

# Professional Lighting Solutions



Commercial/Downlighter Catalogue 2016



**LED: Light Emitting Diode**

LEDs are miniature Light Sources made of semi-conductor material, typically consisting of doped Gallium Nitride materials. They work on the principle of a p-n junction diode. When appropriate DC voltage is applied across the junctions, the diode is forward biased (on state) and the electrons combine with holes and energy is released in the form of visible light. This effect is called electro luminescence and color of light is determined by the band gap of the semiconductor.

**LED Lamp:**

A LED lamp (also called LED bar or Illuminator) is a type of solid state lighting (SSL) device that uses light-emitting diodes (LEDs) as the source of light. They usually comprise clusters of LEDs in a suitable housing.

LEDs by nature emit light in a very small focused wavelength range that is characteristic of the energy band gap of the semiconductor. In order to overcome this, two primary methods of creating white light from LEDs are being used; combination of Red-Green-Blue LEDs and phosphor converted LEDs.

**Why LED:**

Lower Energy Consumption  
Longer Lifetime  
Improved Robustness  
Smaller Size

**Instant Start:** LEDs are ideal for use in applications that are subject to frequent on-off cycling, unlike fluorescent lamps that burn out more quickly when cycled frequently or HID lamps that require a long time before restarting. Also LEDs and LED based luminaires can be dimmed easily. LED luminaires can be designed to focus its light at any desired beam angles (wide to ultra narrow) using small and compact lenses and mirrors. In comparison Incandescent and Fluorescent sources require large external reflector to achieve the same performance.

**Environment Friendly** - Does not Contain Mercury. Reduced CO<sub>2</sub> emission.

LEDs are shock resistant being solid state components and hence accidental breaking during transportation and operations are eliminated.

**Applications:**

- General lighting
- Low energy indicators
- Signage
- Automotive Lighting
- Traffic Lights
- Text and Video Displays.
- Street Lights
- LED Television
- Communication
- Sensors
- Light Matter Interaction
- Pico Projector



# Manufacturing Plants



Havells - Alwar



Havells - Baddi



Havells - Neemrana





Havells Sylvania - Germany



Havells Sylvania - Colombia



Havells Sylvania - Brazil

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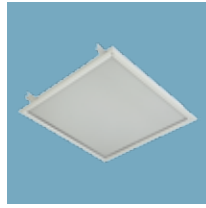
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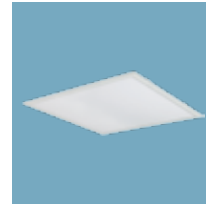
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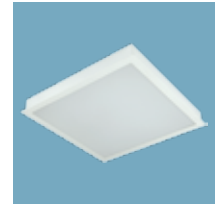
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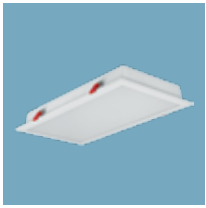
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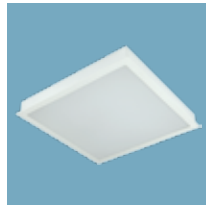
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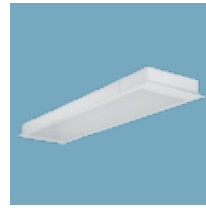
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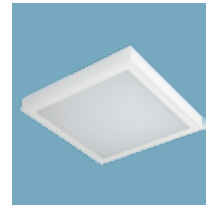
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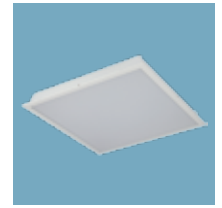
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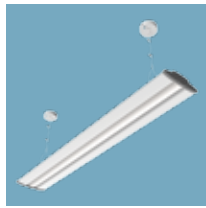
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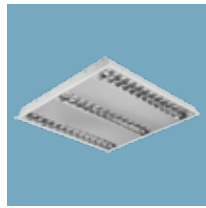
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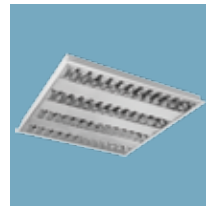
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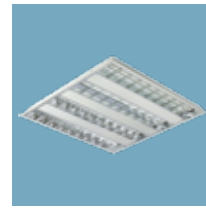
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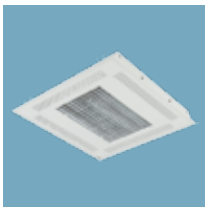
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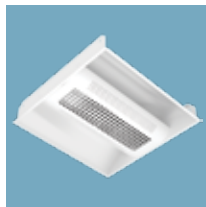
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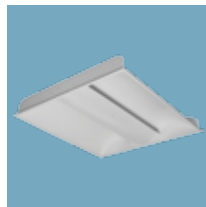
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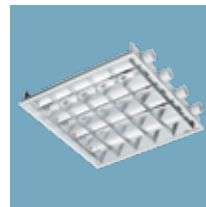
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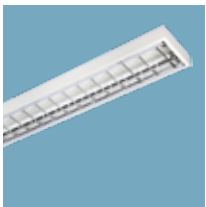
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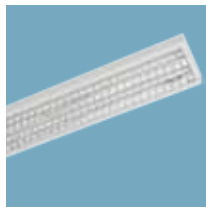
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# Downlighters



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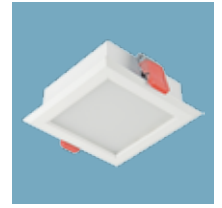
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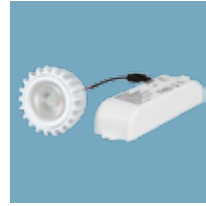
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# Professional Commercial Lighting



# Softline Brilliant Neo

Aesthetically designed architectural 2x2 LED luminaire which provides soft-light and glare free symmetrical illumination.

Green LED | 34W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 3400 lumens (100lm/W)
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta: -10°C to 35°C
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board
- Cut-Out: 580 x 580 mm
- Cable Entry:  $\varnothing 10$  mm

### Applications

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises

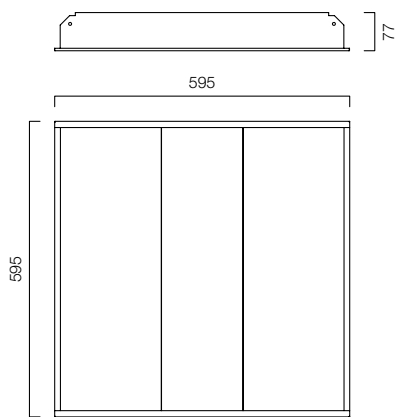


**Technical Specification**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEWEBP6UL1W036	34W	240	0.160	≥0.95	4000K	≥92
LHEWEBP7IN1W036	34W	240	0.160	≥0.95	6000K	≥95

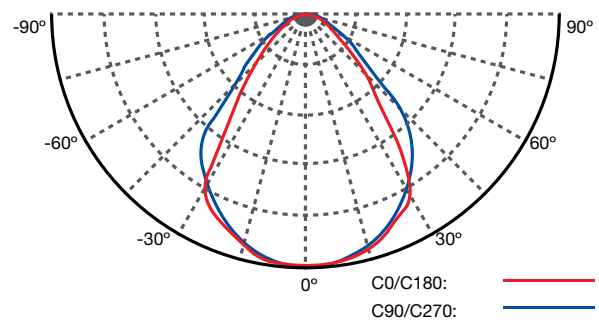
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**



# Scoop

Architectural 2x2 LED panel with prismatic diffuser which creates unique circular illumination pattern for state of art aesthetics.

Green LED | 42W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 3360 lumens (80lm/W)
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and GB ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Prismatic sheet
- Distribution: Direct/Indirect, Symmetrical
- Color Tolerance: LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta: -10 to 35 deg C
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board
- Cut-Out: 580 x 580 mm
- Cable Entry:  $\varnothing 10$  mm

### Applications

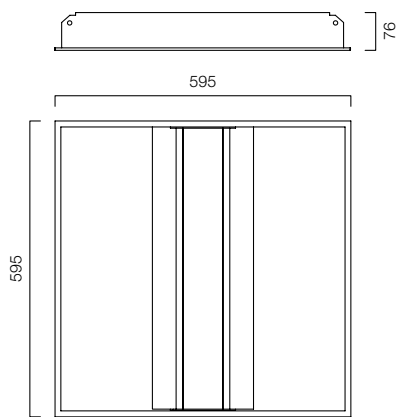
- Corporate Offices
- Modern Work Spaces
- Educational Centers
- Airport lounges
- Bank and ATM outlets

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEWEEP6PL1W042	42W	240	0.200	≥0.95	4000K	≥80
LHEWEEP7PL1W042	42W	240	0.200	≥0.95	6000K	≥85

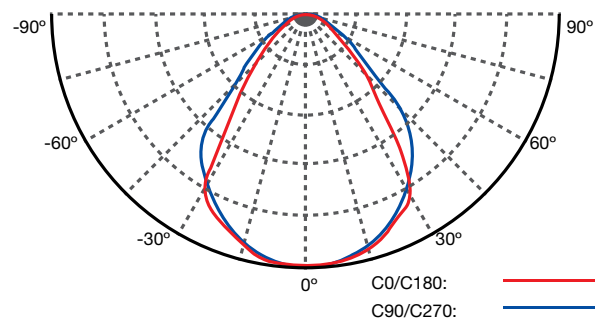
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**





# Endura Flat

Modern 2x2 LED panel for recessed dust-free installation with high brightness LEDs for glare-free homogenous illumination.

**Green LED** | **34/42/48W** | **Life 50000hrs** | **High Efficiency**



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 3400 lumens (100lm/W) for 34W panel, 3990 lumens (95lm/W) for 42W panel and 4320 lumens (90lm/W) for 48W panel
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular, POP and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP40

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular, POP & Gypsum Board
- Cut-Out: 580 x 580 mm
- Cable Entry:  $\varnothing 10$  mm

### Applications

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises



# Endura Small Window

High efficacy 2x2 recess LED luminaire with concentrated light for homogenous illumination.

Green LED | 25/34W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 2500 lumens (100lm/W) for 25W panel and 3400 lumens (100lm/W) for 34W panel
- Smaller lighting area provides high intensity illumination
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- $T_a$ :  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board
- Cut-Out: 580 x 580 mm
- Cable Entry:  $\varnothing 10$  mm

### Applications

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises





# Endura Slim Pro Panel

Ultra modern, slim & compact 36W recess mounting Edge-lit with opposite two edges luminaire comprising of high brightness LEDs.

Green LED | 36W | Life 30000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 30,000 hours ( $L_{70}B_{50}$ )
- Slim profile provides superior aesthetics
- Delivers upto 3060 lumens (85 lm/W) for 36W for 6000K panel.
- Available in Daylight (6000K) and Warm White (3000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: Aluminum
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Micro structured wave guide, Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (5 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta: -10°C to 35°C
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board

### Applications

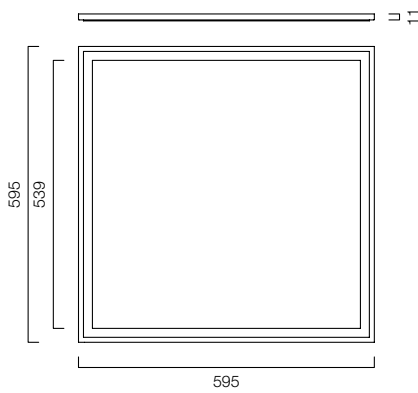
- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHECDIL5PN1W036	36W	240	0.160	≥0.90	3000K	≥80
LHECDIL7PN1W036	36W	240	0.160	≥0.90	6000K	≥80

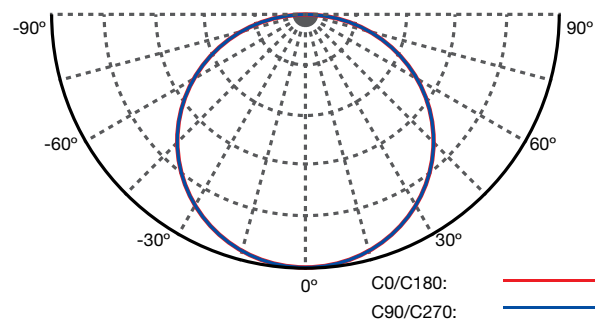
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**



# Pluto Neo Panel 2x2

High efficacy 2x2 recess LED flat panel with high brightness LED for glare-free homogenous illumination.

**Green LED** | **34/42W** | **Life 50000hrs** | **High Efficiency**



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 3570 lumens (105lm/W) for 34W panel and 4200 lumens (100lm/W) for 42W panel
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- $T_a$ :  $-10^\circ\text{C}$  to  $35^\circ\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board
- Cut-Out: 580 x 580 mm
- Cable Entry:  $\varnothing 10$  mm

### Applications

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Hospital premises





# Pluto Neo Panel 2x1

High efficacy 2x1 recess LED flat panel with high brightness LED for glare-free homogenous illumination.

Green LED | 20/34W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 3060 lumens (90lm/W) for 34W panel and 1800 lumens (90lm/W) for 20W panel
- Corrected power factor high efficiency LED driver ( $\geq 85\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board
- Cut-Out: 580 x 280 mm
- Cable Entry:  $\varnothing 10$  mm
- Fixing into false ceiling by 4 nos. SS springs/clips provided as per instructions

### Applications

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Hospital premises



# Pluto Neo Panel 1x1

High efficacy 1x1 recess LED flat panel with high brightness LED for glare-free homogenous illumination.

