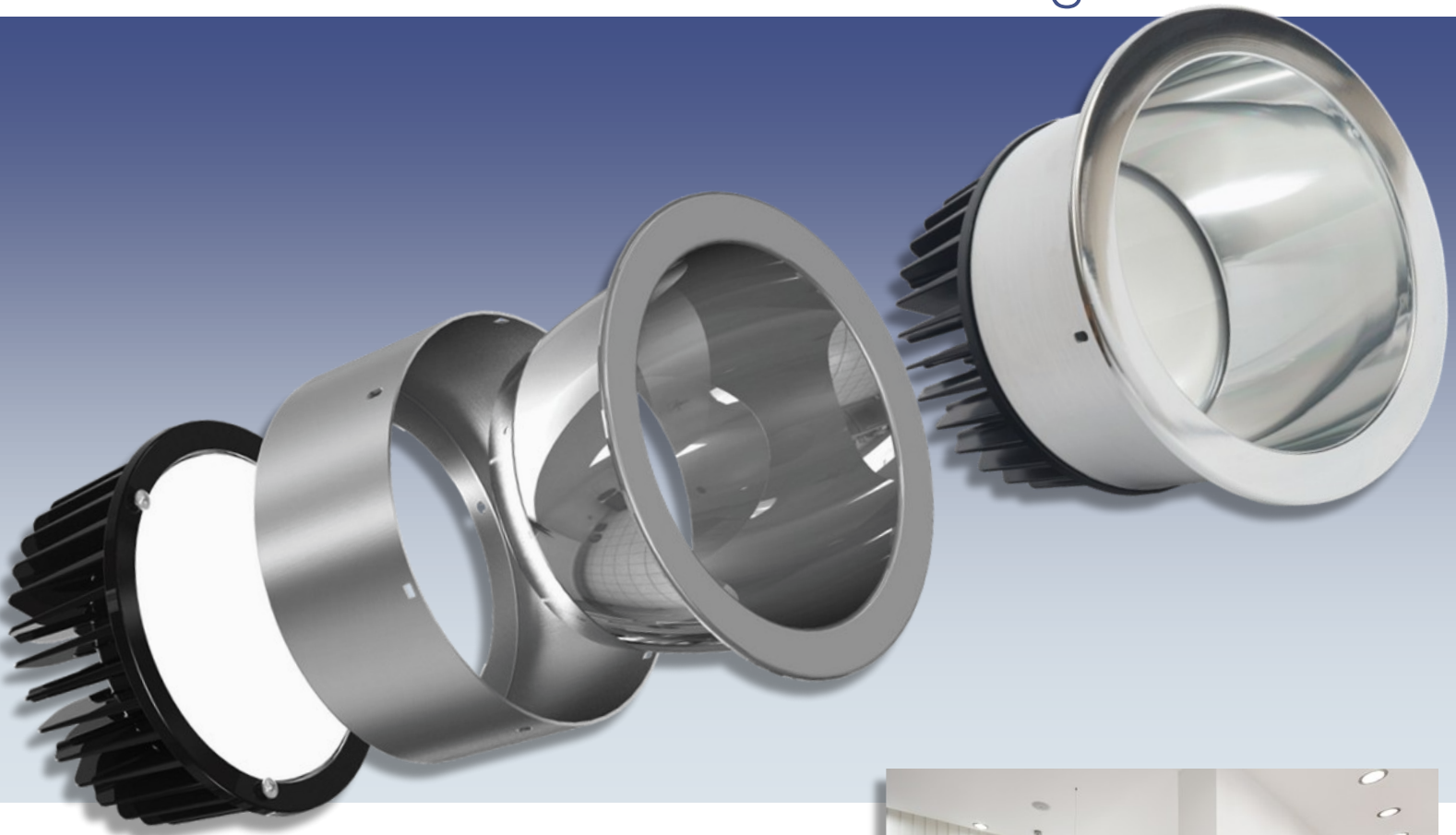




# DL2000

High Brightness  
6" LED Downlight Module



## Overview

Heatron's Innovation Series DL2000 recessed downlight module helps luminaire manufacturers expand their product lines and bring new LED fixtures to market quickly and affordably. The Innovation Series provides OEM's access to an advanced technology platform that has met LM79 approvals and is UL8750 recognized.

