

# COBRA 3" MINI

CB3 SERIES | Deep Regress Downlights



Small and powerful runs in this family of 3" aperture recessed downlight that offer up to 1700 delivered lumens. This mini downlight family is complete with high performance and an expansive range of options for optics, trim styles, trim configurations, beam spreads, housings, mounting, and more – offering the flexibility your projects require. They are available in an expansive assortment of configurations to provide options for nearly every design requirement. It is a designer's favorite that delivers superior light in every application.



## Feature

- Architectural Friendly: Up to 50,000 unique combinations
- Adjustable Ring: 360° rotation and a maximum 30° tilt angle
- 2 in 1 Dimming: 0-10V (Dim to 1%) and TRIAC in one package
- COB LED: 4 Fixed CCT 90+ CRI or Dim to Warm 95+ CRI options.
- Beam Angle: 4 optics series with 15°~60° options
- Trimmed, trimless with various shades options
- New construction and remodel driver options for any site condition



## PERFORMANCE

Wattage Selectable	Round, 24° Beam @ 3000K		Square 24° Beam @ 3000K		Dim to Warm 3000K~2000K 95+ CRI
	Efficacy	Delivered Lumens	Efficacy	Delivered Lumens	
5W	95LM/W	475LM	95LM/W	475LM	Up to 13W 1200LM 95LM/W
8W	100LM/W	800LM	96LM/W	768LM	
10W	99LM/W	990LM	95LM/W	950LM	
13W	95LM/W	1235LM	91LM/W	1183LM	
16W	91LM/W	1456LM	87LM/W	1390LM	
19W	89LM/W	1690LM	85LM/W	1615LM	

Remark: The lumens are subject to 3000K, 90+ CRI, 24° beam angle, white round trim with 360° horizontal adjustable holder. Lumen output may vary ± 5% base on different CCT, beam angle, adjustable holder, trim shape and shade.

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














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## PRODUCT ORDERING GUIDE

Example: CB-3R-TW-19W-DT1-9027-B36-HA-RW-RM

\*Available For Quickship - Coming Soon.

CB			19W	DT1				
Product Family	Size and Shape	Flange Type	Wattage Selectable	Dimming Options	CRI Options	LED Color Options	Beam Options	Adjustable Holder
CB COBRA Downlight Series	<b>3R</b> QuickShip 3inch Round	<b>TW</b> QuickShip Trimmed With White Flange	<b>19W</b> QuickShip Up to 19W, 1700LM (5W, 8W, 10W, 13W, 16W, 19W Field-selectable)	<b>DT1</b> QuickShip 0-10V, (Dim To 1%) Or TRIAC Dimming	<b>90</b> QuickShip 90+ CRI	<b>27</b> QuickShip 2700K Cree COB	<b>B15</b> QuickShip Beam 15°	<b>HA</b> QuickShip 360° Horizontal Adjustment
	<b>3S</b> QuickShip 3inch Square	<b>TB</b> QuickShip Trimmed With Black Flange			<b>95</b> QuickShip 95+ CRI (ONLY For Dim To Warm)	<b>30</b> QuickShip 3000K Cree COB	<b>B24</b> QuickShip Beam 24°	<b>B36</b> QuickShip Beam 36°
		<b>TL</b> QuickShip Trimless				<b>35</b> QuickShip 3500K Cree COB	<b>B60</b> QuickShip Beam 60°	
						<b>40</b> QuickShip 4000K Cree COB	<b>Low Glare Lens</b>	
						<b>DW</b> QuickShip Dim to Warm 3000K~2000K Bridgelux COB (13W Max)	<b>L18</b> QuickShip Beam 18°	
							<b>L24</b> QuickShip Beam 24°	
							<b>L38</b> QuickShip Beam 38°	
							<b>L50</b> QuickShip Beam 50°	
Trim Shade						Mounting	Optic Media(Optional)	Emergency (Optional)
 Square	 <b>SW</b> White QuickShip	 <b>SB</b> Black QuickShip	 <b>SG</b> Gold QuickShip	 <b>SC</b> Chrome QuickShip	<b>RM</b> QuickShip Remodel (NON-IC)	<b>{Blank}</b> None	<b>{Blank}</b> None	
 Round	 <b>RW</b> White QuickShip	 <b>RB</b> Black QuickShip	 <b>RG</b> Gold QuickShip	 <b>RC</b> Chrome QuickShip	<b>NF</b> QuickShip New Construction-Frame Kit (NON-IC)	<b>HB</b> QuickShip Honeycomb (Only For Round/Square Shade)	<b>EM</b> QuickShip Emergency Pre-install 8W LED Emergency Driver And Indicator Before Delivery	
 Pinhole Round	 <b>PWW</b> Inside White Outside White QuickShip	 <b>PBW</b> Inside Black Outside White QuickShip	 <b>PGW</b> Inside Gold Outside White QuickShip	 <b>PCW</b> Inside Chrome Outside White QuickShip	<b>NH</b> QuickShip New Construction-Housing Insulation Kit (IC)	<b>WR</b> QuickShip Waterproof Plate ( Wet Rated ) For Round Shade		
	 <b>PWB</b> Inside White Outside Black QuickShip	 <b>PBB</b> Inside Black Outside Black QuickShip	 <b>PGB</b> Inside Gold Outside Black QuickShip	 <b>PCB</b> Inside Chrome Outside Black QuickShip		<b>WS</b> QuickShip Waterproof Plate ( Wet Rated ) For Square Shade		
 Pinhole Oval	 <b>OWW</b> Inside White Outside White QuickShip	 <b>OBW</b> Inside Black Outside White QuickShip	 <b>OGW</b> Inside Gold Outside White QuickShip	 <b>OCW</b> Inside Chrome Outside White QuickShip		Decorative Kit (Only For Round Shade)		
	 <b>OWB</b> Inside White Outside Black QuickShip	 <b>OBB</b> Inside Black Outside Black QuickShip	 <b>OGB</b> Inside Gold Outside Black QuickShip	 <b>OCB</b> Inside Chrome Outside Black QuickShip		 Yellow +  <b>DYB</b>  <b>DYW</b> QuickShip		
						 Green +  <b>DGB</b>  <b>DGW</b> QuickShip		
						 Transparent +  <b>DTB</b>  <b>DTW</b> QuickShip		
						 Blue +  <b>DBB</b>  <b>DBW</b> QuickShip		
						 Red +  <b>DRB</b>  <b>DRW</b> QuickShip		

