

## HALO LED H4 Series - 2nd Generation

The Halo H4 LED is a family of 4" aperture recessed downlight H457 series of housings designed for exclusive use with Halo EL406, ELG406, ELSG406 Series LED Light Engines and compatible 4" TL4 and TLS4 LED trims. Halo H4 LED housings have integral LED drivers that offer dimming as a standard feature.

This is an insulated ceiling\* AIR-TITE™ housing offering 120 volt dimming capability. The H4 LED series offers high quality down-lighting along with high efficacy – the result being great lighting and significant energy savings.

Catalog #		Type
Project		
Comments		Date
Prepared by		

## DESIGN FEATURES

### MECHANICAL

#### Housings

- Enclosure of formed aluminum construction.
- Openings are gasketed AIR-TITE.
- Designed for insulated ceilings in direct contact with insulation.\* (May also be installed in non-insulated ceilings.)

#### Plaster Frame

- Galvanized steel die-formed construction.
- The collar can be removed from plaster frame to provide access to the junction box.
- Collar adjusts for ceilings up to 1-1/2" thick.
- Plaster frame features include:
  - Patented regressed locking screw positioned for securing hanger bars from below the ceiling.
  - Cutouts for easily crimping hanger bars in position.
  - AIR-TITE aperture gasket is pre-installed.
  - HALO identity embossed on plaster frame.

#### GOT NAIL! Pass -N-Thru™

##### Bar Hangers

- Pre-installed nail easily installs in regular lumber, engineered lumber and laminated beams.
- Safety and guidance system prevents snagging, ensures smooth straight nail penetration and allows bar hangers to be easily removed if necessary.
- Automatic leveling flange aligns the housing and lets you hold the housing in place with one hand while driving nails.
- Housing can be positioned at any point within 24" joist span.
- Pass-N-Thru™ feature allows bar hangers to be shortened without removing from plaster frame.
- Score lines allow "toolless" shortening for 12" joists.
- Bar hangers may be repositioned 90°.
- Integral T-bar clip snaps onto T-bars - no additional clips required.

#### Slide-N-Side™ Junction Box

- Positioned to accommodate straight conduit runs
- Seven 1/2" trade size conduit knockouts with true pry-out slots
- Slide-N-Side™ wire traps allow non-metallic sheathed cable to be installed without tools and without removing knockouts.
- Accepts a wide range of non-metallic (type NM) sheathed cables - the standard cable types used in lighting in both U.S. and Canada.
  - Allows wiring connections to be made outside the junction box
  - Simply insert the cable directly into the trap after connections are made.
  - Accommodates the following standard non-metallic sheathed cable sizes:
    - (US) #14/2, #14/3, #12/2, #12/3
    - (Canada) #14/2, #14/3, #12/2

#### LED Light Engine Connection

- LED connector is a non-screw base connector offering easy installation with the H4 LED 2nd Generation EL406, ELG406, ELSG406 Series LED Light Engines.
- LED connector meets high-efficacy luminaire requirement for a non-screw base socket, and where required to qualify as a high-efficacy luminaire. (California Title-24)

#### LED Driver

- LED dimmable driver mounts to the housing.
- Driver is a120 Volt, high efficiency, electronic power supply providing low voltage power to EL Series LED Light Engines.
- Driver meets FCC EMI/RFI Consumer Level limits for use in residential and commercial installations.
- Driver features high power factor and low THD and has integral thermal protection in the event of over temperature or internal failure.
- Driver is specifically designed for compatibility with EL406 LED Light Engines, and ELG406, ELSG406 Adjustable Gimbal Light Engine / Trims.
- If dimming is not required the fixture can be operated from a standard wall switch.

#### Dimming

- The HALO H4 LED luminaire is designed for dimming capability to 10% in normal operation with most 120V leading edge (LE) and trailing edge (TE) phase control dimmers. H4 LED may also dim to 5% using dimmers with low end trim adjustment. (Consult dimmer manufacturer for application/compatibility/ loading. Note, some dimmers require a neutral in the wallbox).

#### Warranty

Eaton provides a five year limited warranty on Halo LED Luminaires which includes the LED Recessed Housing, LED Light Engine, and LED trims.