The advanced optical system offers a visually comfortable presentation while delivering 2100 lumens using a mere 40 watts of energy. Lighting class LEDs are used in conjunction with a mixing chamber and diffusing lens which shields direct view of LEDs. The reflector design balances the luminaire's brightness and provides a uniform, glare-free appearance.

The downlight module features an integrated cast aluminum thermal design, which efficiently transfers heat away from the LEDs using natural convection and ensures optimal performance and long life.

The DL2000 is designed to last 50,000 hours at L70 and is backed by a 5 year limited warranty.



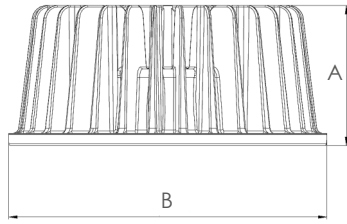
*Transforming Your Vision  
into Higher Performance Solutions*

# DL2000 6" LED Downlight Module

## Mechanical Dimensions

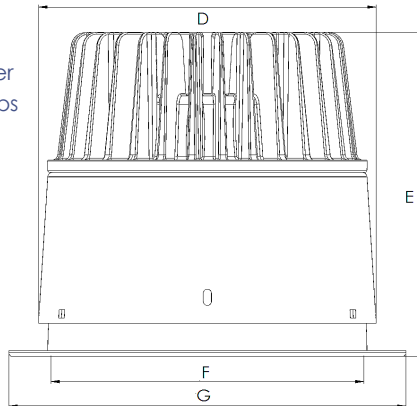
### Option 1

Lens, diffuser and retaining ring



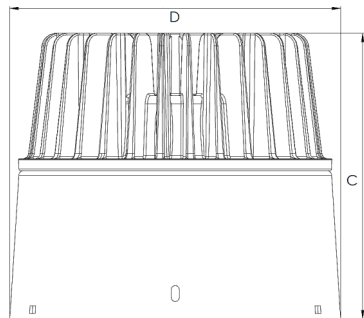
### Option 2

Lens, diffuser, lower housing, spring clips and trim ring



### Option 3

Lens, diffuser and lower housing



| Dimensions | Inches | Millimeters |
|------------|--------|-------------|
| A          | 2.70   | 68.58       |
| B          | Ø 6.15 | Ø 156.21    |
| C          | 5.60   | 142.24      |
| D          | Ø 6.50 | Ø 165.10    |
| E          | 6.25   | 158.75      |
| F          | Ø 6.00 | Ø 152.40    |
| G          | Ø 7.64 | Ø 194.06    |
| H          | 16.89  | 429.06      |

## Indoor Applications

- Retail
- Commercial
- Hospitality
- Institutions
- Health Care

## Key Features

- Light intensity exceeds a 150W incandescent or 32W Watt CFL lamp
- 80 CRI
- Optimized thermal management for maximum performance, long life and reliability
- 5 year limited warranty
- Rapid regulatory approval of final luminaire enabled by using a UL 8750 class II recognized light module
- Contains no mercury

## Product Features

### Wiring

- Side exit wiring port supplied with 15" armored aluminum BX cable
- Top exit wiring port supplied with 18" 18-gage wire with strain relief

### Lens

- Impact-resistant polycarbonate
- High lumen transmission
- Diffusing for uniform illumination

### Heat Sink

- High efficiency integrated heat sink effectively transfers heat away from the LED for reliable operation

### Weight

- 2.5 lbs. (1.13 kg)