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## STRUCTURE

### LED System

LED	Powered by CREE or Bridgelux high efficiency COB LED chip.
CRI	90+ for fixed CCT or 95+ CRI for Dim to Warm, producing outstanding illumination at a tight chromaticity specification and color binning process.
CCT	2700K, 3000K, 3500K and 4000K fixed CCT with a great color consistency or Dim to Warm from 3000K to 2000K.
Light Engine	Aluminum housing acting as the heat sink to maximize life. The temperature of all heatsinks are controlled at 60-70°C.



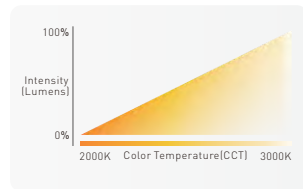
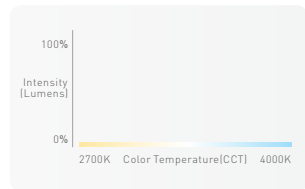
Fixed CCT

- 2700K, 3000K, 3500K, 4000K
- 90+ CRI



Dim to Warm

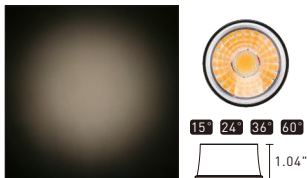
- 2000K - 3000K
- 95+ CRI



### Lens

Classic reflector-like design provides high lighting transmittance. It effect in light control and anti-glare with side facula and fade-out facula. The MR16 standard size (diameter 1.96") design make them widely practical. Available in 15°~60° beam angles, beam spreads are interchangeable which can be easily swapped out in the field without tools.

#### Standard Lens



#### Low Glare Lens Lens



### Trim Finish / Shade

Powder coat white and black finishes offer uniform finish providing long term performance and superior aesthetic, compatible for multiple trim shades.

