

## D4 Retrofit Downlight

### The Ketra Difference:

**High Def Palette**—covers a wide range of 16.7 million colors, including pastels, saturated colors and high CRI whites spanning from 1,400K to 10,000K.

**Dynamic Spectrum**—precisely tunes the amount of energy across the visible spectrum to produce Natural Light, Natural Dimming and Vibrancy.

**TruBeam**—produces uniform color across any available beam angle.

**Color Lock**—maintains your desired color point at a one-step MacAdam Ellipse across all Ketra product families and over each product's lifetime.



## ORDERING GUIDE

Please download this PDF to use the interactive drop down features of the ordering guide.

Product Line	D4R	FXRD	Regress Depth	Baffle	System/ Beam Angle	11	Region / Voltage	Trim Color
Power / Housing Rating	SP							
Packaging								

Order code: \_\_\_\_\_

Product Line	Code	Baffle	Code	Region / Voltage	Code
Commercial (Athena compatible)	<b>CM-</b>	No Baffle (for flush 0 in regress)	<b>NA</b>	North America, 120 V~ 60 Hz	<b>11</b>
Residential (HomeWorks compatible)	<b>HW-</b>	White Baffle	<b>WH</b>	<b>Trim Color</b>	
		Black Baffle	<b>BK</b>	White	<b>WH</b>
				Black	<b>BK</b>
Model		Beam Angle		Power / Housing Rating	
4 in Retrofit Downlight	<b>D4R</b>	KetraNet Spot (15°)	<b>BT15</b>	13 W, Plenum, Air Tight	<b>13PLEN</b>
		KetraNet Flood (25°)	<b>BT25</b>	8.5 W, ICAT	<b>08ICAT</b>
Fixture Style / Shape		KetraNet Wide Flood (40°)	<b>BT40</b>	<b>Packaging</b>	
Fixed Round	<b>FXRD</b>	KetraNet Very Wide Flood (60°)	<b>BT60</b>	Single Pack	<b>SP</b>
		KetraNet Extra Wide Flood (90°)	<b>BT90</b>		
Regress Depth		CCX Spot (15°) <sup>1</sup>	<b>GT15</b>		
No Baffle (0 in)	<b>00</b>	CCX Flood (25°) <sup>1</sup>	<b>GT25</b>		
Half Inch (0.5 in)	<b>05</b>	CCX Wide Flood (40°) <sup>1</sup>	<b>GT40</b>		
One Inch (1 in)	<b>10</b>	CCX Very Wide Flood (60°) <sup>1</sup>	<b>GT60</b>		
Two Inch (2 in)	<b>20</b>	CCX Extra Wide Flood (90°) <sup>1</sup>	<b>GT90</b>		

<sup>1</sup> CCX stands for Clear Connect-Type X.



# D4R DOWNLIGHT

P/N 3662374 Rev F

Specifications are subject to change without notice

CAD files available upon request

## SPECIFICATIONS<sup>1</sup>

### Optical

Lumen Output <sup>2</sup>	<b>D4R.13PLEN 800 lm</b> <b>D4R.08ICAT 600 lm</b>
CRI (Ra) <sup>3</sup>	<b>&gt;90 (R9 &gt;90)</b>
Lumen Maintenance <sup>3</sup>	<b>50,000 hours to L70 @ 25 °C T<sub>A</sub></b>
Color Point Maintenance <sup>3</sup>	<b>One-step MacAdam Ellipse over product lifetime</b>
Dimming Range <sup>4</sup>	<b>0.1-100%</b>

