DESCRIPTION

The HLB4S is a 4-inch ultra-thin LED square lens downlight with remote driver / junction box suitable for new construction and remodel applications. Field selectable color temperature and high color rendering provide excellent color performance. Simplified installation in drywall or suspended ceilings eliminates recessed cans saving time and money. Installs from below the ceiling in as little as 1-1/2" plenum height, can be used in direct contact with insulation and is airtight. Use for general area lighting in low to medium height ceilings where energy savings, long life and economy are required.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

HOUSING

- Die cast aluminum mounting frame with integral flange provides passive thermal cooling achieving L70 at 50,000 hours in IC and non-IC applications
- High impact diffuse lens provides shielding to the light guide minimizing pixilation.

GASKET

- Closed cell gasket achieves restrictive airflow and wet location listing without additional gaskets or caulking

OPTICS

- Precision acrylic light guide organizes source flux into wide distribution with 1.4 spacing criteria, useful for general area illumination

LED ARRAY

- Plurality of mid power LED's provides a uniform source with high efficiency and long life
- Available in 90 CRI minimum, R9 greater than 50 provides high color rendering
- Fixed 3000 and 4000 K CCT color temperatures, color accuracy within 3 SDCM
- Optional field selectable color temperature, select 2700, 3000, 3500, 4000 or 5000 K CCT, color accuracy within 4 SDCM
- Meets Energy Star color angular uniformity requirements, deviation is less than 0.006 u' v'

REMOTE DRIVER / JUNCTION BOX

- Die formed metal driver / junction box with captive hinged junction box cover
- Listed for (6) #12 AWG 90˚ C splice conductors, 2-in, 2-out plus (2) ground
- (2) ½" conduit pry-outs
- (2) Slide-N-Side™ non-metallic (NM) wire traps allows wiring outside the box
- Accepts 14-2, 14-3, 12-2, 12-3 U.S. and 14-2, 14-3, 12-2 Canadian NM cable
- (3) 4-port push wire nuts with clear caps for quick and reliable mains voltage connections
- Integral mounting facilitate direct mounting to building structure or mounting frame

DRIVER

- 120V 60 Hz constant current driver provides noise free operation
- Continuous, flicker-free dimming from 100% to 5% with select leading or trailing edge 120V phase cut dimmers
- Plenum rated inline electrical quick connect provides low voltage connection to fixture fitting, CMP/FT6 rated

INSTALLATION

- Can be installed in 1/2" to 1-1/4" thick ceilings
- Cutout template provided
- Heat treated springs hold fixture fitting securely in the ceiling eliminating light leaks
- Housing is less than ½" thick and can span a 2" nominal framing member
- Can be removed from below the ceiling for service or replacement

COMPLIANCE

- cULus certified type IC suitable for direct contact with air permeable insulation
- Not recommended for use in direct contact with spray foam insulation, reference NEMA LSD57-2013
- Wet location listed and IP44 ingress protection
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions per FCC 47CFR Part 15 consumer limits
- Contains no mercury or lead and RoHS compliant
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- Can be used for State of California Title 24 high efficacy LED compliance under JA8, reference Modernized Appliance Efficiency Database System (MAEDBS) for 2016 JA8 High Efficacy Lighting
- ENERGY STAR® certified, reference "Certified Light Fixtures" database

WARRANTY

- Five year limited warranty, consult website for details. www.eaton.com/lighting/legal

HLB4S

4-Inch LED Square Lens Downlight with Remote Driver / Junction Box

Up to 750 Lumens
Field Selectable CCT

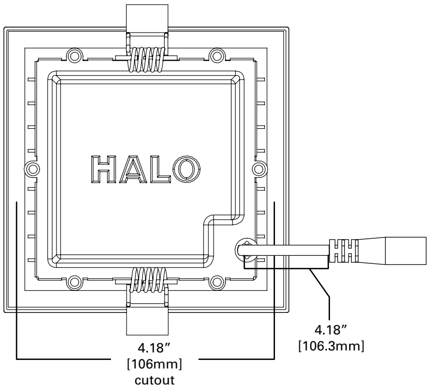
5 seleCCTable™ colors

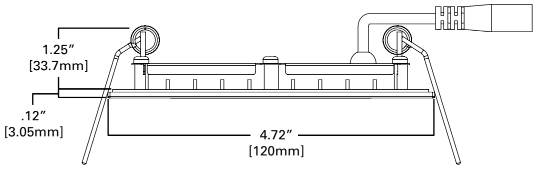
2700K • 3000K • 3500K
4000K • 5000K

ENERGY DATA	
Lumens	600 Series
Input Voltage	120V
Input Current	90 (mA)
Input Power	10.5 (W)
Efficiency	60 (LPW)
Inrush (A)	2.2 A @ 54mS
THD	≤ 20%
PF	≥ 0.90
T Ambient	-30° - +40°C
Sound Rating	≤ 22 dba

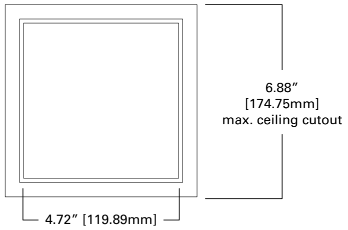
Refer to ENERGY STAR® Certified Products List.
Can be used to comply with California Title 24 High Efficacy requirements.
Certified to California Appliance Efficiency Database under JA8.