#### Labels

- UL/cUL Listed 1598 Luminaire
- UL/cUL Listed for Damp Location
- UL/cUL Listed for Wet Location, covered ceiling - with select trims
- UL/cUL listed for Direct Contact with insulation and combustible material\*
- Options to meet Trade Agreements Act requirements

#### Qualifications

- ENERGY STAR® Certification.\*\*
- Use with designated LED light engines and trims for State of California Title 24 high efficacy luminaire compliance\*\*
- Can be used for International Energy Conservation Code (IECC) high efficacy luminaire compliance

#### IC and AIR-TITE™

Certified under ASTM-E283 and listed UL/cUL 1598. May be used to meet insulated ceiling and restricted air-flow requirements such as:

- International Energy Conservation Code (IECC)
- State of California Title 24 "Recessed Downlight Luminaires in Ceilings."



## H457ICAT1E

**4-Inch LED  
Recessed Housing  
New Construction  
Insulated Ceiling**

**High Efficacy LED Housing-  
Dimmable**

**FOR USE IN  
INSULATED CEILINGS  
FOR DIRECT CONTACT  
WITH INSULATION\***

**ALSO SUITABLE FOR  
NON-IC APPLICATIONS**

#### H4 Series LED Energy Data:

(Values at non-dimming line voltage.)

Minimum Starting Temp: -30°C (-22°F)

EMI/RFI: FCC Title 47 CFR, Part 18 (Consumer)

Sound Rating: Class A standards

Input Voltage: 120V

Power Factor: >0.90

Input Frequency: 50/60Hz

THD: <20%

Input Power: 13W

Input Current: 121mA

Driver Compliance: UL6950, LPS rated

Maximum IC (Insulated Ceiling)

Ambient Continuous Operating

Room Temperature: 25°C (77°F)

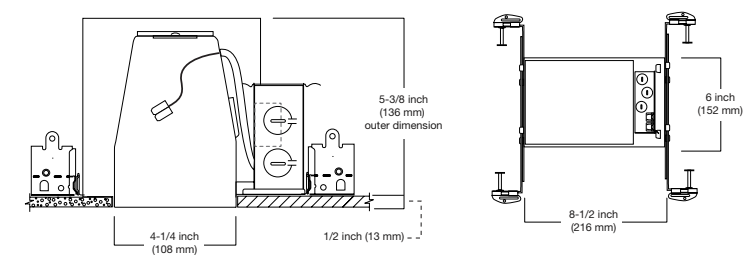
Maximum Non-IC (Non-Insulated

Ceiling) Ambient Continuous

Operating Room Temperature: 40°C (104°F)



DIMENSIONS



ORDERING INFORMATION - H4 LED Downlights

**SAMPLE NUMBER:** H457ICAT1E - EL406927 -TL410SC  
 Complete unit includes LED housing, light engine and trim; ordered separately.

Domestic Preferences <sup>(1)</sup>		H4 LED Housing		H4 LED Light Engine		
				EL406	CRI	CCT
<b>[Blank]</b> = Standard <b>TAA</b> = Trade Agreements Act		<b>H457</b> = 4" housing H4 LED series downlight, 2nd Generation				
		<b>ICAT</b> = New Construction Insulated Ceiling, AIR-TITE				
		<b>1E</b> = LED driver, 120V, 50/60 Hz, dimmable, LE/TE* phase control dimmers (refer to dimmer manufacturer).		<b>EL406</b> = 4" LED Downlight Engine, 2nd Generation		<b>9</b> = 90 CRI  <b>27</b> = 2700K <b>30</b> = 3000K <b>35</b> = 3500K <b>40</b> = 4000K

