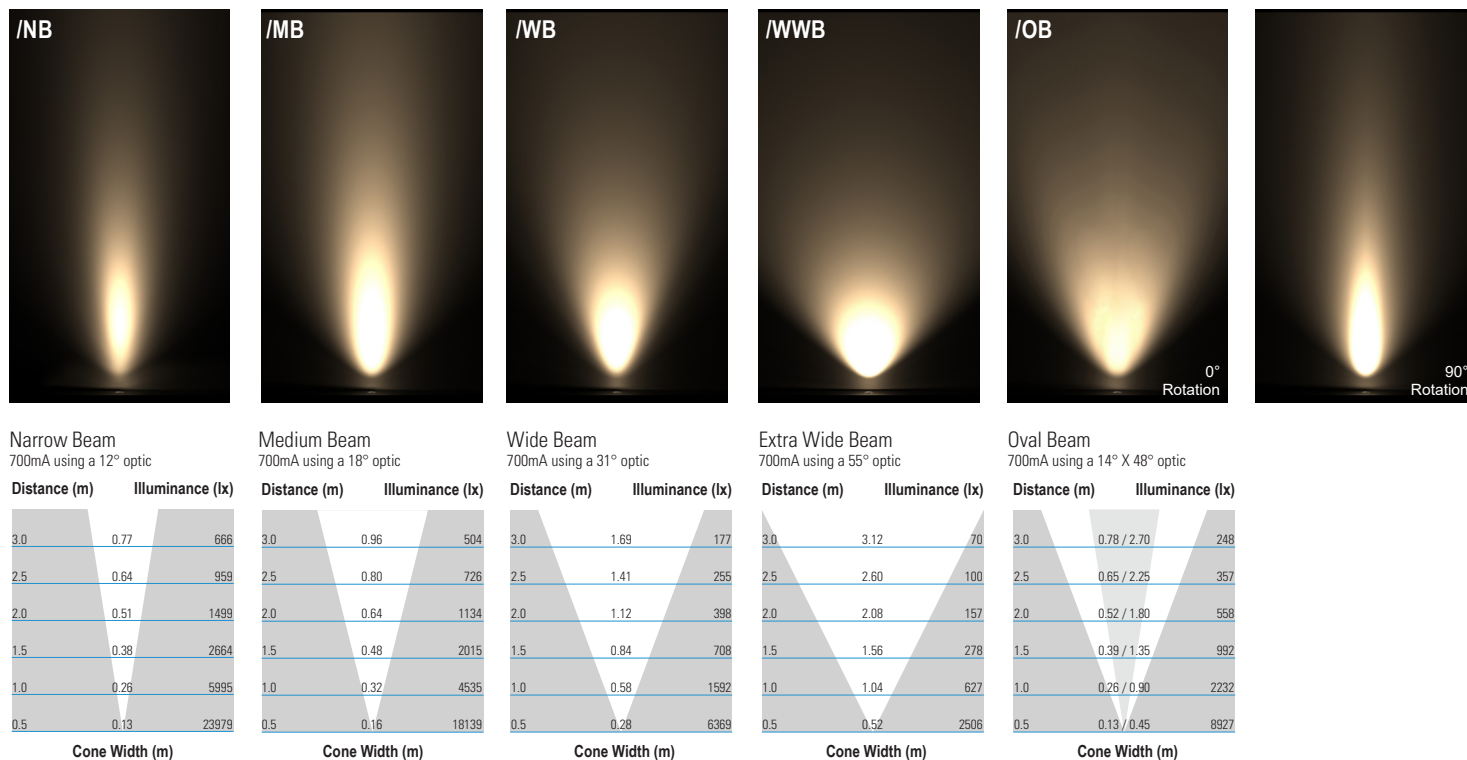
The honeycomb louvre can be used alone or with the /GSHM for further reducing glare from all angles. Please note this is not suitable for use with the 14° x 48° oval beam. Suitable for use with an anti-glare cowl.