Green LED | 15W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 1275 lumens (85lm/W)
- Corrected power factor high efficiency LED driver ( $\geq 82\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board
- Cut-Out: 280 x 280 mm
- Cable Entry:  $\varnothing 10$  mm
- Fixing into false ceiling by 4 nos. SS springs/clips provided as per instructions

### Applications

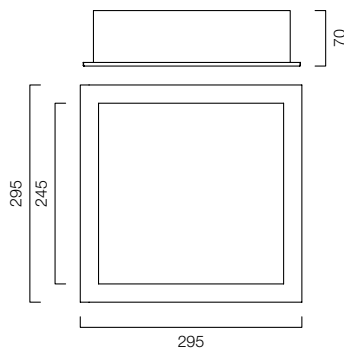
- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Hospital premises

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEWEBP6IN1W015	15W	240	0.070	≥0.95	4000K	≥80
LHEWEBP7IN1W015	15W	240	0.070	≥0.95	6000K	≥85

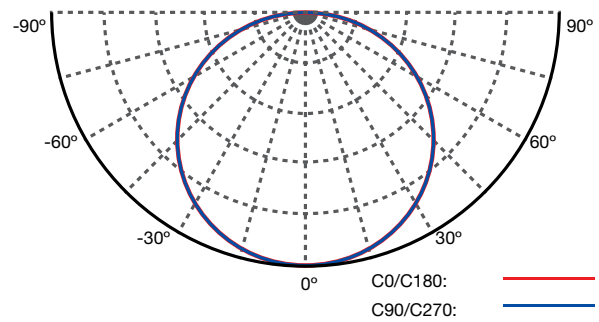
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**





# Pluto 2x2

Aesthetically designed 2x2 LED Flat panel which provides soft-light and glare free symmetrical illumination. Also for POP ceilings.

**Green LED** | **34/48W** | **Life 50000hrs** | **High Efficiency**



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 3400 lumens (100lm/W) for 34W panel, 3990 lumens (95lm/W) for 42W panel and 4320 lumens (90lm/W) for 48W panel
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board, Plaster of Paris ceiling
- Cut-Out: 580 x 580 mm
- Cable Entry:  $\varnothing 10$  mm

### Applications

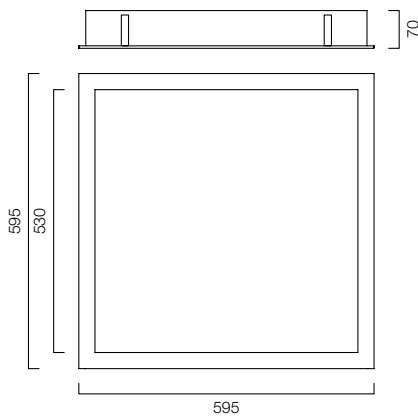
- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Hospital premises

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEEBP6CUL1W034	34W	240	0.160	≥0.95	4000K	≥92
LHEEBP7CUL1W034	34W	240	0.160	≥0.95	6000K	≥95
LHEWEBP7UL1W048	48W	240	0.220	≥0.95	6000K	≥85

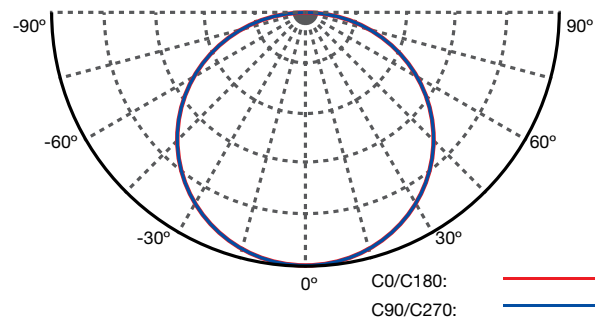
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**



# Pluto 4x1

Aesthetically designed 4x1 LED Flat panel which provides soft-light and glare free symmetrical illumination. Also for POP ceilings.

**Green LED** | **34/42W** | **Life 50000hrs** | **High Efficiency**



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 3400 lumens (100lm/W) for 34W panel, 3990 lumens (95lm/W) for 42W panel and 4320 lumens (90lm/W) for 48W panel
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board, Plaster of Paris ceiling
- Cut-Out: 1180 x 280 mm
- Cable Entry:  $\varnothing 10$  mm

### Applications

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Hospital premises





# Pluto Surface

Aesthetically designed 2x2 & 4x1 LED flat panel for Surface/Suspended mounting which provides soft-light and glare free symmetrical illumination.

Green LED | 34W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 3230 lumens (95lm/W)
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Surface Mounting
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta: -10°C to 35°C
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Surface
- Provision for surface mounting through 4 nos. holes of  $\varnothing 5$  mm provided at the back of the fixture

### Applications

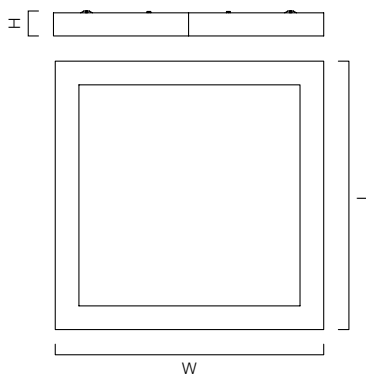
- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises

**Technical Data**

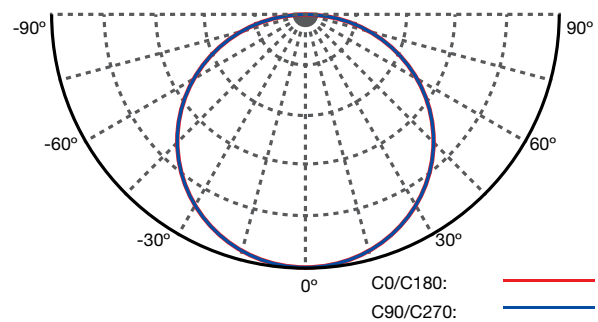
Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEWEBP6ON1W034 (2x2)	34W	240	0.160	≥0.95	4000K	≥92
LHEWEBP7NL1W036 (2x2)	34W	240	0.160	≥0.95	6000K	≥95
LHEWEBP6PN1W034 (4x1)	34W	240	0.160	≥0.95	4000K	≥90
LHEWEBP7PN1W036 (4x1)	34W	240	0.160	≥0.95	6000K	≥93

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



**Polar Plot**



Ordering Code	Length (L)	Width (W)	Height (H)	CD Mounting Holes
LHEWEBP7NL1W036 (2x2)	595±1	595±1	74±1	450x500
LHEWEBP7PN1W036 (4x1)	1155±1	295±1	74±1	225x1000

All dimensions are in mm



# Venus Neo

Ultra modern designed architectural 2x2 LED luminaire which provides soft-light and glare free symmetrical illumination.

**Green LED** | **34/42W** | **Life 35000hrs** | **High Efficiency**



## Product Specifications

### Features & Benefits

- Long life 35,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 3060 lumens (90lm/W) for 34W panel and 3570 lumens (85lm/W) for 42W panel
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting with Modular and Gypsum Board ceilings
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (5 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- $T_a$ :  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Modular & Gypsum Board
- Cut-Out: 580 x 580 mm
- Cable Entry:  $\varnothing 10$  mm

### Applications

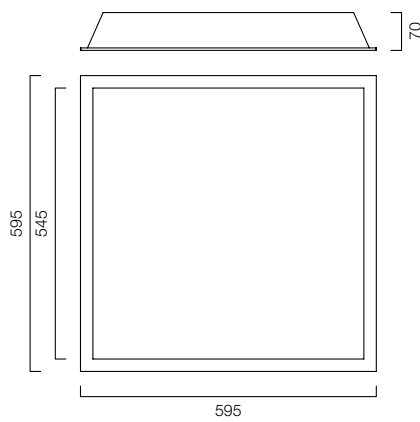
- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEWDRP6PL1W034	34W	240	0.160	≥0.95	4000K	≥85
LHEWDRP7PL1W034	34W	240	0.160	≥0.95	6000K	≥88
LHEWDRP6PL1W042	42W	240	0.200	≥0.95	4000K	≥82
LHEWDRP7PL1W042	42W	240	0.200	≥0.95	6000K	≥85

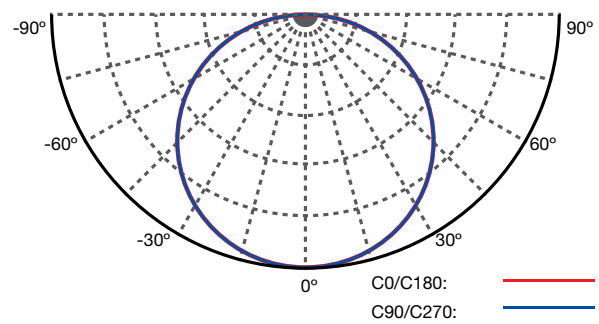
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**



# Consta LED

Suspended architectural LED luminaire provides soft-light and glare free symmetrical illumination also available in continuous mounting option.

Green LED | 20/40W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 1900 lumens (95lm/W) for 20W panel and 3800 lumens (95lm/W) for 40W panel
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K), Neutral White (4000K) and Warm White (3000K)
- Suitable for Suspended Mounting
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Suspended
- Can be suspended with height adjustable suspension kit as per the instruction manual provided with the fixture
- Can be installed in continuous with click shut mechanism as per the instruction manual provided with the fixture

### Applications

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises





## Avion

Suspended architectural LED luminaire provides soft-light and glare free symmetrical illumination also available in continuous mounting option.

Green LED | 40W | Life 50000hrs | High Efficiency



### Product Specifications

#### Features & Benefits

- Long life 35,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 3800 lumens (95lm/W) for 40W
- Corrected power factor high efficiency LED driver ( $\geq 88\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Suspended Mounting
- Easy installation and zero maintenance

#### Construction

- Housing: Aluminum
- Finish: Anodised
- IP rating: IP20

#### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (5 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

#### Electrical

- Electrical Protection: Class II
- Surge Protection: 3kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

#### Installation

- Mounting: Suspended
- Can be suspended with height adjustable suspension kit as per the instruction manual provided with the fixture
- Can be installed in continuous with click shut mechanism as per the instruction manual provided with the fixture

#### Applications

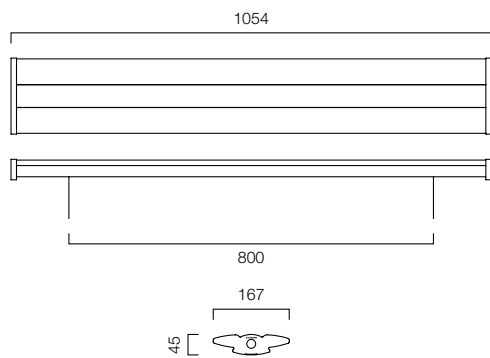
- Hospitals
- Banks & offices
- Corridors & Lobbies
- Reception & Public service areas

**Technical Data**

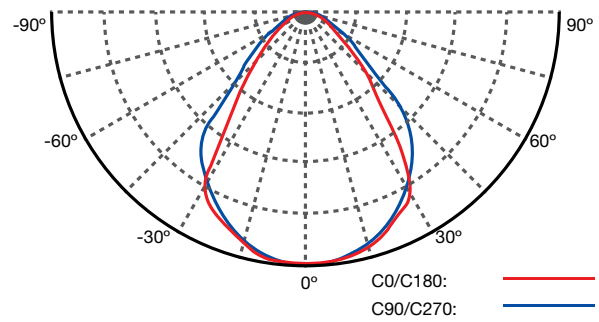
Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEDDGN6IX1W040	40W	240	0.180	≥0.95	4000K	≥90
LHEDDGN7IX1W040	40W	240	0.180	≥0.95	5000K	≥95

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



**Polar Plot**

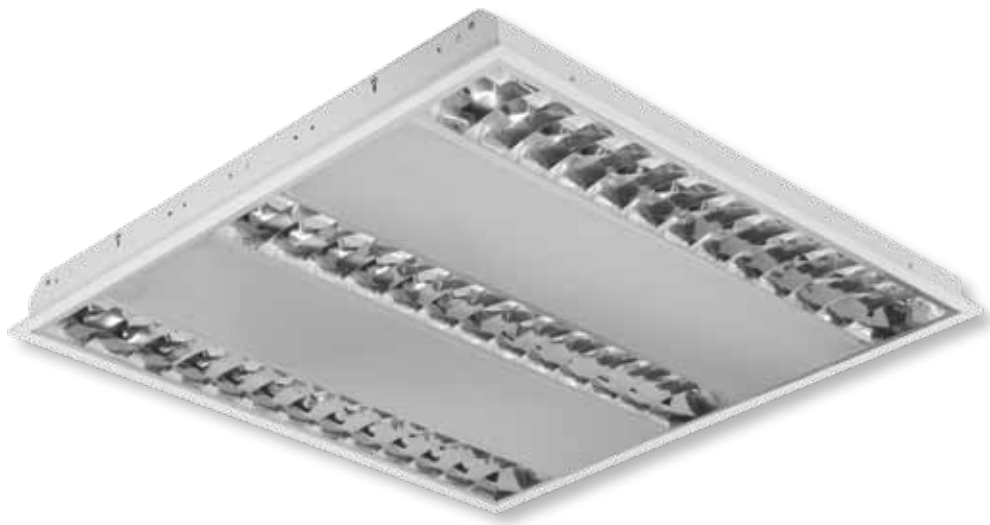


All dimensions are in mm



# Ivy Mirror Optics (Crystal)

Exclusive premium range recess mounting mirror optic luminaire suitable for 14W/ 24W/ 28W T5 compact linear fluorescent lamps for Modular/ Armstrong ceiling.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Reflector made up of high purity pre-anodised aluminium sheet. Iridescence free, MIRO imported aluminium reflector with polycarbonate translucent cross louvre assembly & in-fill panel for wide batwing distribution & dispersive lighting. Reflector fixed to the housing with two spring loaded toggles and hinged by twin wire straps for re-lamping/ easy maintenance.

### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

### Electric gear

Pre-wired with HF high performance electronic ballast (THD $\leq$ 33%) upto terminal block.

With HF digital ballast option power factor  $\geq$ 0.98, THD $\leq$ 10% available on request.

### Mounting

Knock-out provision for suspension through  $\varnothing$ 19mm conduit for traditional mounting.

### Applications

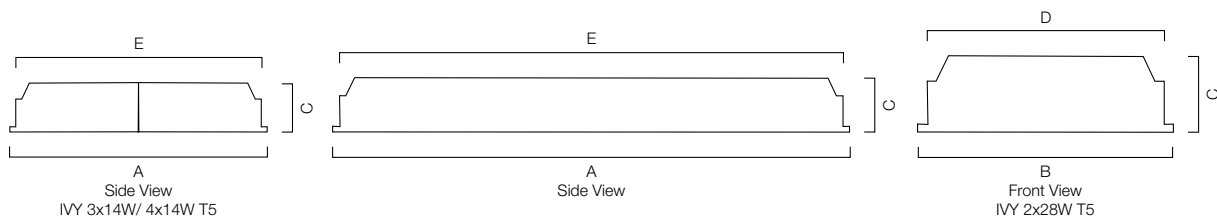
- Airport lounges
- Corporate offices
- BPOs & call centers
- Modern work spaces
- Banks & ATM outlets
- Software development centers

**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHCTP1214340	Polycarbonate	2x14W T5 FTL	240	0.140	G5	≥0.95
LHCTP1224334	Polycarbonate	2x24W T5 FTL	240	0.220	G5	≥0.95
LHCTP1314331	Polycarbonate	3x14W T5 FTL	240	0.210	G5	≥0.95
LHFCDF3PU1W014*	Polycarbonate	3x14W T5 FTL	240	0.210	G5	≥0.98
LHCTP1414340	Polycarbonate	4x14W T5 FTL	240	0.280	G5	≥0.95
LHCTP1414349*	Polycarbonate	4x14W T5 FTL	240 <td 0.280	G5	≥0.98	
LHFCDF4IU1W024	Polycarbonate	4x24W T5 FTL	240	0.440	G5	≥0.95
LHCTP8228333	Polycarbonate	2x28W T5 FTL	240	0.280	G5	≥0.95

\*THD≤10%.

**Technical Drawing**



Lamp Type	A	B	C	D	E
4x14W T5	595±2	595±2	52±1	580±2	580±2
2x24W T5	595±2	296±2	52±1	280±2	580±2
3x14W T5	595±2	595±2	52±1	580±2	580±2
2x14W T5	595±2	296±2	52±1	280±2	580±2
4x24W T5	595±2	595±2	52±1	580±2	580±2
2x28W T5	1196±2	296±2	52±1	280±2	1180±2

Cutout size: D x E  
All dimensions are in mm





# Ivy Mirror Optics (Classic)

Exclusive premium range recess mounting mirror optic luminaire suitable for 14W/24W/28W T5 linear fluorescent lamps for Modular/ Armstrong ceiling.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Reflector made up of high purity pre-anodised aluminium sheet. Iridescence free, MIRO imported aluminium reflector with back folded double parabolic cross louvre assembly & in-fill panel for wide batwing distribution & good glare control. Reflector fixed to the housing with two spring loaded toggles and hinged by twin wire straps for re-lamping/ easy maintenance.

### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

### Electric gear

Pre-wired with HF high performance electronic ballast (THD $\leq$ 33%) upto terminal block.

With HF digital ballast option power factor  $\geq$ 0.98, THD $\leq$ 10% available on request.

### Mounting

Knock-out provision for suspension through  $\varnothing$ 19mm conduit for traditional mounting.

### Applications

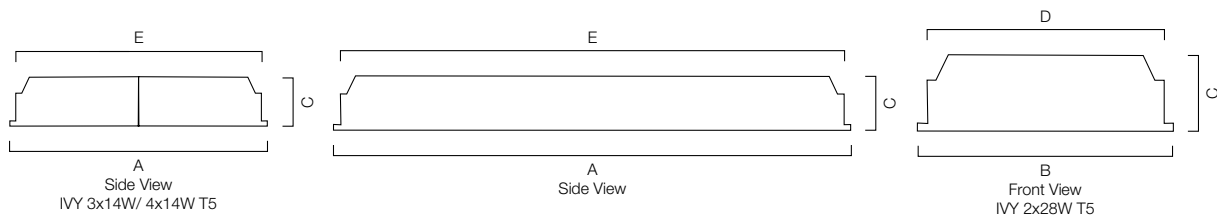
- Airport lounges
- Corporate offices
- BPOs & call centers
- Modern work spaces
- Banks & ATM outlets
- Software development centers

**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHCTD1314331	L2 Category	3x14W T5 FTL	240	0.210	G5	≥0.95
LHCTD4414340	L2 Category	4x14W T5 FTL	240	0.280	G5	≥0.95
LHCTD1414049*	L2 Category	4x14W T5 FTL	240	0.280	G5	≥0.98
LHCTD7228333	L2 Category	2x28W T5 FTL	240	0.280	G5	≥0.95

\*THD≤10%.

**Technical Drawing**



Lamp Type	A	B	C	D	E
3x14W T5	595±2	595±2	52±1	580±2	580±2
4x14W T5	595±2	595±2	52±1	580±2	580±2
2x28W T5	1195±2	295±2	52±1	280±2	1180±2

Cutout size: D x E  
All dimensions are in mm



## ly 2

Exclusive premium range recess mounting mirror optic luminaire suitable for 14W T5 linear fluorescent lamps for Modular/ Armstrong ceiling.



### Product Specifications

#### Housing

Made up of CRCA sheet steel.

#### Finish

Epoxy powder coated white after phosphochromate treatment.

#### Optics

High efficiency, high quality, high purity pre anodised aluminium side reflectors in mirror finish and matt finish cross louvres. Aluminium powder coated in-fill panel for wide bat-wing distribution and good glare control. Reflector fixed to the housing with two spring loaded toggles and hinged by twin PVC straps for relamping/ easy maintenance.

#### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

#### Electric gear

Pre-wired with HF high performance electronic ballast (THD $\leq$ 10%) upto terminal block.

#### Mounting

Knock-out provision for suspension through  $\varnothing$ 19mm conduit for traditional mounting.

#### Applications

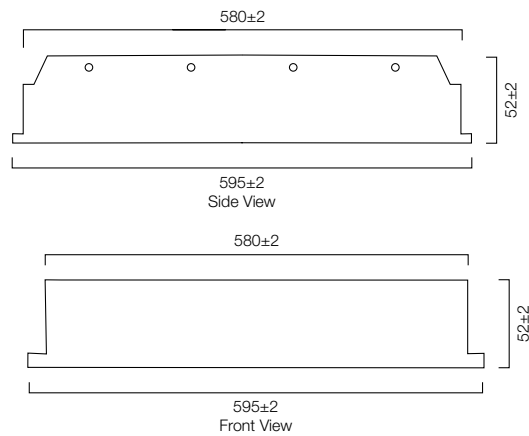
- Airport lounges
- Corporate offices
- BPOs & call centers
- Modern work spaces
- Banks & ATM outlets
- Software development centers

**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHFCGZF4PV1W014	Non Category	4x14W T5 FTL	240	0.280	G5	≥0.98
LHFCGZF4IA1W014*	Non Category	4x14W T5 FTL	240	0.280	G5	≥0.95

\*THD≤10%. Item code of ballast : LHGEAFCBHQA2014 (THD≤33%) 2x14W T5 ECO.

**Technical Drawing**



Cutout size: 580x580  
All dimensions are in mm



# Mirror Optics T5 SR Series

Surface cum recess mounting decorative mirror optic luminaire suitable for 28W T5 linear fluorescent lamps designed for Modular/ Gypsum board false ceiling.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Reflector made up of high purity pre-anodised aluminium sheet.

Non-Category (Non-cat): High-efficiency, high quality mirror optics with aluminium faceted side reflectors and serrated cross louvres.

L2 Category (Cat 2): High-gloss, improved efficiency mirror optic of high quality parabolic aluminium side

reflectors with aluminium in-fill panel and back folded double parabolic cross louvres.

Reflector fixed to the housing with four SS latches.

### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

### Electric gear

Pre-wired with single high performance electronic ballast (THD $\leq$ 33%) upto the terminal block.

Option of high frequency digital ballast (THD $\leq$ 10%) available on request.

### Mounting

Provision for suspension through  $\varnothing$ 19 mm conduit or on ceiling with 4 nos. holes of  $\varnothing$ 5 mm.

### Applications

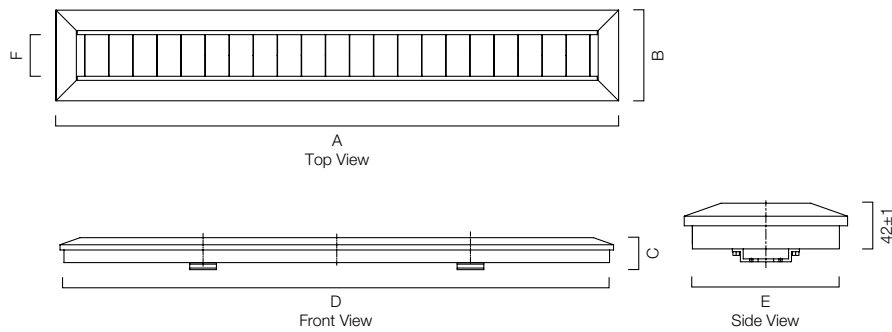
- Hospitals
- Corridors & lobbies
- Departmental stores
- Banks & small offices
- Reception & public service areas



**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHECDEFDIH1W028	Non Category	1x28W FTL T5	240	0.140	G5	≥0.95
LHECDEFIOIH1W028	Non Category	2x28W FTL T5	240	0.280	G5	≥0.95

**Technical Drawing**



Lamp Type	A	B	C	D	E	F
1x28W T5	1245±2	165±2	75±1	1225±2	145±2	91±2
2x28W T5	1245±2	220±2	75±1	1225±2	177±2	123±2

Cutout size: D x E  
All dimensions are in mm



# Mirror Optics P5 AS Series (SW)

Recess mounting decorative luminaire with Paralite P5 louvre suitable for 2x36W FP-L or 3x36W FP-L designed for Modular/ Armstrong/ POP/ Gypsum board false ceiling.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Optic assembly made up of high purity pre-anodised aluminium reflector with specially designed precision injection moulded square type metallized Fire Retardant Polystyrene (FRP) louvres. Decorative pattern of perforation on front cover improves aesthetic.

Frame held to the housing with four SS spring clips, acting as a hinge during relamping/ maintenance by pulling downwards.

### Lamp holder

White PBT housing with brass contacts and SS clips.

### Electric gear

Pre-wired with high frequency electronic ballast (THD $\leq$ 33%) upto terminal block.

### Mounting

Provision for suspension with clutch wire arrangement through 2 nos. holes of  $\text{\O}8$  mm provided diagonally at the back of the fixture.

### Applications

- Small offices
- Shops & boutiques
- Conference rooms
- Departmental stores
- Reception & public service areas

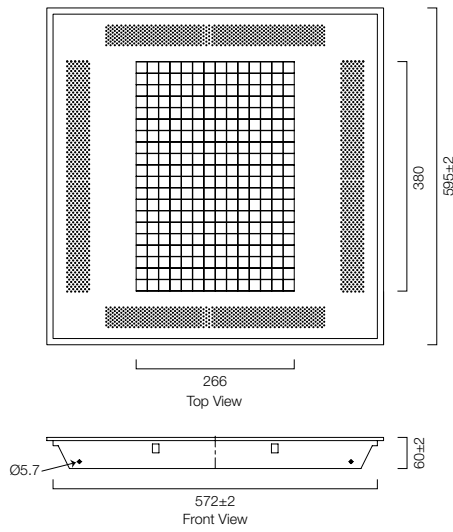
**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHECDEG2IN1W036	Paralite P5	2x36W FP-L (HF)	240	0.320	2G11	≥0.95
LHECDEG3IN1W036	Paralite P5	3x36W FP-L (HF)	240	0.480	2G11	≥0.95

With Olympian Slim Electronic Ballast Item Code: LHBF28904025.

\* With HF digital ballast option power factor ≥0.98, THD≤10% available on request.

**Technical Drawing**



Cutout size: 580x580  
 Cable Entry: Ø9.5  
 All dimensions are in mm



# Softline New Direct AS Series

Recess mounting decorative luminaire with Paralite P5 louvre suitable for 2x36W FP-L designed for Modular/ Armstrong/ POP/ Gypsum board false ceiling.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Optic assembly made up white powder coated reflector with specially designed precision injection moulded square type metalised Fire Retardent Polystyrene (FRP) louvres.

Lamp cover fixed to the housing with "clip-on" arrangement.

### Lamp holder

White PBT housing with brass contacts and SS clips.

### Electric gear

Pre-wired with high frequency electronic ballast (THD $\leq$ 33%) upto terminal block.