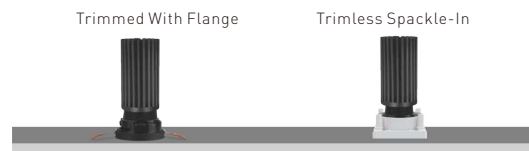


### Electrical

LED Driver	It is powered by Class 2 high efficiency LED driver, with a standard 0-10V dimming which continuous dims to 1% or Triac dimming that works with many types of controls. Thermal overload protection shuts down the luminaire when system temperatures exceed designed operating conditions.
THD	<20%
Power Factor	>0.9
Input Voltage	Standard electronic drivers are cULus recognized and available for 110-277V AC.
Environment	Environment damp rated for ambient operating temperature of -20°C to +40°C (-4° to +104°F)

### Installation

Twist & Lock feature for easy trim installation. Durable tension clips are allowing for fast and easy flush installation.



### Listings

- cULus listed for damp locations
- Five-year warranty for parts and components. (Labor not included)

#### NOTES:

- Ambient temperatures at fixture location should not exceed 40°C during normal operation.
- For interior use only

# COBRA 3" MINI

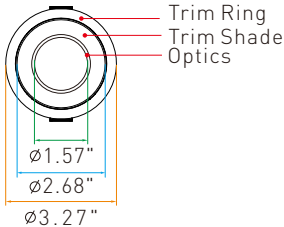
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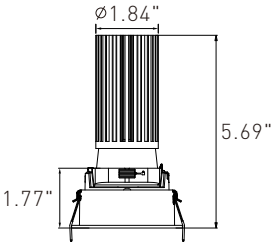
## DIMENSIONS

### CB-3R-TW / TB

3" Round Trim

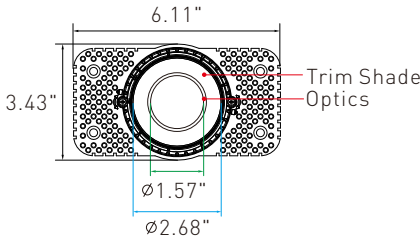


Mounting Diameters: 2.96"-3.11"

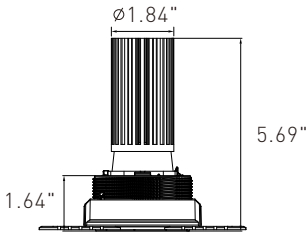


### CB-3R-TL

3" Round Trimless

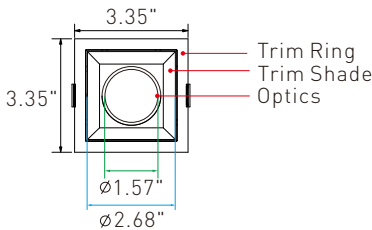


Mounting Diameters: 3.51"-3.70"

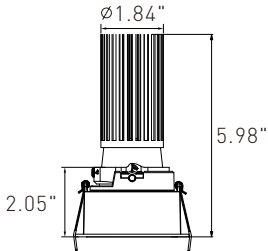


### CB-3S-TW / TB

3" Square Trim

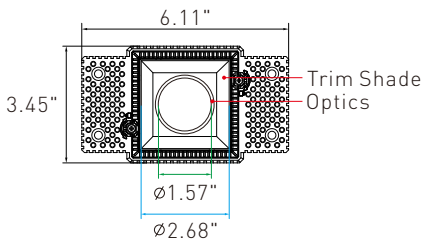


Mounting Diameters: (2.96"-3.11") x (3.11"-3.19")

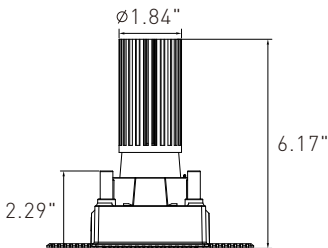


### CB-3S-TL

3" Square Trimless



Mounting Diameters: 3.51"-3.70"



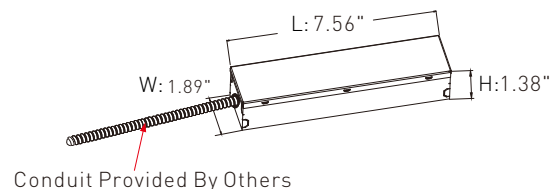
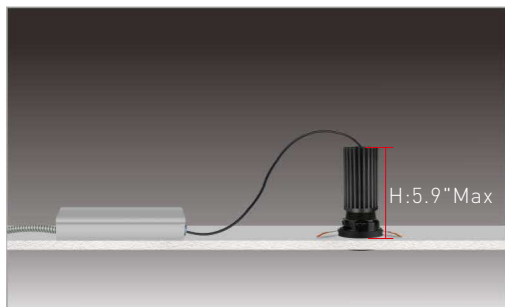
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## MOUNTING