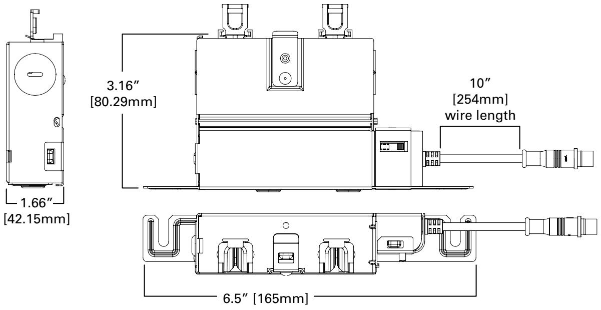
DIMENSIONS





HLB4SOTMW
Oversized trim





ORDERING INFORMATION

SAMPLE NUMBER: HLB4S069FS1EMWR

Models	Lumens	CRI / CCT	Driver	Finish	Packaging
HLB4S = 4-Inch LED square lens downlight with remote driver / junction box	**06** = 600 lumens (nominal)	**930** = 90 CRI minimum, 3000 K CCT **940** = 90 CRI minimum, 4000 K CCT **9FS** = 90 CRI minimum, field selectable 2700, 3000, 3500, 4000 or 5000 K CCT	**1E** = 120V 60Hz, LE & TE phase cut 5% dimming	**MW** = matte white flange	**R** = recyclable 4-color unit carton suitable for point of purchase merchandising display

Accessories

HLB4SOTMW = 4″ square oversized trim, matte white

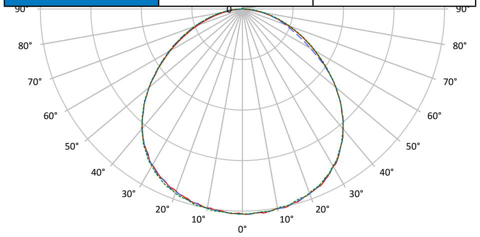
Designer Trims
HLB4STRMMW = 4″ square decorative overlay, matte white
HLB4STRMSN = 4″ square decorative overlay, satin nickel
HLB4STRMTBZ = 4″ square decorative overlay, tuscan bronze

Extension Cable | Dedicated Driver/Jbox
HLB06EC - 6 ft. extension cable
HLB12EC - 12 ft. extension cable
HLB20EC - 20 ft. extension cable

Extension Cable | seleCCTable Driver/Jbox
HLB06FSEC - 6 ft. extension cable
HLB12FSEC - 12 ft. extension cable
HLB20FSEC - 20 ft. extension cable

PHOTOMETRIC DATA

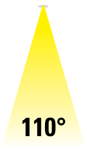
HLB4S069FS1EMW-3000K		
Luminaire lumens		696
Input watts		10.1
LER (LPW)		68.9
Spacing Criteria	0-180	1.30
	90-270	1.32
	Diagonal	1.40
Beam angle (degrees)		110.3
Field angle (degrees)		161.8
Zonal lumen	Lumens	% Lumens
0-30	196	28.1
0-40	321	46.1
0-60	557	80
0-90	696	100



* Tested in accordance with IES LM63. Field results may vary.

Color Metric Summary - 3000K

TM-30-15	$R_f = 90.1$
	$R_g = 97.9$
CRI/CIE	$R_a = 95$
	$R_9 = 75.8$

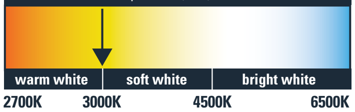


CCT - Range of 2700K- 5000K

Product Specifications

PRODUCT SPECIFICATIONS

Lumens	668
Watts	10.8
Lumens Per Watt (Efficacy)	62.1
Color Accuracy (CRI)	92
Light Color (CCT) Correlated Color Temperature (CCT)	3000K



HLB4S 4-inch	CCT	Lumens	Power (W)	LPW
Fixed CCT	3000K	734.6	10.2	72.0
	4000K	773.2	10.2	75.8
Field Selectable CCT	2700K	684.9	10.1	67.8
	3000K	695.9	10.1	68.9
	3500K	689.6	10.1	68.3
	4000K	693.7	10.1	68.7
	5000K	694.6	10.1	68.8