### Environmental

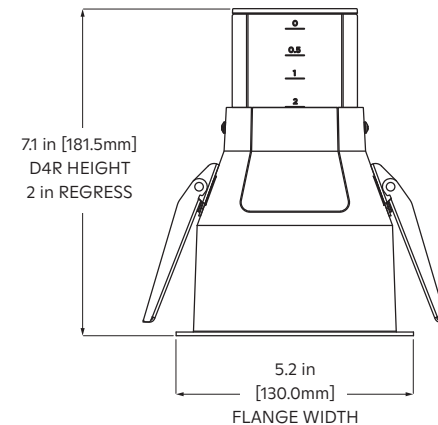
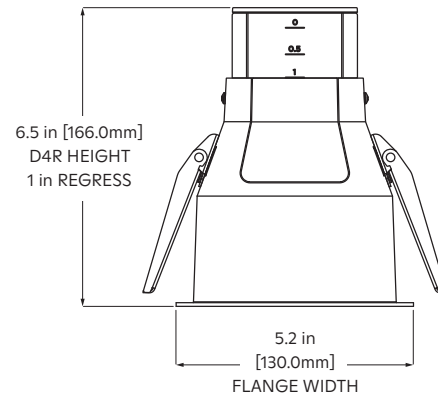
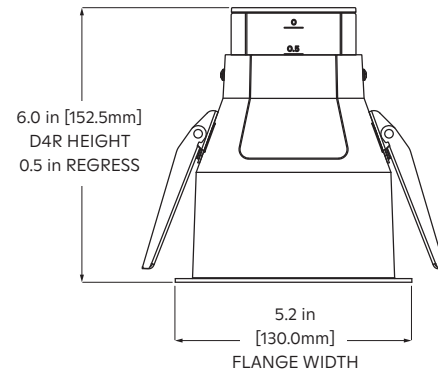
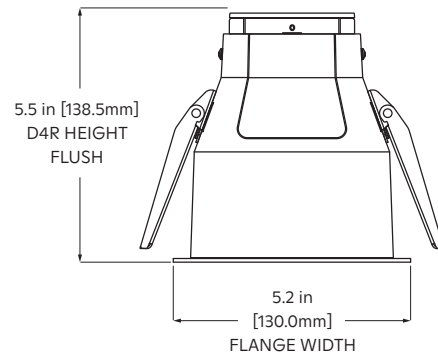
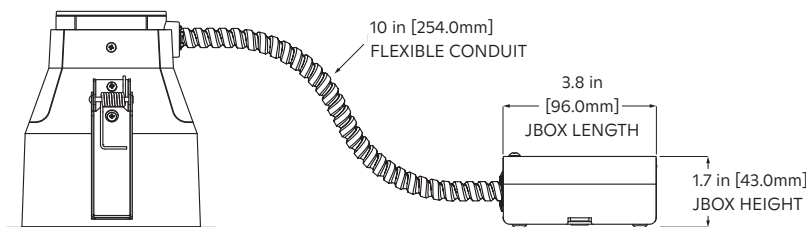
Operating Temperature	<b>0 to 50 °C</b>
Storage Temperature	<b>-20 - 80 °C</b>
Humidity	<b>0 - 95%, Non-condensing</b>
Certification	<b>UL, cUL, RoHS, FCC Class B</b>
Location	<b>UL Damp Location, IP20, Plenum &amp; IC-rated versions are airtight, &amp; Plenum-rated must be used only in non-insulation contact locations</b>
Outdoor Use	<b>Not for use in outdoor applications</b>

### Mechanical

Weight	<b>2.65 lbs (1200 g)</b>
Housing Material	<b>Powder Coated Aluminum, ABS Plastic, Corrosion Protected Steel</b>
Lens Material	<b>UL F1 outdoor rating for UV and water contact PMMA</b>

### Electrical

Power consumption	<b>D4R.13PLEN 13 W</b> <b>D4R.08ICAT 08.5 W</b>
Power Factor	<b>&gt;0.9</b>
Current	<b>142 mA Max</b>
Efficacy <sup>1</sup>	<b>D4R.08 75 lm/W</b> <b>D4R.13 62 lm/W</b>
Emergency Lighting	<b>Evaluated by UL<sup>5</sup> for use in emergency lighting systems in accordance with standard UL<sup>5</sup> 924 and CSA C22.2 No. 141 when paired with the LVS™ model LUT-SHUNT-A-TD (UL<sup>5</sup> file E206507). See Lutron Application Note 106 (P/N 048106) at <a href="http://www.lutron.com">www.lutron.com</a> for wiring details. This is only applicable to CCX fixtures used in an Athena system.</b>



<sup>1</sup> All performance measurements taken at 1 in regress depth, 3000K, 25 °C ambient, 100% power input, with a white baffle, unless otherwise stated.

<sup>2</sup> Lumen measurement complies with IES LM-79-08 testing procedures.

<sup>3</sup> Lumen maintenance values calculated in accordance to TM-21 procedures based on LM-80 compliant measurement data.

<sup>4</sup> Intensity and color point control requires compatible system.

<sup>5</sup> For Title 24 and Title 20 compliant model numbers or for more information, please contact Customer Service at [ketrasales@lutron.com](mailto:ketrasales@lutron.com) or 844.588.6445.