### Mounting

- Provision for suspension with chain/ hooks through 4 nos holes of  $\varnothing$ 8 mm provided at the corners (495x550mm)
- Provision for POP mounting with clutch wire arrangement through holes of  $\varnothing$ 5mm provided at the centre at a distance of 530mm

### Applications

- Small offices
- Shops & boutiques
- Conference rooms
- Departmental stores
- Reception & public service areas

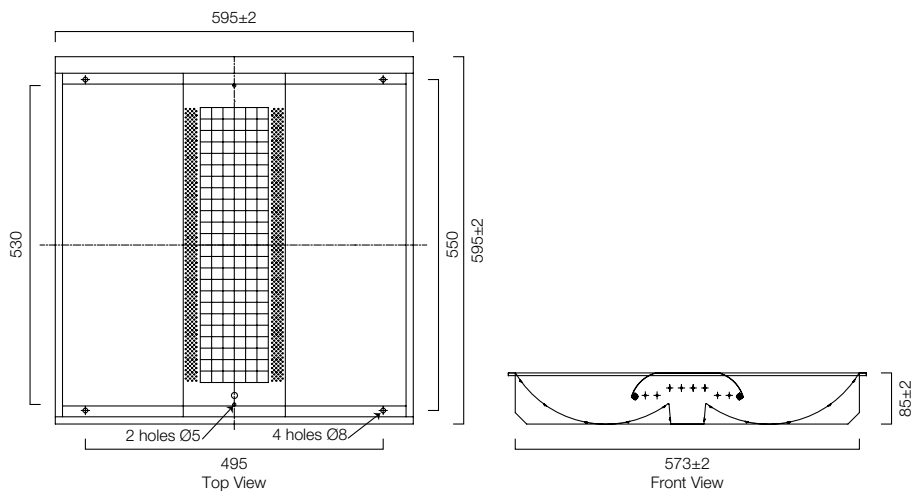
**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor*
LHECDEL2IP1W036	Paralite P5	2x36W FP-L (HF)	240	0.320	2G11	≥0.95

With Olympian Slim EB - (LHBF28904025).

\*With HF digital ballast option power factor ≥0.98, THD≤10% available on request.

**Technical Drawing**



Cutout size: 580x580  
 Cable Entry: Ø10  
 All dimensions are in mm





# Softline New AS Series

Recess mounting decorative luminaire with perforated lamp shield suitable for 2x36W FP-L designed for Modular/ Armstrong/ POP/ Gypsum board false ceiling.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Optic assembly made up CRCA sheet white powder coated perforated reflector with precised round holes ensuring comfortable & relaxing illumination offering soft light.

Lamp cover fixed to the housing with "clip-on" arrangement.

### Lamp holder

White PBT housing with brass contacts and SS clips.

### Electric gear

Pre-wired with high frequency electronic ballast (THD $\leq$ 33%) upto terminal block.

### Mounting

- Provision for suspension with chain/ hooks through 4 nos holes of  $\varnothing$ 8 mm provided at the corners (495x550mm)
- Provision for POP mounting with clutch wire arrangement through holes of  $\varnothing$ 5mm provided at the centre at a distance of 530mm

### Applications

- Small offices
- Shops & boutiques
- Conference rooms
- Departmental stores
- Reception & public service areas

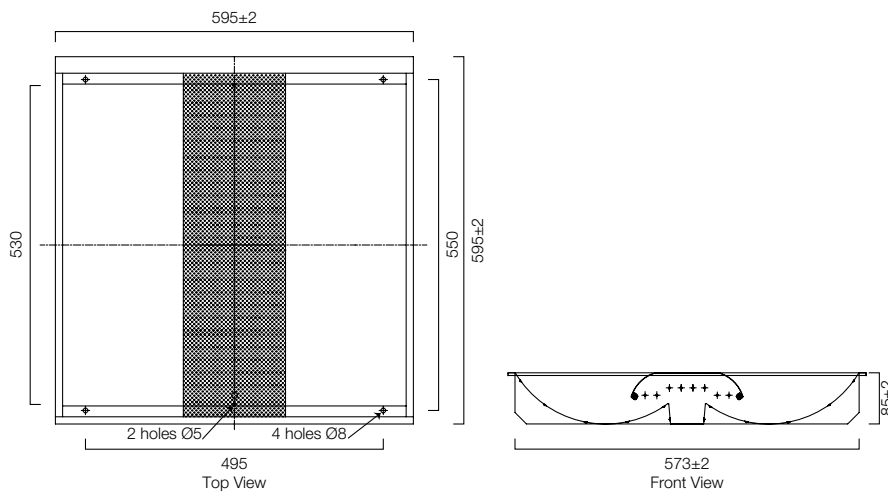
**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor*
LHFCDEL2IN1W036	Perforated	2x36W FP-L (HF)	240	0.320	2G11	≥0.95

With Olympian Slim EB - (LHBF28904025).

\*With HF digital ballast option power factor ≥0.98, THD≤10% available on request.

**Technical Drawing**



Cutout size: 580x580  
 Cable Entry: Ø10  
 All dimensions are in mm



# Mirror Optics AS Series

Recess mounting decorative mirror optic luminaire suitable for 4x18/20W linear fluorescent lamps designed for Modular/ Armstrong/ POP/ Gypsum board false ceiling.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Reflector made up of high purity pre-anodised aluminium sheet.

Non-Category (Non-cat): High-efficiency, high quality mirror optics with aluminium faceted side reflectors and serated cross louvres.

L2 Category (Cat 2): High-gloss, improved efficiency mirror optic of high quality aluminium with double parabolic

side reflectors and parabolic cross louvres.

Reflector fixed to the housing with four SS latches and hinged by twin nylon strings for re-lamping / easy maintenance.

### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

### Electric gear

- Pre-wired with open construction copper wound ferromagnetic ballast, 110V starter (FS2) and power factor improvement capacitor upto terminal block

- Pre-wired with high frequency electronic ballast (THD<33%) upto terminal block as standard

### Mounting

Provision for suspension through Ø19 mm conduit or with chain/ hooks through 4 nos holes of Ø6 mm.

### Applications

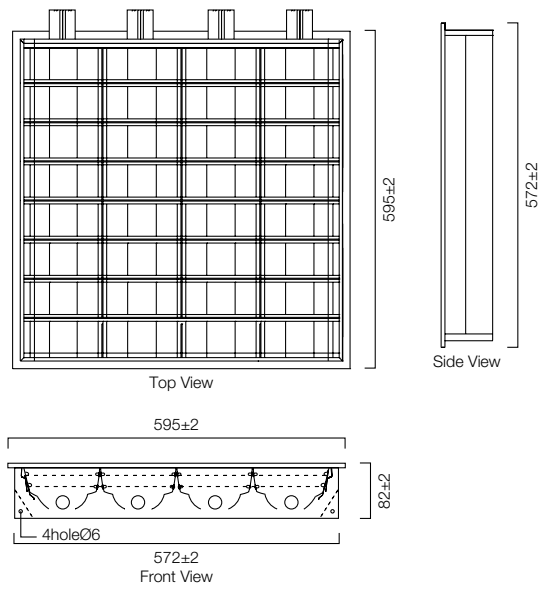
- Airport lounges
- Computer centers
- Conference rooms
- Banks & small offices

**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor*
LHFCDEG4PV1W018	Non-Category	4x18/20W FTL (HF)	240	0.320	G13	≥0.98

\*With HF digital ballast option power factor  $\geq 0.98$ , THD $\leq 10\%$  available on request.

**Technical Drawing**



Cutout size: 580x580  
All dimensions are in mm



# Mirror Optics T8 SR Series

Surface cum recess mounting decorative slim mirror optic luminaire suitable for 1x36W/2x36W linear fluorescent lamp designed for POP/GB false ceiling.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Reflector made up of high purity pre-anodised aluminium sheet.

Non-Category (Non-cat): High-efficiency, high quality mirror optics with aluminium faceted side reflectors and serrated cross louvres.

Reflector fixed to the housing with four SS latches.

### Lamp holder

Push fit rotary type white polycarbonate/PBT with electrical grade brass contacts.

### Electric gear

- Pre-wired with open construction copper wound ferromagnetic ballast, universal starter (FSU) and power factor improvement capacitor upto terminal block
- Pre-wired with high frequency electronic ballast (THD $\leq$ 33%) upto terminal block as standard
- Option with high frequency digital ballast THD $\leq$ 10% available on request

### Mounting

Provision for suspension through  $\varnothing$ 19 mm conduit or on ceiling with 4 nos. holes of  $\varnothing$ 5 mm.

### Applications

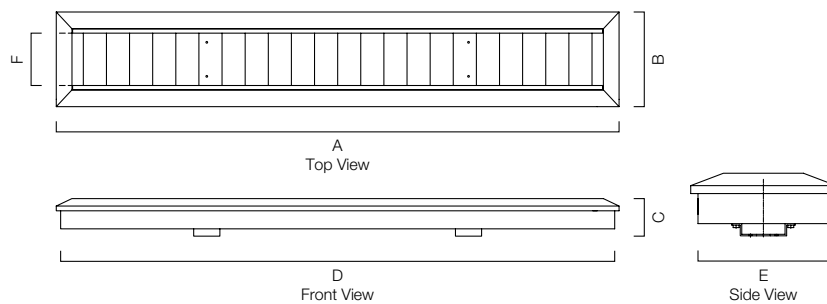
- Hospitals
- Corridors & lobbies
- Departmental stores
- Banks & small offices
- Reception & public service areas

**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor*
LHECDEGFIH1W036	Non-Category	1x36W FTL T8 HF	240	0.160	G13	≥0.95
LHECDEGOIH1W036	Non-Category	2x36W FTL T8 HF	240	0.320	G13	≥0.95
LHFCDEL2TV1W020	Non-Category	2x20W Retro LED DS	240	0.180	-	≥0.95
LHFCDEL2TV1W022	Non-Category	2x22W LED Tube SS	240	0.200	-	≥0.95

\*With HF digital ballast option power factor ≥0.98, THD≤10% available on request.

**Technical Drawing**



Lamp Type	A	B	C	D	E	F
1x36W T8	1295±2	180±2	75±1	1275±2	155±2	91±2
2x36W T8	1295±2	220±2	75±1	1275±2	195±2	123±2
2x20/22W LED	1295±2	220±2	75±1	1275±2	195±2	123±2

Cutout size: D x E  
All dimensions are in mm





# Mirror Optic Surface

Surface mounting decorative mirror optic luminaire suitable for 2x1 1W CFL/PL-S.



## Product Specifications

### Housing & Finish

Epoxy powder coated white CRCA sheet after phosphochromate treatment.

### Optics

Reflector made up of high purity pre-anodised aluminium sheet.

Non-Category (Non-cat) : High-efficiency, high quality mirror optics with glossy aluminium side reflectors and serated cross louvres in matt finish.

Reflector fixed to the housing with four SS spring clips.

### Lamp holder

White polycarbonate/ ABS lamp holders with electrical grade brass contacts.

### Electric gear

Pre-wired with two nos. high frequency electronic ballast upto terminal block.

### Mounting

Can be mounted on ceiling by 4 nos. dimpled holes of Ø5 mm at a distance of 225x110 mm.

### Applications

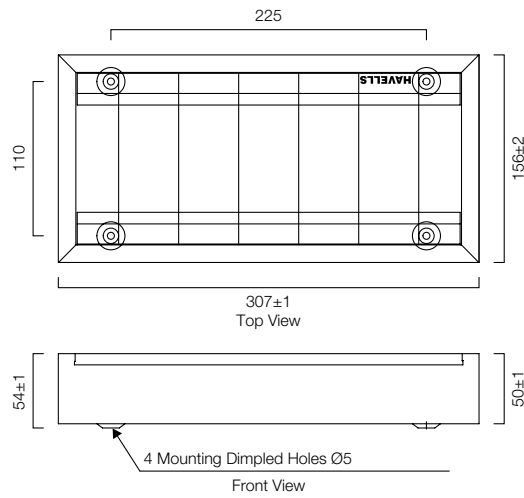
- Libraries
- Waiting rooms
- Banks & offices
- Computer centers
- Reception & public service areas

**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHEDHSG2II1W011	Non-Category	2x11W CFL/PL-S	240	0.190	G23	≥0.55

Ballast Code: LHBC08113054.

**Technical Drawing**



All dimensions are in mm



# Mirror Optic Surface

Surface mounting decorative mirror optic luminaire suitable for 2x28W (T5) linear fluorescent lamps.



## Product Specifications

### Housing & Finish

Epoxy powder coated white CRCA sheet after phosphochromate treatment.

### Optics

Reflector made up of high purity pre-anodised aluminium sheet.

Non-Category (Non-cat): High-efficiency, high quality mirror optics with glossy aluminium side reflectors and serated cross louvres in matt finish.

Reflector fixed to the housing with four SS spring clips acting as a hinge for relamping/ easy maintenance by pulling downwards.

### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

### Electric gear

Pre-wired with high frequency electronic ballast (THD $\leq$ 33%) upto terminal block.