### Testing

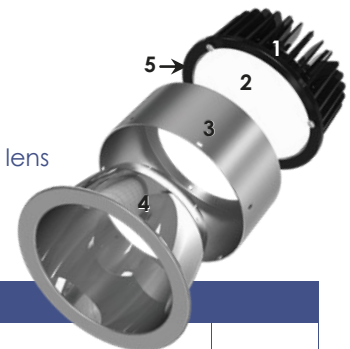
- Tested in accordance with IESNA LM79 by an independent laboratory

### Lifetime

- Estimated Lumen Depreciation (LM80 standard) 70% of initial lumens (L70) at 50,000 hours

## LED Module

1. Integrated cast aluminum heat sink
2. Optical mixing chamber with diffuser and lens
3. Lower housing
4. Trim ring
5. Retaining ring



## Ordering Information Example: JDHT6R-A1430-8070-S01-NSA

| Internal | Series | Internal | Color Temperature                         | Minimum CRI    | Beam Angle | Wiring Port Location | Option  | Internal |
|----------|--------|----------|---|----------------|------------|----------------------|---|----------|
| JDHT     | 6R     | A14      | 30 - 3000 K<br>35 - 3500 K<br>40 - 4000 K | 80<br>80<br>80 | 70°        | T Top<br>S Side      | 01 - lens, diffuser and retaining ring<br>02 - lens, diffuser, lower housing and trim ring<br>03 - lens, diffuser and lower housing | NSA      |

# DL2000 6" LED Downlight Module

## Technical Details

| Optical Parameters |                        |
|--------------------|------------------------|
| CCT (Kelvin)       | 3000 K, 3500 K, 4000 K |
| Lumen Values       | 2100                   |
| CRI (min)          | 80                     |
| Beam Angle         | 70                     |

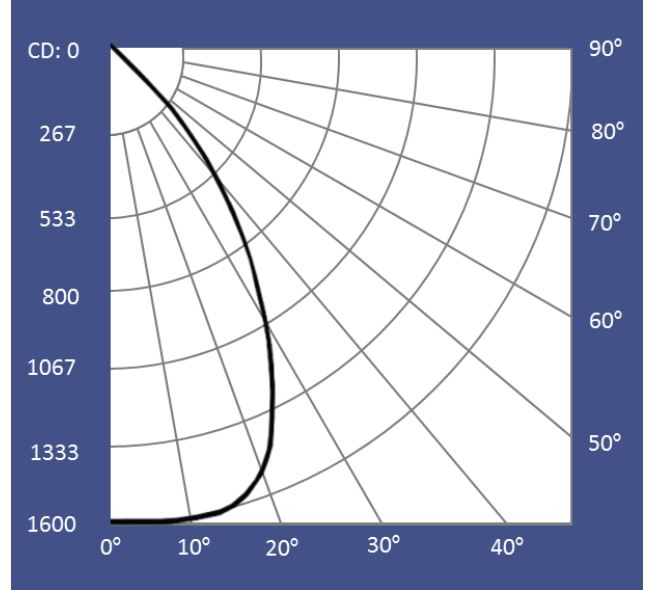
| Electrical Parameters Ta = 25°C | Nominal | Maximum |
|---------------------------------|---------|---------|
| Forward Voltage Volts DC        | 38.10   | 40.80   |
| Forward Current Amps            | 1.05    | 1.05    |
| Power Consumption Watts (W)     | 38.10   | 40.80   |

Operate with a 1050mA constant current LED driver capable of operating up to 48 Watts. Actual wattage may vary by +/-10%. Driver not supplied by Heatron.

| Operating Conditions             | Typical      | Maximum |
|----------------------------------|--------------|---------|
| Ambient Operating Temperature °C | 25°          | 35°     |
| Case Temperature °C (Tc)         |              | 70°     |
| Storage Temperature Range °C     | -25° to +50° |         |

Operation beyond recommended maximum levels may result in a reduction of product performance and lifetime.