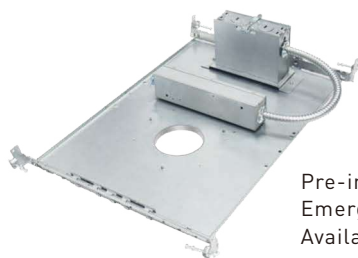
### Remodel (NON-IC)- LED Driver Box



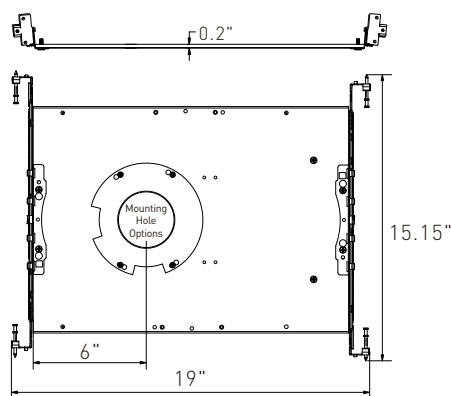
It can be installed in existing ceilings for remodel application. Simple cut a hole in existing drywall ceilings.

### New Construction-Frame Kit (NON-IC)

A rough-in frame option is available for all new constructions and a variety of ceiling types. LED driver box rests on the frame kit by magnet when installed as shown below.

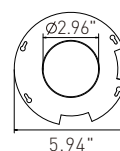


Pre-install LED  
Emergency Driver  
Available.

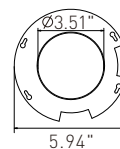


#### Mounting Hole Options

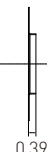
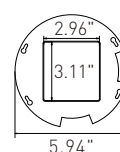
##### 3" Round Trim



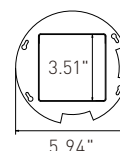
##### 3" Round Trimless



##### 3" Square Trim



##### 3" Square Trimless

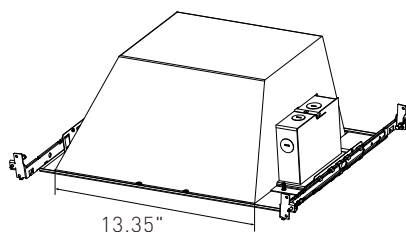
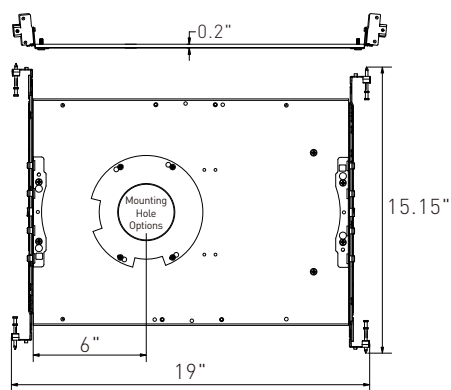


### New Construction-Housing Insulation Kit (IC)

An IC-rated housing frame kit allows placement of 3inch LED downlight in direct contact with insulation.



Pre-install LED  
Emergency Driver  
Available.





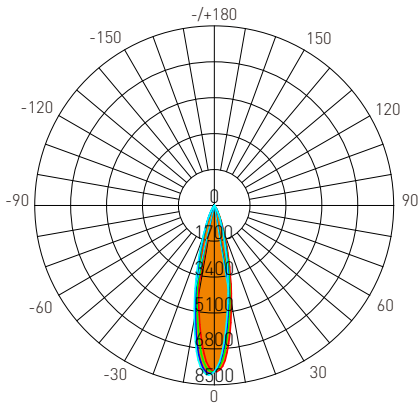
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## DISTRIBUTION DIAGRAM