### Mounting

- Can be mounted on ceiling by 4 nos. dimpled holes of  $\text{Ø}5$  mm at a distance of 1000x110mm
- Provision for suspension through  $\text{Ø}19$ mm conduit with 2 nos. knockout holes of  $\text{Ø}20$ mm at a distance of 600mm

### Applications

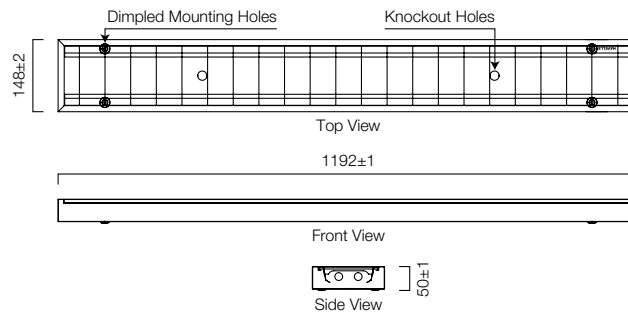
- Libraries
- Waiting rooms
- Banks & offices
- Computer centers
- Reception & public service areas

**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHECDEG2IN1W028	Non-Category	2x28W T5 FTL	240	0.280	G5	≥0.95

Ballast Code: LHBT03128032 (T5 Ez).

**Technical Drawing**



All dimensions are in mm



# Innovate Surface

Exclusive premium range surface mounting mirror optic luminaire suitable for 28W/54W T5 linear fluorescent lamps.



## Product Specifications

### Housing

Made up of CRCA sheet steel.

### Finish

Epoxy powder coated white after phosphochromate treatment.

### Optics

Reflector made up of high purity pre-anodised aluminium sheet. Iridescence free, aluminium reflector with back folded double parabolic cross louvre assembly & in-fill panel for wide batwing distribution & good glare control. Reflector fixed to the housing with two spring loaded toggles and hinged by twin wire straps for re-lamping/ easy maintenance.

### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

### Electric gear

Pre-wired with HF high performance electronic ballast (THD $\leq$ 33%) upto terminal block.

Option of high frequency digital ballast (THD $\leq$ 10%) available on request.

### Mounting

Fixed to the ceiling by means of 4 holes  $\text{\O}5.0$  mm at CD of 1000x120mm. Can be suspended by means of 2 nos.  $\text{\O}19$  mm knock out hole provided at a distance of 600mm.

### Applications

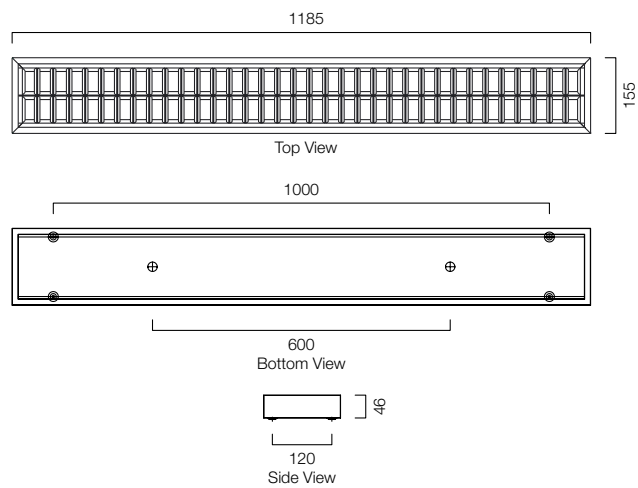
- Airport lounges
- Corporate offices
- BPOs & call centers
- Modern work spaces
- Banks & commercial offices
- Software development centers

**Technical Data**

Ordering Code	Optics	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHCTD1228433	L2 Category	2x28W T5 FTL	240	0.280	G5	≥0.95

Option to use 54W T5 HO fluorescent lamp available on request.  
 With HF digital ballast option power factor  $\geq 0.98$ , THD  $\leq 10\%$  available on request.

**Technical Drawing**



All dimensions are in mm







# Professional Downlighters





# Integra

Ascend design, energy efficient compact glare free LED down-lighter with integrated driver.

Green LED | 10/15/24W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance : Delivers up to 2280 lumens (95lm/W) for 24W, 1455 lumens (97lm/W) for 15W and 820 lumens (82lm/W) for 10W
- Corrected power factor high efficiency LED driver ( $\geq 85\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminum
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class I
- Surge Protection: 2.5kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 20\%$

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by 2 nos. SS springs/clips provided as per instructions.

### Applications

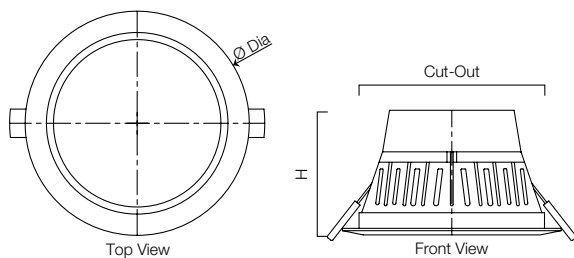
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEBJNP5OZ1W010	10W	240	0.050	≥0.95	3000K	≥70
LHEBJNP6IZ1W010	10W	240	0.050	≥0.95	4000K	≥70
LHEBJNP7IZ1W010	10W	240	0.050	≥0.95	6000K	≥75
LHEBJNP5OZ1W015	15W	240	0.070	≥0.95	3000K	≥85
LHEBJNP6OZ1W015	15W	240	0.070	≥0.95	4000K	≥90
LHEBJNP7OZ1W015	15W	240	0.070	≥0.95	6000K	≥95
LHEBJNP5PZ1W024	24W	240	0.120	≥0.95	3000K	≥85
LHEBJNP6PZ1W024	24W	240 </td <td>0.120</td> <td>≥0.95</td> <td>4000K</td> <td>≥90</td>	0.120	≥0.95	4000K	≥90
LHEBJNP7PZ1W024	24W	240	0.120	≥0.95	6000K	≥95

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

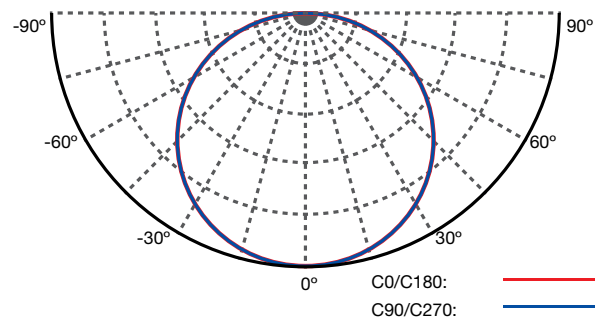
**Technical Drawing**



System Power	Dia (Ø)	Height (H)	Cutout Size (Ø)
10W	111	90±2	90
15W	158	90±2	138
24W	197	92±2	175

All dimensions are in mm

**Polar Plot**



# Endura DL 7N/10N

Energy efficient, glare free, LED down-lighter Ideally suited for low ceiling area.

**Green** LED | 7/10W | **Life** 50000hrs | **High**Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 750 lumens (77lm/W) for 10W and 520 lumens (74lm/W) for 7W
- Corrected power factor high efficiency LED driver ( $\geq 80\%$ )
- Available in Daylight (6000K), Neutral White (4000K) and Warm White (3000K)
- Suitable for Recessed Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminum
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 20\%$

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by 2 nos. SS springs/clips provided as per instructions.

### Applications

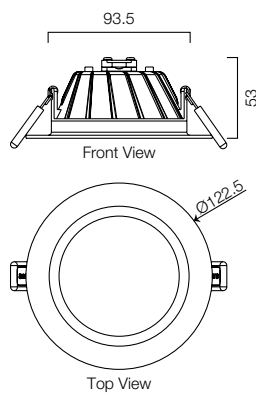
- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices

**Technical Data**

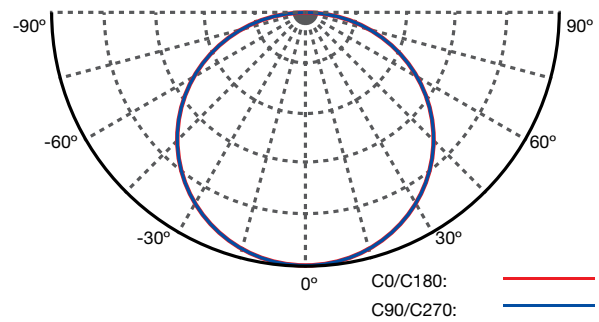
Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEBJNP5PZ1W007	7W	240	0.040	≥0.95	3000K	≥60
LHEBJNP6PZ1W007	7W	240	0.040	≥0.95	4000K	≥65
LHEBJNP7PZ1W007	7W	240	0.040	≥0.95	6000K	≥70
LHEBJNP6PZ1W010	10W	240	0.050	≥0.90	4000K	≥70
LHEBJNP7IN1W010	10W	240	0.050	≥0.90	6000K	≥75

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



**Polar Plot**



Wire entry hole Ø5  
 Cutout size: Ø100  
 All dimensions are in mm





# Endura DL 12N/15N/18N

Energy efficient, glare free, LED down-lighter Ideally suited for low ceiling area.

Green LED | 12/15/18W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 1566 lumens (87lm/W) for 18W, 1200 lumens (80lm/W) for 15W and 936 lumens (77lm/W) for 12W
- Corrected power factor high efficiency LED driver ( $\geq 82\%$ )
- Available in Daylight (6000K), Neutral White (4000K) and Warm White (3000K)
- Suitable for Recessed Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminum
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- $T_a$ :  $-10^\circ\text{C}$  to  $35^\circ\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by 2 nos. SS springs/clips provided as per instructions.

### Applications

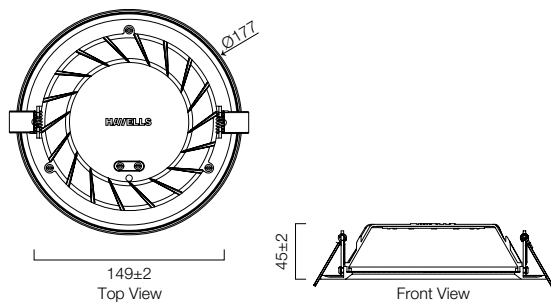
- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEJNP5CPZ1W012	12W	240	0.055	≥0.90	3000K	≥70
LHEJNP6CPZ1W012	12W	240	0.055	≥0.90	4000K	≥70
LHEJNP7CPZ1W012	12W	240	0.055	≥0.90	5700K	≥75
LHEBJNP5IN1W015	15W	240	0.070	≥0.90	3000K	≥70
LHEBJNP6IN1W015	15W	240	0.070	≥0.90	4000K	≥75
LHEBJNP7IN1W015	15W	240	0.070	≥0.90	6000K	≥80
LHEBJNP5PZ1W018	18W	240	0.085	≥0.90	3000K	≥75
LHEBJNP6PZ1W018	18W	240	0.085	≥0.90	4000K	≥80
LHEBJNP7IN1W018	18W	240	0.085	≥0.90	6000K	≥85

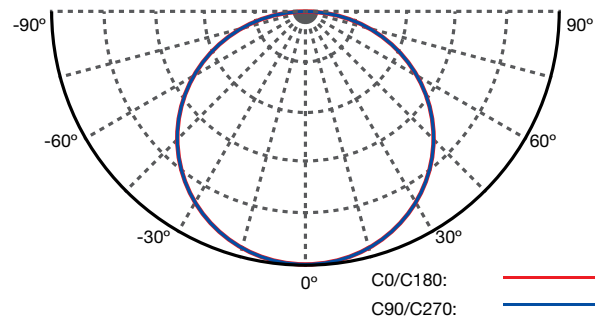
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



Cutout size: Ø155  
All dimensions are in mm

**Polar Plot**



# Endura DL 21N/25N

Energy efficient, high bright, glare free, LED down-lighter Ideally suited for low ceiling area.

**Green LED** | 21/25W | **Life 50000hrs** | **High Efficiency**



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 2200 lumens (88lm/W) for 25W and 1827 lumens (87lm/W) for 21W
- Corrected power factor high efficiency LED driver ( $\geq 85\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminum
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by 2 nos. SS springs/clips provided as per instructions.

### Applications

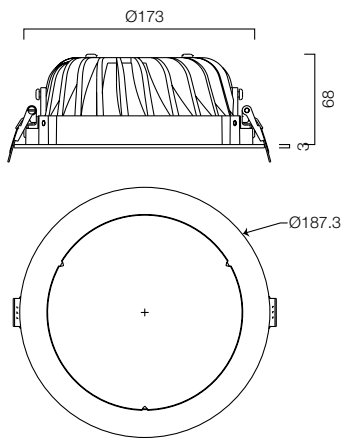
- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEBJNP6IZ1W021	21W	240	0.100	≥0.90	4000K	≥85
LHEBJNP7IZ1W021	21W	240	0.100	≥0.90	6000K	≥90
LHEBJNP6IZ1W025	25W	240	0.120	≥0.90	4000K	≥85
LHEBJNP7IZ1W025	25W	240	0.120	≥0.90	6000K	≥90

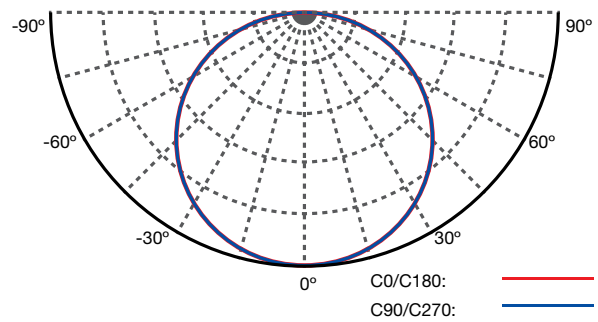
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



Cutout size: Ø180  
All dimensions are in mm

**Polar Plot**



# Sparkle

Environmental friendly, new generation, energy saving, recess mounted downlighter with high power COB LED as light source.