| Initial Footcandles                  |                         |                     |                       |
|--------------------------------------|-------------------------|---------------------|-----------------------|
| Distance to Illuminated Plane (feet) | Footcandles Beam Center | Vertical Beam Width | Horizontal Beam Width |
| 8'                                   | 24.6                    | 11.2                | 11.2                  |
| 10'                                  | 15.7                    | 14.0                | 14.0                  |
| 12'                                  | 10.9                    | 16.8                | 16.8                  |
| 14'                                  | 8.0                     | 19.6                | 19.6                  |
| 16'                                  | 6.2                     | 22.4                | 22.4                  |
| 18'                                  | 4.9                     | 25.2                | 25.2                  |
| 20'                                  | 3.9                     | 28.0                | 28.0                  |
| 22'                                  | 3.3                     | 30.8                | 30.8                  |



## Zonal Lumen Summary & Percentages at 25°C

| Zone   | Lumens | % of Luminaire |
|--------|--------|----------------|
| 0 - 30 | 1212   | 59.8           |
| 0 - 40 | 1740   | 85.8           |
| 0 - 60 | 2021   | 99.7           |
| 0 - 90 | 2027   | 100            |

## Luminance Data

| Candela/M <sup>2</sup> |            |
|------------------------|------------|
| Angle                  | Average 0° |
| 45°                    | 27651      |
| 55°                    | 1232       |
| 65°                    | 544        |
| 75°                    | 339        |
| 85°                    | 126        |

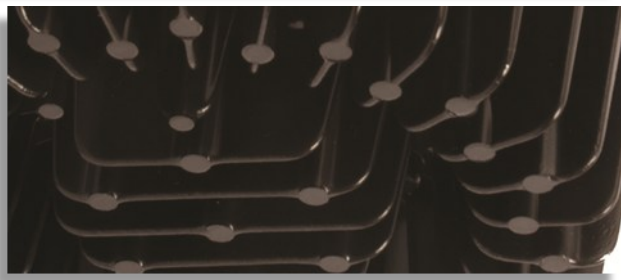
## Candela Distribution

| Angle | Candela |
|-------|---------|
| 0°    | 1573    |
| 5°    | 1582    |
| 15°   | 1596    |
| 25°   | 1353    |
| 35°   | 845     |
| 45°   | 357     |
| 55°   | 13      |
| 65°   | 4       |
| 75°   | 2       |
| 85°   | 0       |
| 90°   | 0       |