3" Round / 19W / 3000K / 24°



AVERAGE BEAM ANGLE(50%): 22.6°

Lumens: 1687.3 Lm  
Watts: 19 W  
LPW: 89.60 Lm/W  
CCT: 3000K

UNIT:cd  
— C0/180,22.6°  
— C30/210,22.5°  
— C60/240,22.6°  
— C90/270,22.5°

Zonal Flux Diagram

T	C0	C45	C90	C135	C180
10	4692	4157	3789	3903	4333
20	1363	1157	1005	1035	1168
30	307.5	269.5	220.7	207.2	240.7
40	14.08	14.54	14.73	14.24	13.66
50	4.167	4.152	4.343	4.449	4.585
60	2.910	3.014	3.282	3.277	3.334
70	1.667	1.879	2.086	2.094	1.894
80	0.4451	0.4716	0.6493	0.5151	0.4606
90	0.0311	0.0135	0.0317	0.0091	0.0223
100	0.0266	0.0450	0.0227	0.0453	0.0444
110	0.2036	0.2749	0.3032	0.3265	0.0979
120	1.077	1.306	1.511	1.500	0.5293
130	3.854	4.383	4.893	4.808	2.099
140	8.471	9.035	9.516	9.460	6.040
150	11.99	12.27	12.49	12.45	10.65
160	13.21	13.05	13.10	12.98	12.59
170	11.69	11.24	11.06	10.99	11.16
180	9.987	10.21	10.16	10.30	10.01
DEG	LUMINOUS INTENSITY:cd				

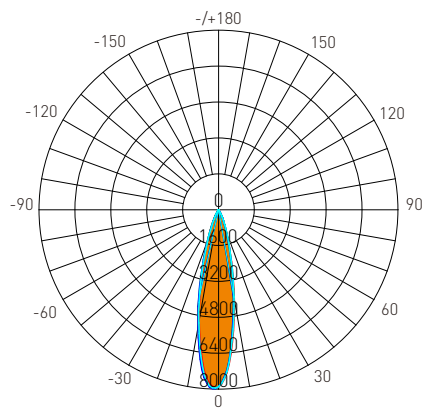
Zonal Lumens

T	φ total
0-10	576.8
10-20	1287
20-30	1588
30-40	1652
40-50	1658
50-60	1661
60-70	1664
70-80	1665
80-90	1665
90-100	1665
100-110	1665
110-120	1666
120-130	1667
130-140	1671
140-150	1677
150-160	1683
160-170	1686
170-180	1687
UNIT: lm	

Luminance cd/(m2)

G(DEG)	C0/180	C90/270
85	180	638
80	744	1063
75	1112	1426
70	1414	1735
65	1711	1995
60	1689	1866
55	1756	1832
50	1881	1921
45	2314	2250

3" Square / 19W / 3000K / 24°



AVERAGE BEAM ANGLE(50%): 22.5°

Lumens: 1609.3 Lm  
Watts: 19 W  
LPW: 85.64 Lm/W  
CCT: 3000K

UNIT:cd  
— C0/180,22.5°  
— C30/210,22.5°  
— C60/240,22.8°  
— C90/270,22.5°

Zonal Flux Diagram

T	C0	C45	C90	C135	C180
10	4048	3864	3957	4441	5003
20	990.0	983.0	1048	1205	1367
30	188.4	199.2	211.4	234.7	273.7
40	11.87	15.51	12.83	17.25	14.22
50	7.034	7.424	7.276	7.575	7.011
60	6.750	7.004	7.307	8.800	6.668
70	1.541	2.531	1.626	3.081	1.640
80	0.4825	0.4814	0.6059	0.4547	0.4580
90	0.0315	0.0225	0.0454	0.0226	0.0270
100	0.0270	0.0496	0.0316	0.0406	0.0540
110	0.2110	0.2483	0.2026	0.1987	0.0990
120	1.222	1.277	1.199	1.043	0.3785
130	4.310	4.431	4.330	3.869	1.564
140	8.860	8.974	8.882	8.419	5.014
150	11.92	11.94	11.92	11.68	9.680
160	12.72	12.49	12.62	12.55	12.14
170	10.70	10.46	10.70	10.82	11.03
180	9.356	9.628	9.623	9.696	9.401
DEG	LUMINOUS INTENSITY:cd				

Zonal Lumens

T	φ total
0-10	198.8
10-20	656.9
20-30	1051
30-40	1188
40-50	1209
50-60	1215
60-70	1219
70-80	1221
80-90	1221
90-100	1221
100-110	1221
110-120	1222
120-130	1224
130-140	1227
140-150	1230
150-160	1234
160-170	1236
170-180	1237
UNIT: lm	

Luminance cd/(m2)

G(DEG)	C0/180	C90/270
85	140	554
80	619	774
75	849	911
70	1004	1055
65	2826	2900
60	3007	3243
55	2626	2749
50	2437	2512
45	2299	2348