Green LED | 10/20/30/40W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 3400 lumens (85lm/W) for 40W, 2400 lumens (80lm/W) for 30W, 1500 lumens (75lm/W) for 20W and 700 lumens (70lm/W) for 10W
- Corrected power factor high efficiency LED driver ( $\geq 85\%$ )
- Available in Daylight (6000K) and Warm White (3000K)
- Suitable for Recessed Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminum
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- $T_a$ :  $-10^\circ\text{C}$  to  $35^\circ\text{C}$
- $A_{THD}$ :  $\leq 33\%$

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by 2 nos. SS springs/clips provided as per instructions.

### Applications

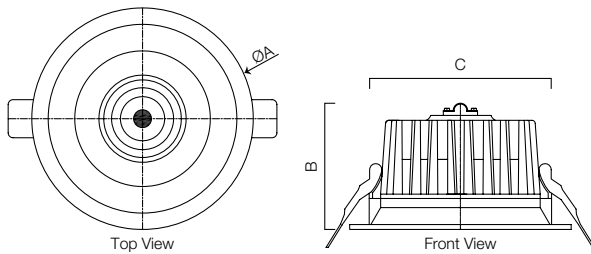
- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices

**Technical Data**

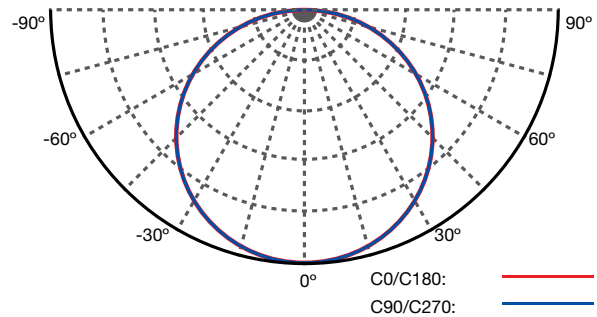
Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEBLUPDUE1W010	10W	240	0.050	≥0.90	3000K	≥80
LHEBLUPFUE1W010	10W	240	0.050	≥0.90	6000K	≥85
LHEBLUPDIE1W020	20W	240	0.090	≥0.90	3000K	≥80
LHEBLUPFIE1W020	20W	240	0.090	≥0.90	6000K	≥85
LHEBLUPDIE1W030	30W	240	0.140	≥0.90	3000K	≥80
LHEBLUPFIE1W030	30W	240	0.140	≥0.90	6000K	≥85
LHEBLUPDIE1W040	40W	240	0.185	≥0.90	3000K	≥80
LHEBLUPFIE1W040	40W	240	0.185	≥0.90	6000K	≥85

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



**Polar Plot**



System Power	Ø (A)	Height (B)	Ø (C)	Cutout Size
10W	114	68±2	93	Ø100
20W	136	70±2	112	Ø118
30W	196	103±2	167	Ø172
40W	221	120±2	192	Ø198

All dimensions are in mm





# Endura DL Square

Ultra modern, energy efficient, high bright, glare free, square LED down-lighter ideally suited for low ceiling area.

Green LED | 7/15W | Life 30000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 30,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 750 lumens (77lm/W) for 15W and 400 lumens (74lm/W) for 7W
- Corrected power factor high efficiency LED driver ( $\geq 80\%$ )
- Available in Daylight (6000K) and Neutral White (4000K)
- Suitable for Recessed Mounting
- Easy installation and zero maintenance

### Construction

- Housing: CRCA
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (5 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by 2 nos. SS springs/clips provided as per instructions.

### Applications

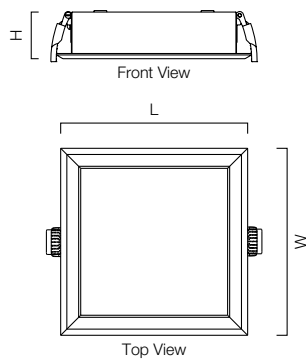
- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices

**Technical Data**

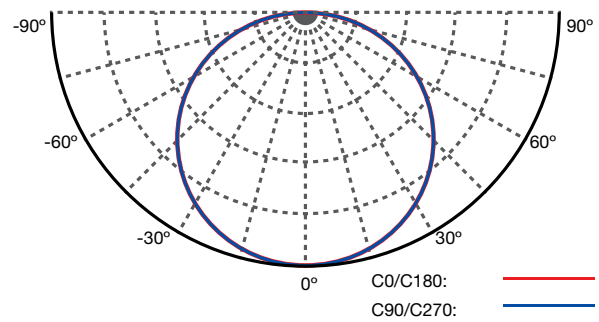
Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEWEBP6PL1W007	7W	240	0.040	≥0.90	4000K	≥50
LHEWEBP7PL1W007	7W	240	0.040	≥0.90	6000K	≥50
LHEWEBP6PL1W015	15W	240	0.070	≥0.90	4000K	≥70
LHEWEBP7PL1W015	15W	240	0.070	≥0.90	6000K	≥70

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



**Polar Plot**



System Power	Length (L)	Width (W)	Height (H)	Cutout Size
7W	132±1	132±1	45±1	124x124
15W	182±1	182±1	45±1	174x174

All dimensions are in mm



# Endura DL Neo Square Slim

Slim, energy efficient, glare free, square LED down-lighter Ideally suited for low ceiling area.

Green LED | 18W | Life 30000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 30,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 1350 lumens (75lm/W) for 18W
- Corrected power factor high efficiency LED driver ( $\geq 85\%$ )
- Available in Daylight (6000K)
- Suitable for Recessed Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminium
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (5 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by 2 nos. SS springs/clips provided as per instructions.

### Applications

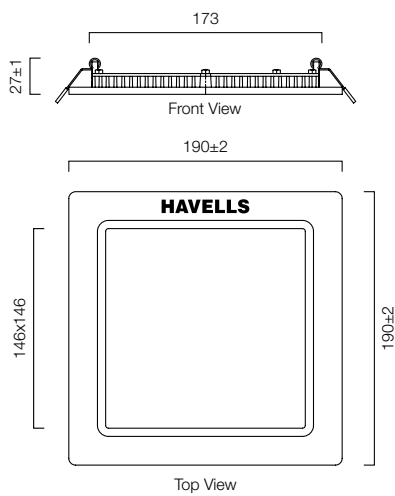
- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises

**Technical Data**

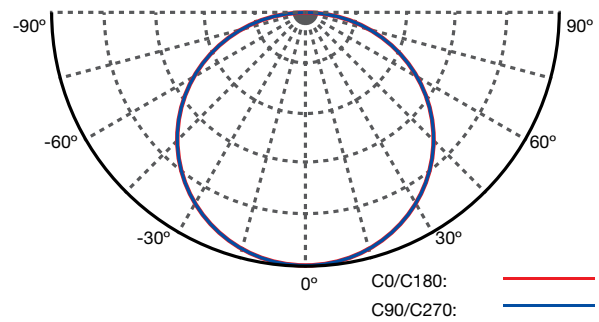
Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEBJNP7IZ1W018	18W	240	0.085	≥0.90	6000K	≥75

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



**Polar Plot**



Cutout size: 178x178 mm  
All dimensions are in mm



# Integra (Surface)

Slim, energy efficient, glare free, round LED down-lighter Ideally suited for low ceiling area.

Green LED | 15W | Life 50000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 50,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 1455 lumens (97lm/W) for 15W
- Corrected power factor high efficiency LED driver ( $\geq 85\%$ )
- Available in Daylight (6000K), Neutral White (4000K) and Warm White (3000K)
- Suitable for Surface Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminium
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Surface
- Fixing into ceiling by means of 2 nos. holes provided in the fixture.

### Applications

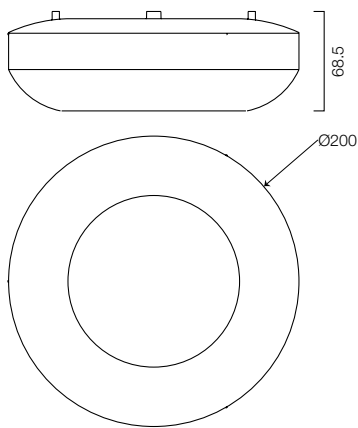
- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEAAGP5PL1W015	15W	240	0.070	≥0.90	3000K	≥85
LHEAAGP6PL1W015	15W	240	0.070	≥0.90	4000K	≥90
LHEAAGP7PL1W015	15W	240	0.070	≥0.90	6000K	≥95

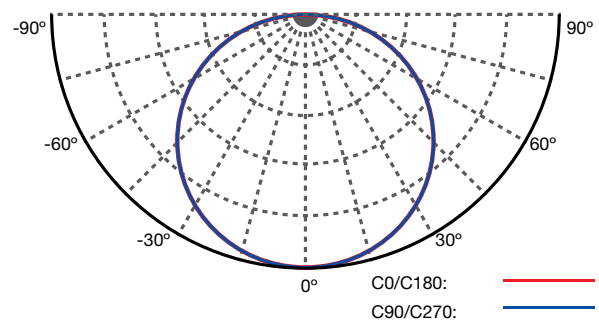
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**





# Endura DL Surface

Ultra bright compact surface mounted, glare free, surface mounted LED down-lighter  
Ideally suited for low ceiling area.

Green LED | 15/21W | Life 30000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 30,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 1680 lumens (80lm/W) for 21W and 1125 lumens (75lm/W) for 15W
- Corrected power factor high efficiency LED driver ( $\geq 85\%$ )
- Available in Daylight (6000K), Neutral White (4000K)
- Suitable for Surface Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminium
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Opal Polycarbonate
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- Ta: -10°C to 35°C
- $A_{THD}$ :  $\leq 10\%$

### Installation

- Mounting: Surface
- Fixing into ceiling by means of 3 nos. holes provided in the fixture.

### Applications

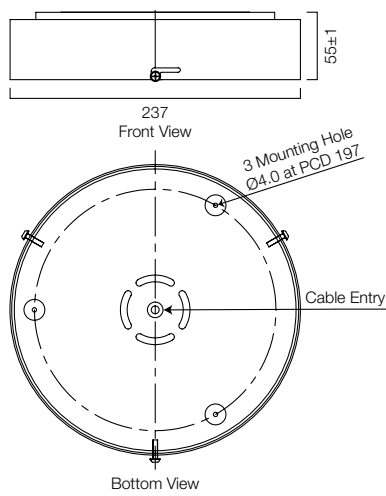
- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices

**Technical Data**

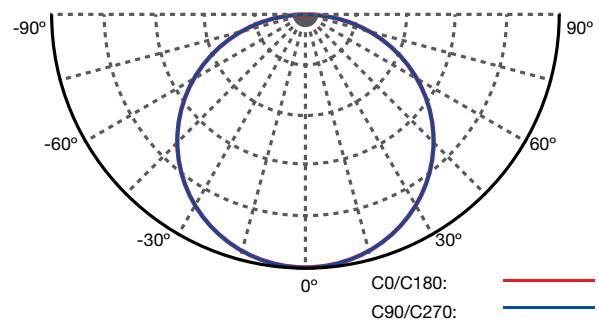
Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEAAGP6IA2W012	15W	240	0.070	≥0.90	4000K	≥70
LHEAAGP7IA2W012	15W	240	0.070	≥0.90	6000K	≥75
LHEAAGP7IA1W018	21W	240	0.100	≥0.90	6000K	≥80

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



**Polar Plot**



All dimensions are in mm



# Novastar Neo

Decorative, energy efficient 5W LED spotlight. An alternative for MR16 Lamp.

Green LED | 5W | Life 30000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 30,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 400 lumens (80lm/W) for 5W
- Corrected power factor high efficiency LED driver ( $\geq 80\%$ )
- Available in Daylight (6000K), Neutral White (4000K) and Warm White (3000K)
- Suitable for Recess Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminium
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Translucent
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Powered by a separate electronic driver in ABS housing (SMPS based constant current supply)

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by means of 2 nos. SS springs/ clips provided with endura fixture/ can be fixed in place of MR16 lamp (12V 50W halogen lamp).

### Applications

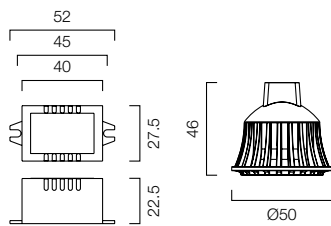
- BPO
- Meeting rooms
- Corporate offices
- Modern hospitals
- Modern work spaces
- Software development centers

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEEAYPAIH1W005	5W	240	0.030	≥0.90	3000K	≥70
LHEEAYPDIH1W005	5W	240	0.030	≥0.90	4000K	≥80
LHEEAYPFIH1W005	5W	240	0.030	≥0.90	6000K	≥80

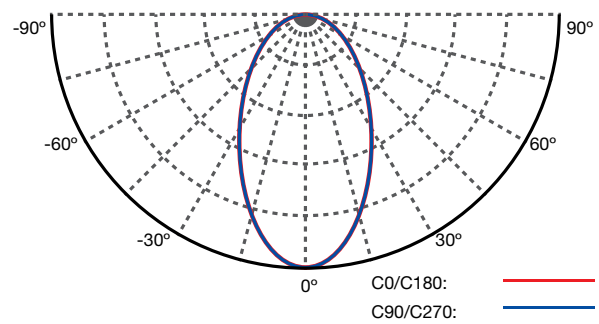
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**



# Novastar Neo

Decorative, energy efficient 7W LED spotlight. An alternative for MR16 Lamp.