## CONE DIAGRAMS

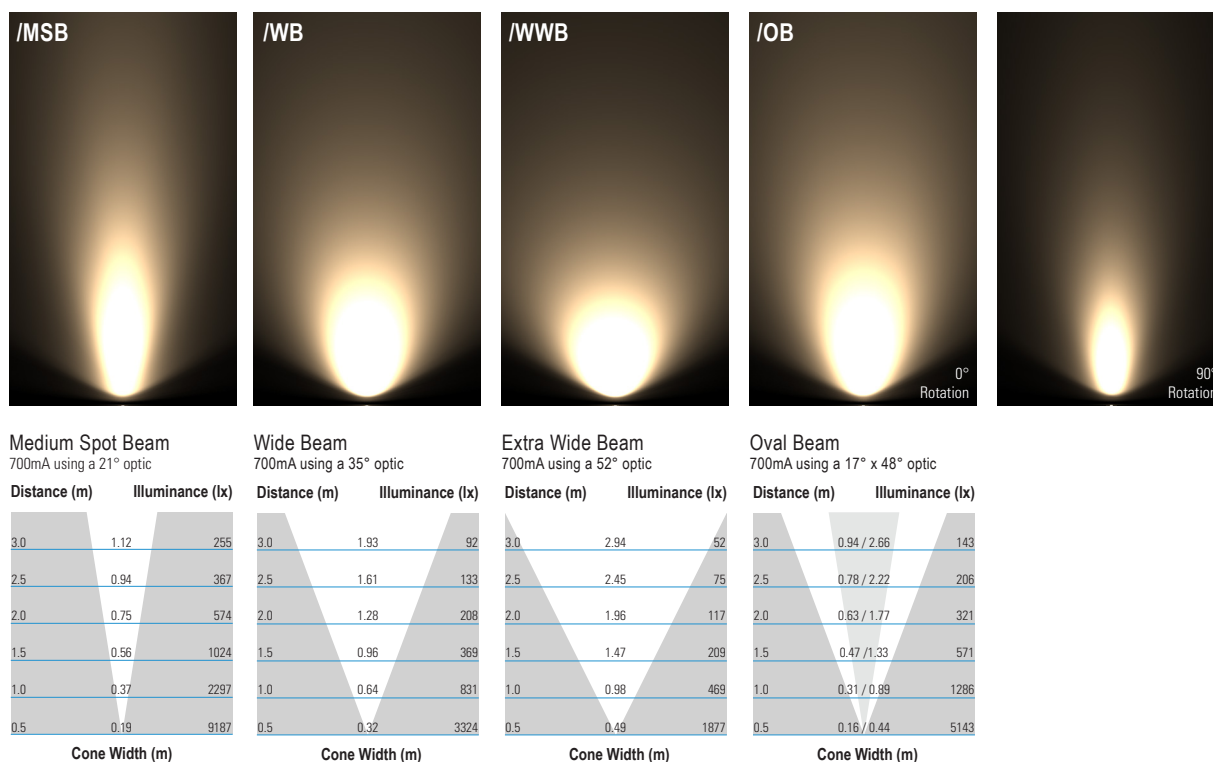
### E3 LED Engine

Cone diagrams below are based on a 3000K E3 LED engine run at maximum output 700mA, 10W. Images below represent 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 LD238 product page on the website.



### F1 LED Engine

Cone diagrams below are based on a 3000K F1 LED engine run at maximum output 700mA, 7W. Images below represent 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 LD238 product page on the website.



## ORDER CODES & OPTIONS

Example: LD238-E3-700/830/OB/HL/Black/BB

| Light engine & drive current | LED colour | Beam angle | Accessory | Finish | Fixing |
|------------------------------|------------|------------|-----------|--------|--------|
| LD238-                       | /          | /          | /         | /      | /      |

Ambient temperature key: ● 55°C

### ⊕ E3

|                                                                                   |              |                                |      |                    |      |                                                                                     |                                                                                       |                                                                                       |
|-----------------------------------------------------------------------------------|--------------|--------------------------------|------|--------------------|------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <span style="background-color: #FFC0CB; padding: 2px;">5W LED<br/>at 350mA</span> | LD238-E3-350 | 2200K<br>85+ CRI               | /822 | 12°<br>Narrow spot | /NB  |    |    |    |
| 7W LED<br>at 500mA                                                                | LD238-E3-500 | 2700K<br>85+ CRI               | /827 | 18°<br>Medium      | /MB  | /NC                                                                                 | Powder Coat<br>Black<br>(RAL 9005 - Standard)                                         | /SMB                                                                                  |
| 10W LED<br>at 700mA                                                               | LD238-E3-700 | 3000K<br>85+ CRI               | /830 | 31°<br>Wide        | /WB  |    |    |    |
|                                                                                   |              | 4000K<br>85+ CRI<br>on request | /840 | 55°<br>Extra Wide  | /WWB | /HC                                                                                 | Powder Coat<br>White<br>(RAL 9016)                                                    | /BB                                                                                   |
|                                                                                   |              | 5000K<br>85+ CRI               | /850 | 14° x 48°<br>Oval  | /OB  |    |   |    |
|                                                                                   |              | 2700K<br>90+ CRI               | /927 |                    |      | /FC                                                                                 | Powder Coat<br>Classic Bronze<br>(YM262E)                                             | /SAM                                                                                  |
|                                                                                   |              | 3000K<br>90+ CRI               | /930 |                    |      |  |  |  |

### ⦿ F1

|                                                                                     |              |                                |      |                    |      |                                                                                     |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|--------------|--------------------------------|------|--------------------|------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <span style="background-color: #FFC0CB; padding: 2px;">3.5W LED<br/>at 350mA</span> | LD238-F1-350 | 2200K<br>90+ CRI               | /922 | 21°<br>Medium spot | /MSB |  |  |  |
| 5W LED<br>at 500mA                                                                  | LD238-F1-500 | 2700K<br>90+ CRI               | /927 | 35°<br>Wide        | /MB  | /GS238                                                                              | Powder Coat<br>Textured<br>Fir Green<br>(RAL 6009)                                    | /GSF                                                                                  |
| 7W LED<br>at 700mA                                                                  | LD238-F1-700 | 3000K<br>90+ CRI               | /930 | 52°<br>Extra Wide  | /WB  |  |  |  |
|                                                                                     |              | 4000K<br>90+ CRI<br>on request | /940 | 17° x 48°<br>Oval  | /WWB | /GSHM                                                                               | Powder Coat<br>Textured<br>Mars Bronze                                                | /GSA                                                                                  |
|                                                                                     |              | 5000K<br>90+ CRI               | /950 |                    |      |  |  |                                                                                       |
|                                                                                     |              |                                |      |                    |      | /HL                                                                                 | Powder Coat<br>Gunmetal Grey<br>(RAL 7021)                                            |                                                                                       |
|                                                                                     |              |                                |      |                    |      |                                                                                     |  |                                                                                       |
|                                                                                     |              |                                |      |                    |      |                                                                                     | Custom<br>RAL Colours                                                                 |                                                                                       |

| Drivers                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use with 350mA, 500mA & 700mA constant current LED drivers<br>We have a range of dimmable LED drivers DMX and DALI compatible. Please see the downloads section on our website. |