## Coefficients of Utilization

| Room Cavity Ratio | % Effective Ceiling Cavity Reflectance |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|                   | 80%                                    |     |     |     |     |     | 70% |     |     |     |     |     | 50% |     |     |     |     |     | 30% |     |     |     |     |     | 10% |    |    |    |    |    | 0% |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                   | 20% Effective Floor Cavity Reflectance |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                   | 70                                     | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 70  | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 |    |    |    |    |    |    |    |    |
| 0                 | 119                                    | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 111 | 106 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 100 | 100 | 100 | 100 | 99  | 97 | 97 | 97 | 96 | 94 | 94 | 94 | 93 | 93 | 93 | 93 | 91 | 91 | 91 | 91 | 89 | 89 | 89 | 89 | 87 | 87 | 87 | 87 |
| 1                 | 113                                    | 110 | 108 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 97  | 96  | 94  | 94  | 94  | 93  | 93  | 93  | 93  | 91  | 91 | 91 | 91 | 89 | 89 | 89 | 89 | 87 | 87 | 87 | 87 | 85 | 85 | 85 | 85 |    |    |    |    |    |    |    |    |
| 2                 | 107                                    | 102 | 97  | 94  | 105 | 100 | 96  | 93  | 97  | 93  | 91  | 94  | 91  | 89  | 91  | 89  | 91  | 89  | 91  | 89  | 87  | 85  | 87  | 85  | 85  | 83 | 85 | 83 | 81 | 81 | 81 | 81 | 79 | 79 | 79 | 79 | 77 | 77 | 77 | 77 |    |    |    |    |    |    |    |    |
| 3                 | 101                                    | 94  | 89  | 84  | 99  | 93  | 88  | 84  | 90  | 86  | 82  | 88  | 84  | 81  | 88  | 82  | 84  | 81  | 88  | 82  | 80  | 78  | 80  | 78  | 76  | 76 | 76 | 76 | 74 | 74 | 74 | 74 | 72 | 72 | 72 | 72 | 70 | 70 | 70 | 70 |    |    |    |    |    |    |    |    |
| 4                 | 95                                     | 87  | 81  | 77  | 93  | 86  | 80  | 76  | 84  | 79  | 75  | 82  | 78  | 74  | 80  | 76  | 74  | 74  | 80  | 76  | 73  | 72  | 73  | 72  | 70  | 70 | 70 | 70 | 68 | 68 | 68 | 68 | 66 | 66 | 66 | 66 | 64 | 64 | 64 | 64 |    |    |    |    |    |    |    |    |
| 5                 | 90                                     | 81  | 75  | 70  | 88  | 80  | 74  | 70  | 78  | 73  | 69  | 76  | 72  | 68  | 75  | 71  | 68  | 68  | 75  | 71  | 66  | 66  | 66  | 66  | 64  | 64 | 64 | 64 | 62 | 62 | 62 | 62 | 60 | 60 | 60 | 60 |    |    |    |    |    |    |    |    |    |    |    |    |
| 6                 | 85                                     | 75  | 69  | 64  | 83  | 74  | 68  | 64  | 73  | 67  | 63  | 71  | 67  | 63  | 70  | 66  | 62  | 62  | 70  | 66  | 60  | 60  | 60  | 60  | 58  | 58 | 58 | 58 | 56 | 56 | 56 | 56 | 54 | 54 | 54 | 54 |    |    |    |    |    |    |    |    |    |    |    |    |
| 7                 | 80                                     | 70  | 63  | 59  | 79  | 69  | 63  | 59  | 68  | 62  | 58  | 67  | 62  | 58  | 66  | 61  | 58  | 58  | 66  | 61  | 56  | 56  | 56  | 56  | 54  | 54 | 54 | 54 | 52 | 52 | 52 | 52 | 50 | 50 | 50 | 50 |    |    |    |    |    |    |    |    |    |    |    |    |
| 8                 | 76                                     | 65  | 59  | 54  | 74  | 65  | 59  | 54  | 64  | 58  | 54  | 63  | 57  | 54  | 62  | 57  | 54  | 54  | 62  | 57  | 52  | 52  | 52  | 52  | 50  | 50 | 50 | 50 | 48 | 48 | 48 | 48 | 46 | 46 | 46 | 46 |    |    |    |    |    |    |    |    |    |    |    |    |
| 9                 | 72                                     | 61  | 55  | 50  | 70  | 61  | 55  | 50  | 60  | 54  | 50  | 59  | 54  | 50  | 58  | 53  | 50  | 50  | 58  | 53  | 48  | 48  | 48  | 48  | 46  | 46 | 46 | 46 | 44 | 44 | 44 | 44 | 42 | 42 | 42 | 42 |    |    |    |    |    |    |    |    |    |    |    |    |
| 10                | 68                                     | 57  | 51  | 47  | 67  | 57  | 51  | 47  | 56  | 50  | 47  | 55  | 50  | 47  | 54  | 50  | 46  | 46  | 54  | 50  | 44  | 44  | 44  | 44  | 42  | 42 | 42 | 42 | 40 | 40 | 40 | 40 | 38 | 38 | 38 | 38 |    |    |    |    |    |    |    |    |    |    |    |    |

Specifications subject to change.



### About Heatron LED Integration

Heatron LED Integration helps OEMs reduce costs, speed time to market and ensure superior quality and performance. Heatron LED Integration leverages the engineering disciplines of optical, electrical and mechanical design, with expertise in thermal management.

Offering various levels of integration ranging from design and manufacture of component level LED light engines to turnkey lighting solutions, Heatron designs for a broad range of uses, including indoor, outdoor, commercial, industrial, healthcare and transportation lighting applications.

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For more information about Heatron LED Integration, its products, services and manufacturing, visit [www.heatron.com](http://www.heatron.com)

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