Green LED | 7W | Life 30000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 30,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 490 lumens (70lm/W) for 7W
- Corrected power factor high efficiency LED driver ( $\geq 80\%$ )
- Available in Daylight (6000K), Neutral White (4000K) and Warm White (3000K)
- Suitable for Recess Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminium
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Translucent
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (4 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Powered by a separate electronic driver in ABS housing (SMPS based constant current supply - 2A, DC)

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixing into false ceiling by means of 2 nos. SS springs/ clips provided with endura fixture/ can be fixed in place of MR16 lamp (12V 50W halogen lamp).

### Applications

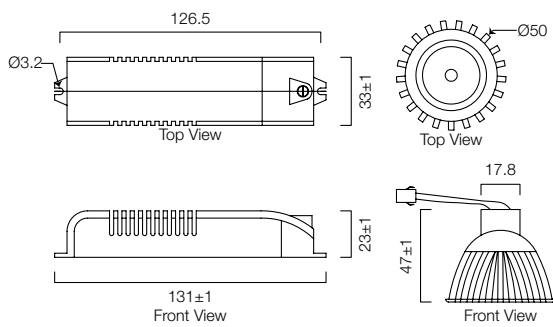
- BPO
- Meeting rooms
- Corporate offices
- Modern hospitals
- Modern work spaces
- Software development centers

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHEEAYPBMH1E007	7W	240	0.040	≥0.90	3000K	≥70
LHEEAYPDMH1E007	7W	240	0.040	≥0.90	4000K	≥80
LHEEAYPFMH1E007	7W	240	0.040	≥0.90	6000K	≥80

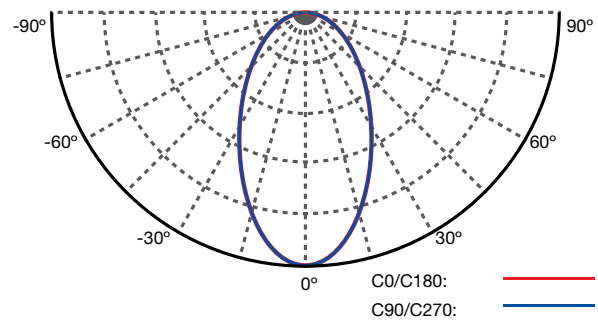
**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

**Technical Drawing**



All dimensions are in mm

**Polar Plot**





# Endura Wall Washer

Recess mounted, swivel type wall washer with COB LED environmental friendly new generation, energy saving.

Green LED | 15/25/35W | Life 30000hrs | High Efficiency



## Product Specifications

### Features & Benefits

- Long life 30,000 hours ( $L_{70}B_{50}$ )
- High performance: Delivers up to 2975 lumens (85lm/W) for 35W, 1875 lumens (75lm/W) for 25W & 1050 lumens (70lm/W) for 15W
- Corrected power factor high efficiency LED driver ( $\geq 85\%$ )
- Available in Daylight (6000K) and Warm White (3000K)
- Suitable for Recess Mounting
- Easy installation and zero maintenance

### Construction

- Housing: PDC Aluminium
- Finish: White powder coated
- IP rating: IP20

### Optical

- Diffuser: Transparent
- Distribution: Direct, Symmetrical
- Color Tolerance : LED (5 Step SDCM)
- CRI ( $R_a$ ):  $\geq 80$

### Electrical

- Electrical Protection: Class II
- Surge Protection: 2.5kV
- Ta:  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$
- $A_{THD}$ :  $\leq 20\%$

### Installation

- Mounting: Recess
- Ceiling Type: Gypsum Board, Plaster of Paris ceiling
- Fixed into false ceiling with 2 nos SS springs/clamps provided with the fixture.

### Applications

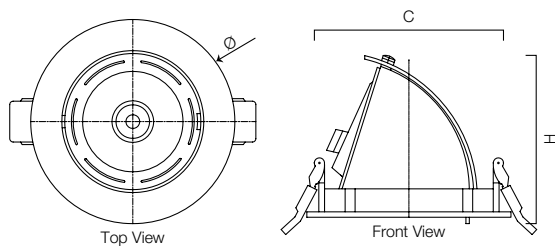
- Showrooms
- Restaurants
- Hotel lobbies
- Car showrooms
- Call centres & BPO's
- Malls and retail stores
- Corridors & passage areas

**Technical Data**

Ordering Code	System Power	Nominal Voltage (V)	Mains Current (A)	Power Factor	Colour Temp. (CCT)	System Luminous Efficacy Lm/ W
LHESAHPBNN1W015	15W	240	0.070	≥0.90	3000K	≥65
LHESAHPGNN1W015	15W	240	0.070	≥0.90	6000K	≥70
LHESAHPBNN1W025	25W	240	0.120	≥0.90	3000K	≥70
LHESAHPGNN1W025	25W	240	0.120	≥0.90	6000K	≥75
LHESAHPBNN1W035	35W	240	0.160	≥0.90	3000K	≥75
LHESAHPGNN1W035	35W	240	0.160	≥0.90	6000K	≥85

**Note:** Warranty void for LED fixtures including Drivers, if individual points of installations are not provided with proper Earthing.

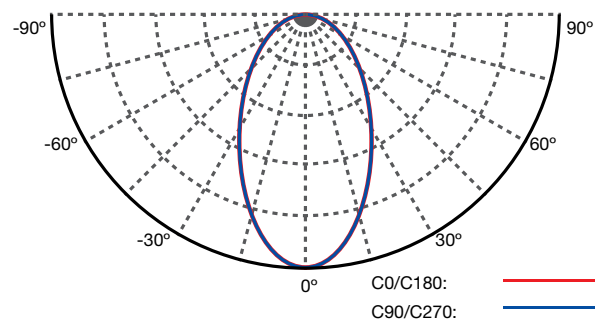
**Technical Drawing**



System Power	Outer Dia (Ø)	Height (H)	C	Cutout Size
15W	120±1	95±2	108	Ø114
25W	160±1	130±2	140	Ø146
35W	192±1	155±2	172	Ø180

All dimensions are in mm

**Polar Plot**



# Wall Washer GDL 72

Recess, swivel modular wall washer suitable for single 70W CMI-T lamp.



## Product Specifications

### Housing

Powder coated white die cast aluminium housing with MS brackets high purity anodized reflector and frosted glass fixed to the frame.

### Optics

High purity anodized aluminium having satin finish provided with heat resistant frosted toughened lense for glare elimination and diffused light distribution with angle adjustable system.

### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

### Electric gear\*

Use suitable external control gear for selected lamp type and wattage.

### Mounting

Fixed into false ceiling with 2 nos clamp arrangement provided as per instruction.

### Applications

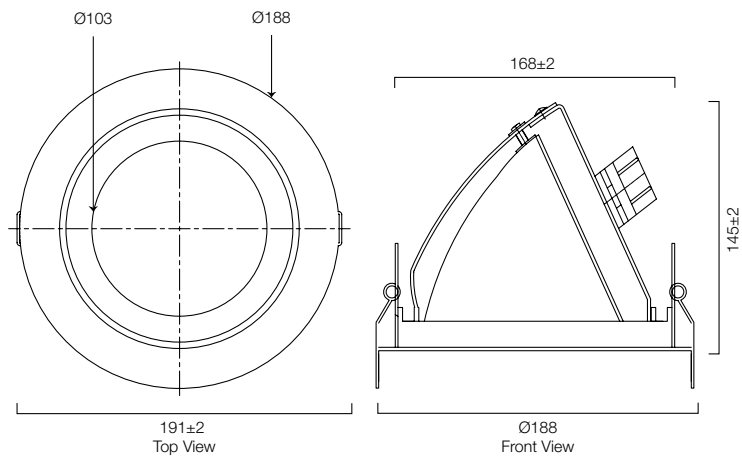
- Showrooms
- Restaurants
- Hotel lobbies
- Car showrooms
- Call centres & BPO's
- Malls and retail stores
- Corridors & passage areas

**Technical Data**

Ordering Code	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor	Capacitor Value
LHOM76115399	1x70W CMI-T	240	0.400	G12	≥0.85	10 Mfd

\*When used with appropriate external control gear box/ IGU.

**Technical Drawing**



Ceiling cutout:  $\text{Ø}180$   
All dimensions are in mm



# Wall Washer GDL 73

Recess, swivel modular wall washer suitable for single 150W CMI-T lamp.



## Product Specifications

### Housing

Powder coated white die cast aluminium housing with MS brackets high purity anodized reflector and frosted glass fixed to the frame.

### Optics

High purity anodized aluminium having satin finish provided with heat resistant toughened lense with glare spot for glare elimination and crisp light distribution. Ideal optic for accent lighting applications.

### Lamp holder

Push fit rotary type white polycarbonate/ PBT with electrical grade brass contacts.

### Electric gear\*

Use suitable external control gear for selected lamp type and wattage.

### Mounting

Fixed into false ceiling with suitable clamp arrangement provided as per instruction.

### Applications

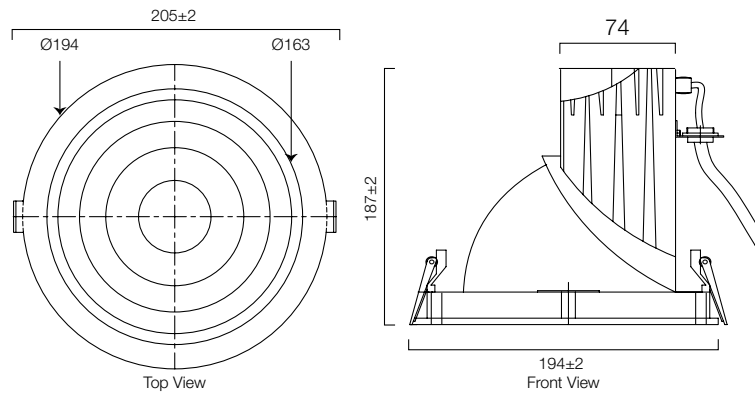
- Showrooms
- Restaurants
- Art galleries
- Hotel lobbies
- Retail lighting
- Car showrooms
- Call centres & BPO's
- Malls and retail stores
- Corridors & passage areas

**Technical Data**

Ordering Code	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor	Capacitor Value
LHOM77115399	1x150W CMI-T	240	0.820	G12	≥0.85	20 Mfd

\*When used with appropriate external control gear box/ CGU.

**Technical Drawing**



Ceiling cutout: Ø185  
All dimensions are in mm





# Surface Downlite GDL 31E

Surface mounted sleek elegant compact integral fixture suitable for 2x18W Non-retrofit CFL/PL-C.



## Product Specifications

### Housing

MS powder coated white housing with high purity anodized aluminium reflector and centre frosted glass fixed to the housing.

### Optics

Spun aluminium reflector having specular finish with centre frosted lense for glare free light distribution.

### Lamp holder

White PBT housing with brass contacts and SS clips.

### Electric gear

Pre-wired with light weight HF electronic ballasts upto terminal block.

### Mounting

Provision for surface mounting on wall/ ceiling with 4 nos. hole of Ø 5mm provided at the back of the fixture.

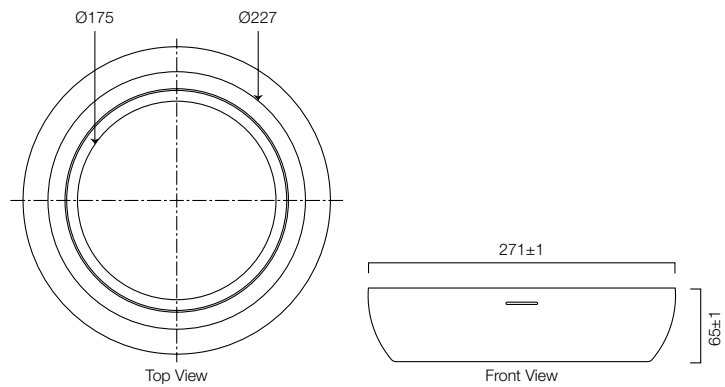
### Applications

- Showrooms
- Restaurants
- Hotel lobbies
- Malls & retail showroom

**Technical Data**

Ordering Code	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHFAAKH2IB1W018	2x18W CFL/PL-C	240	0.290	G 24 d-2	≥0.55

**Technical Drawing**



All dimensions are in mm



# Surface Downlite DL 31

Decorative cylindrical surface mounting wide beam downlighter suitable for single/ double 18W non-retrofit CFL/PL-C.



## **Product Specifications**

### **Housing**

Made up of deep drawn MS body  
Powder coated white finish.

### **Optics**

Spun aluminium, specular finish reflector with dimpled pattern on top, and vertical facets on lower portion for better light distribution & glare control.

### **Lamp holder**

White PBT housing with brass contacts and SS clips.

### **Electric gear**

Pre-wired with single / twin open construction copper wound ferromagnetic CFL ballasts upto terminal block.

Option with light-weight high frequency electronic ballast available on request.

### **Mounting**

Surface mounted by means of 4 nos screws.