## COMPONENT ORDERING GUIDE

### Replacement Light Engine

Product Line	D4R Model	LE Component	Beam Angle	11 Region / Voltage	Color	Power/Housing Rating
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Order code: \_\_\_\_\_

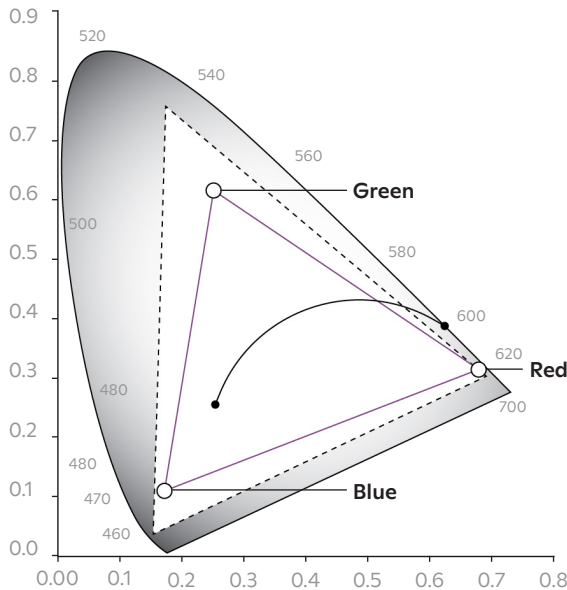
Product Line	Code	Beam Angle	Color	
Commercial	<b>CM-</b>	Spot (15°)	<b>15</b> White <b>WH</b>	
Residential (HomeWorks compatible)	<b>HW-</b>	Flood (25°)	<b>25</b> Black <b>BK</b>	
		Wide Flood (40°)	<b>40</b>	
		Very Wide Flood (60°)	<b>60</b>	
Model		Extra Wide Flood (90°)	<b>90</b>	<b>Power &amp; Housing Rating</b>
4 in Retrofit Downlight	<b>D4R</b>			13 W, Plenum <b>13</b>
				8 W, ICAT <b>08</b>
Component		Region / Voltage	Code	
Light Engine	<b>LE</b>	North America, 120 V~ 60 Hz	<b>11</b>	

### Replacement Baffle

UN- Product Line	D4R Model	BF Component	RD Baffle Shape	Regress Depth	Color
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Order code: \_\_\_\_\_

Product Line	Code	Baffle Shape	Code
Universal	<b>UN-</b>	Round	<b>RD</b>
Model		Regress Depth	
4 in Retrofit Downlight	<b>D4R</b>	Half Inch (0.5 in)	<b>05</b>
		One inch (1 in)	<b>10</b>
		Two Inch (2 in)	<b>20</b>
Component		Color	
Baffle	<b>BF</b>	Black	<b>BK</b>
		White	<b>WH</b>

**WIDE GAMUT**
**CIE 1931 Color Chart**


Ketra's D4R LED Downlight can easily be commissioned into Lutron HomeWorks or Athena systems. The product can reproduce any color point within the triangle shaped gamut indicated in the chart to the left. With Ketra's innovative optical and thermal feedback system, the color point is maintained to an accuracy of one-step MacAdam Ellipse over the lifetime of the product and across operating temperature range.

— **Color Lock**—Color point is maintained to an accuracy of one-step MacAdam Ellipse over the lifetime of the product and across operating temperature range.

- - - **Expanded Gamut**—Color calibration is relaxed such that each product produces the most saturated color it is capable of.

**D4R General Specifications**

**Color Point Maintenance:** Employ closed loop optical and thermal feedback capable of maintaining color point accuracy at a one-step MacAdam ellipse over product lifetime.

**Wireless Capability:** LED light source shall have an integrated wireless control on board.

**Color Rendering Index (CRI):** Capable of CRI greater than 90 at any point along the Black Body Curve from 2,700K to 5,000K.

**Single Source Multi-Dye Emitter Design:** Employ a single source multi-dye emitter consisting of both monochromatic and phosphor converted blue LED dye.

**LED Estimated Useful Life:** Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

**Warranty:** Ketra's light source is warrantied to be free from material defects in material and workmanship for five ( 5 ) years or 25,000 hours from date of shipment, whichever is less.

**Lighting System Capable of the Following Dimming Functionality:**

1. Automatically mimicking natural daylight by shifting Correlated Color Temperature (CCT) and intensity based on time-of-day.
2. Shifting from high CCT at high intensity to low CCT at low intensity, mimicking dimming curve of an incandescent lamp.
3. Changing intensity while maintaining full color spectrum or CCT.
4. Changing full color spectrum or CCT while maintaining intensity.

**Spectral Power Distribution Manipulation:** Light system capable of manipulating the Spectral Power Distribution (SPD) by automatically adjusting distributions of color intensity while maintaining the same Correlated Color Temperature (CCT).

**Dimming Range:** Dimmable from 100 to 0.1 percent measured luminous flux.

**Color Point Range:** Single light source capable of producing 16.7 million colors and white from 1,400K to 10,000K Correlated Color Temperature (CCT).

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