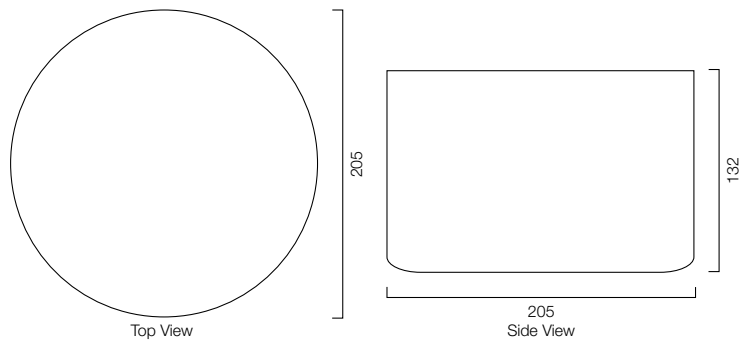
### **Applications**

- Showrooms
- Restaurants
- Hotel lobbies
- High ceiling areas

**Technical Data**

Ordering Code	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHOC14118454	1x18W PL-C	240	0.145	G 24 d-2	≥0.55
LHFAAKH2IQ1W018	2x18W PL-C	240	0.290	G 24 d-2	≥0.55

**Technical Drawing**



All dimensions are in mm



# Chandelier 1 NI

Decorative, contrast reducing translucent polycarbonate medium bay suitable for 65W retrofit spiral CFL.



## Product Specifications

### Housing

Made up of polycarbonate

### Cover

Conical food grade & UV stabilised polycarbonate sagged lens.

### Optics

Injection moulded food grade & UV stabilised polycarbonate with precisely contoured prismatic internal facets ensures uniform & better light distribution.

### Lamp holder

In ceramics with electrical grade brass contacts.

### Electric gear

Pre-wired upto terminal block for CFL operation.

### Mounting

Suspend by means of chain provided with the fixture.

### Applications

- Arrival halls
- Shopping malls
- Airport waiting lounges
- Public circulating areas

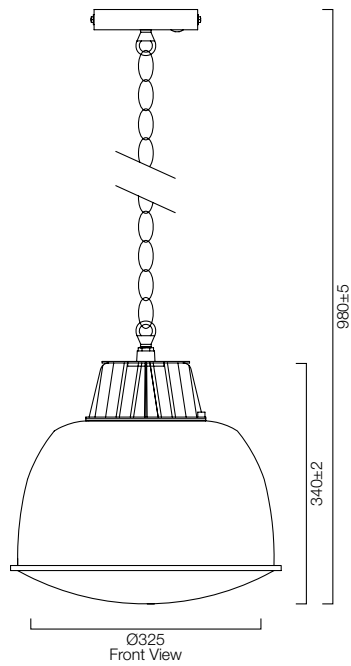
**Technical Data**

Ordering Code	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Lamp Socket	Power Factor
LHYC05165099	1x65W Retrofit Spiral CFL*	240	0.520	E27	≥0.55

\*Length 230 mm, Ø86 mm

Reflector and cover supplied in separate bulk packing for transportation purpose, for installation refer to provided instructions.

**Technical Drawing**



All dimensions are in mm





# Integrated Gear Unit

Compact, sleek, encapsulated electromagnetic copper wound potted IGU for reliable ignition of 70/150W HID SV/MH/CDM HID lamps for indoor use.



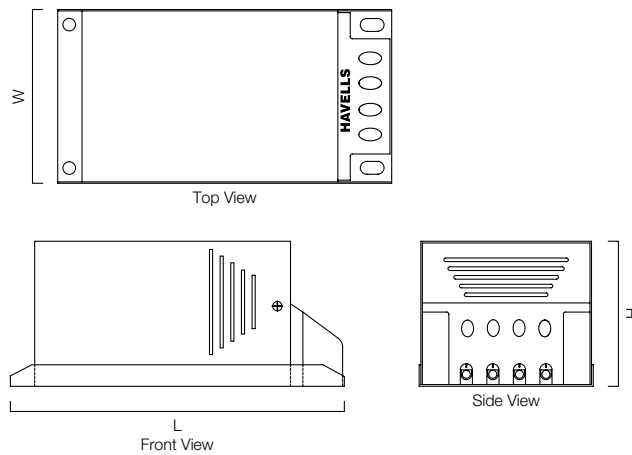
## Product Specifications

- Compact size encapsulated copper wound gear integrated with Short distance ignitor and power factor improvement capacitor.
- Electrical grade steel and superfine insulated grade enamel wire ensures long and reliable operation.
- Built in capacitor eliminates external wiring of compensation circuits.
- Polyester filled compact design to reduce the temperature rise.
- Designed for only indoor/ shielded out door environments. Hazardous if used in exposed out door conditions.
- Designated mains and lamp terminals for ease of direct wiring.

**Technical Data**

Ordering Code	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Wattloss (W)	Power Factor
LHGEANMBHQA2013	2x13W PL-C	240	0.140	6.0	≥0.95
LHGEANPBHQA2018	2x18W PL-C	240	0.165	8.0	≥0.95

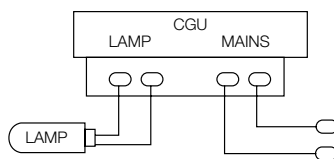
**Technical Drawing**



Lamp Type	Length (L)	Width (W)	Height (H)	CD
1x70W SV/MH/CDM	152±2	79±2	66±2	137x65
1x150W SV/MH/CDM	180±2	79±2	66±2	163x65

All dimensions are in mm

**Wiring Diagram**



# Electronic Ballast

Industrial electronic HID ballast suitable for 35W/70W/150W ceramic Metal Halide lamp.



## Product Specifications

- Suitable for 220-240V/ 50Hz
- Ignition time  $\leq 2$  secs
- Crest Factor (CF)  $\leq 1.70$
- Output Frequency  $\geq 150$ Hz
- High power factor (PF)  $\geq 0.98$
- Total Harmonic Distortion (THD)  $\leq 10\%$
- IR radiation immune, hum free operation

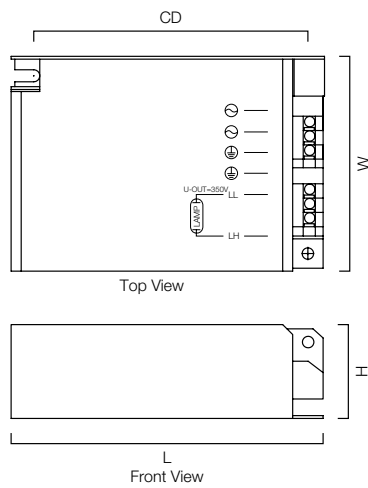
## Advantages:

- Optimal lamp control & operation
- Micro processor control & monitoring of operation status
- Comfortable operation
- Longer lamp life
- Push-fit type connector
- Low energy consumption with low heat generation
- Conforms to IEC 61547/ IEC 61000
- Programmed APFC regulated high frequency ballast for multiple switching cycle

**Technical Data**

Ordering Code	Lamp Type	Nominal Voltage (V)	Mains Current (A)	Wattloss (W)	Power Factor
LHBI01135056	1x35W CMI	240	0.190	8.0	≥0.98
LHBW01170057	1x70W CMI	240	0.330	12.0	≥0.98
LHBI01115058	1x150W CMI	240	0.720	18.0	≥0.98

**Technical Drawing**



Lamp Type	Length (L)	Width (W)	Height (H)	CD
1x35W CMI	110±2	75±2	33±2	96±1
1x70W CMI	110±2	75±2	33±2	96±1
1x150W CMI	165±2	91±2	39±2	157x74

All dimensions are in mm

# We are now in SOLAR street light.

## Havells – Lighting up the way

Havells India Limited is a USD 1.4 billion Indian multinational company. Havells is also the 4th largest lighting company of the world. The company owns a large product portfolio in consumer and professional lighting, and caters to indoor, outdoor and specialty lighting segments.

Havells' strength is its manufacturing capability. Havells is the only company in India that manufactures its entire lighting product portfolio in-house. The company has established a state-of-the-art, technologically advanced manufacturing plant at Neemrana, Rajasthan to manufacture luminaires and fixtures. The ultra-modern manufacturing plant is a replica of Havells manufacturing in France, and contains sophisticated processes like robotic box bending machines. Supported by German, Italian and Japanese technology, the colossal manufacturing unit is spread over 2 lakh square feet, and churns out 5 million CFLs every month.

Havells lighting business is strongly supported by its dealership network of over 20,000 across the world. In 2007, the company made history by acquiring the legacy European lighting brand 'Sylvania'. The acquisition strengthened Havells lighting in the global markets.

## Solar Street light system

A LED based solar street lighting system consists of a PV Module, control electronics, battery, and LED based luminaires, all suitably mounted on a pole. The battery is charged by electricity generated through the PV module during day time and the luminaires provides light from dusk to dawn.

## Applications

- Street Lighting
- Perimeter Security Lighting
- Park Lighting
- Campus Lighting
- Pathway Lighting
- Remote Area Lighting
- Farm Lighting
- Ship Dock Lighting
- Railway Yard Lighting

## Why Havells Solar

### LED Luminaire

Havells LED Luminaires delivers the best in class lumen efficacy. They deliver the maximum light output (lumens) at the lower wattage .

### About MPPT

Havells LED street lighting systems are designed with MPPT (Maximum Power Point Tracking) which provides about 25% more efficiency by utilizing maximum energy harvested by solar PV modules.

### About Solar PV module

Highly efficient poly crystalline solar modules are used which are tested for longer durability & manufactured with innovative technologies. These modules are designed to withstand highly corrosive atmospheres and heavy wind loads. Also the modules are certified for industry standards IEC61215, IEC61730( safety class 1 & 11), IEC61701 and CE.

## Benefits of solar LED street lights

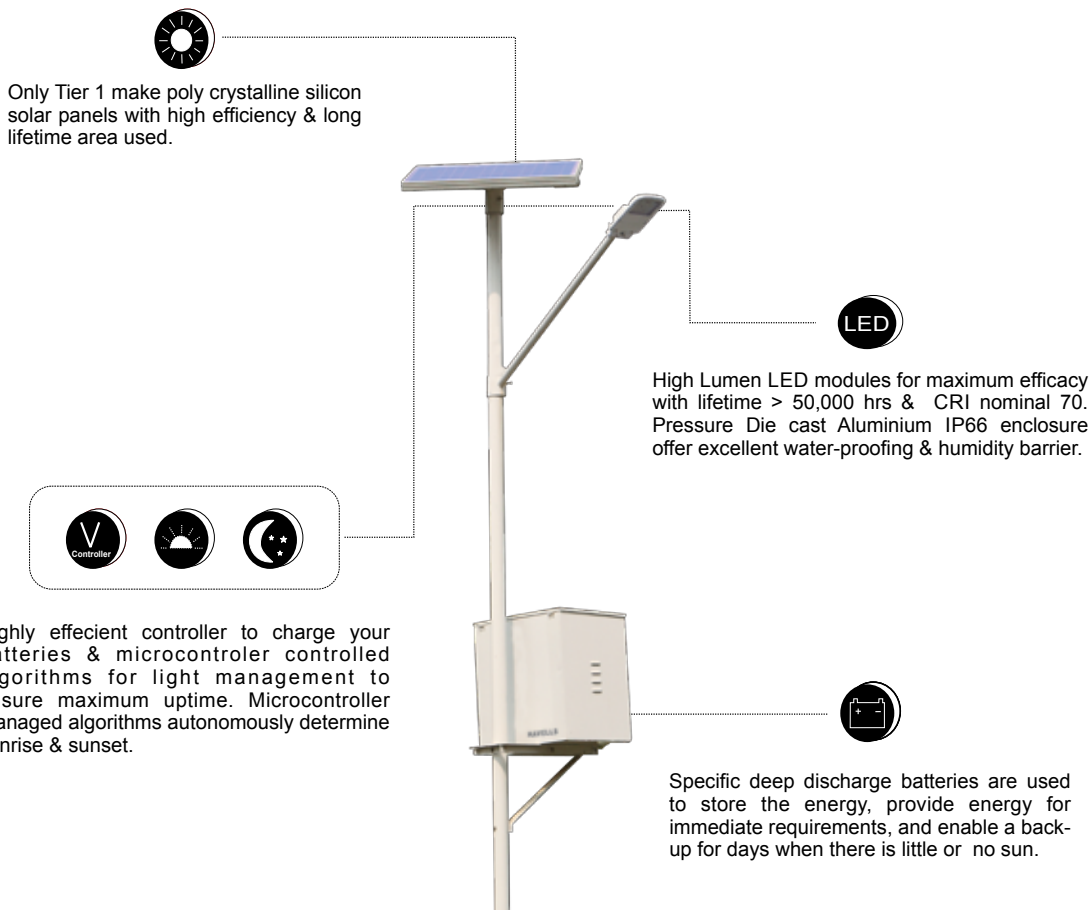
1. Fully Renewable and Independent Energy source.
2. Zero Carbon foot prints.
3. Easy to Install. Instant installation and ready to use.
4. No External cabling, Trenching required i.e eliminates the chance of accident due to electric shocks, No trenching & wiring.
5. Ideal solution for Rural and remote areas where power lines are not available.
6. Independent of Grid , the operational costs are minimum.
7. Green technology.
8. No maintenance in initial years
9. Immediate Returns on Investment.

## Product Offerings.

1. Standard systems ( this is offered with Preset specification with various wattages to suit, Specs of Govt., private and PSU's)
2. Customized solutions can be offered with one to one meeting with end user.
3. Hybrid system which would operate on AC ( alternate current, i.e in presence of GRID supply and DC ( Direct current in ABSENCE of grid supply) it would work in Either Circumstances.



## Pole Diagram for SOLAR street light:



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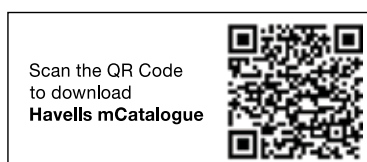
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Although every effort has been made to ensure accuracy in the compilation of the technical detail within this publication, however current details should therefore be checked with Havells Group. Specifications & performance data are constantly changing.



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CIN - L31900DL1983PLC016304.