Trim Options		Accessories
<b>TL410SC</b> = Specular Clear Reflector, Diffuse Polymer Dome Lens, White Ring, Shower Rated <b>TL410H</b> = Haze Reflector, Diffuse Polymer Dome Lens, White Ring, Shower Rated <b>TL410WH</b> = White Reflector, Diffuse Polymer Dome Lens, White Ring, Shower Rated <b>TL410SN</b> = Satin Nickel Reflector, Diffuse Polymer Dome Lens, Satin Nickel Ring, Shower Rated <b>TL410TBZ</b> = Tuscan Bronze Reflector, Diffuse Polymer Dome Lens, Tuscan Bronze Ring, Shower Rated <b>TL410SBK</b> = Specular Black Reflector, Diffuse Polymer Dome Lens, White Ring, Shower Rated <b>TL411WB</b> = White Baffle, Diffuse Polymer Dome Lens, White Ring, Shower Rated <b>TL411BB</b> = Black Baffle, Diffuse Polymer Dome Lens, White Ring, Shower Rated <b>TL402SCS</b> = Specular Clear Reflector, Solite® Glass Lens, and White Ring, Shower Rated <b>TL402HS</b> = Haze Reflector, Solite® Glass Lens, and White Ring, Shower Rated <b>TL402WHS</b> = White Reflector, Solite® Glass Lens, and White Ring, Shower Rated <b>TL402SNS</b> = Satin Nickel Reflector, Solite® Glass Lens, and Satin Nickel Ring, Shower Rated		<b>Thin Profile Designer Trim Rings</b> <i>For use with Round TL4 trims (not compatible with Square TLS4 trims, or adjustable gimbals ELG, ELSG trims.)</i> <b>TRM400WH</b> = White <b>TRM400BK</b> = Black <b>TRM400SN</b> = Satin Nickel <b>TRM400TBZ</b> = Tuscan Bronze <b>TRM400PC</b> = Polished Chrome
<b>TL402TBZS</b> = Tuscan Bronze Reflector, Solite® Glass Lens, and Tuscan Bronze Ring, Shower Rated <b>TL402SBKS</b> = Specular Black Reflector, Solite® Glass Lens, and White Ring, Shower Rated <b>TL403WBS</b> = White Baffle, Solite® Glass Lens, and White Ring, Shower Rated <b>TL403BBS</b> = Black Baffle, Solite® Glass Lens, and White Ring, Shower Rated <b>TLS408WHWB</b> = Square Baffle Trim, Solite® Glass Lens, White Ring with White Baffle, Shower Rated <b>TLS408WHBB</b> = Square Baffle Trim, Solite® Glass Lens, White Ring with Black Baffle, Shower Rated <b>TLS408SNBB</b> = Square Baffle Trim, Solite® Glass Lens, Satin Nickel Ring with Black Baffle, Shower Rated <b>TLS408TBZBB</b> = Square Baffle Trim, Solite® Glass Lens, Tuscan Bronze Ring with Black Baffle, Shower Rated <b>TL409WW</b> = Wall Wash, Semi-Specular Clear Reflector with White Ring, Shower Rated <b>TL409WHWW</b> = Wall Wash, White Reflector with White Ring, Shower Rated <b>TL422PS</b> = Polymer "Dead Front" White Baffle & Regressed Lens, White Ring, Shower Rated		

\* LE = Leading Edge (forward phase control) dimming  
 \* TE = Trailing Edge (reverse phase control) dimming  
**Notes:** (1) Only product configurations with this designated prefix are built to be compliant with the Trade Agreements Act of 1979 (TAA). Please refer to [DOMESTIC PREFERENCES](#) website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

\*Outdoor rated lamp only (purchase separately)

ORDERING INFORMATION - H4 LED Adjustable Gimbals

**SAMPLE NUMBER:** H457ICAT1E - ELG406930WH  
 Complete unit includes LED housing, light engine and trim; ordered separately.

Domestic Preferences <sup>(1)</sup>		H4 LED Light Engine			Optional Accessory Reflector Kit	Optional Len Media
		CRI	CCT	Finish	(order separately)	(order separately)
<b>[Blank]</b> = Standard <b>TAA</b> = Trade Agreements Act	<b>ELG406</b> = Round LED Adjustable Gimbal Light Engine - 2nd Generation <b>ELSG406</b> = Square LED Adjustable Gimbal Light Engine - 2nd Generation	<b>9</b> = 90 CRI	<b>27</b> = 2700K	<b>WH</b> = White	TL412RK includes: • 25° reflector (one is included with gimbal) • 35° reflector • 50° reflector TL412RK is for use with ELGxx and ELSGxx gimbals only.	One lens media may be used in place of clear lens. Optical Lenses • L110 Diffuse Sand Blasted Lens • L111 Soft Focus Textured Lens • L113 Prismatic Lens • L115 Linear Spread Lens  Dichroic Color Films • L114 UV Filter • L120 Red • L121 Amber • L122 Yellow • L123 Green • L124 Daylight • L125 Blue • L127 Cosmetic Color Filters • L130 Yellow
			<b>30</b> = 3000K	<b>SN</b> = Satin Nickel		
			<b>35</b> = 3500K	<b>TBZ</b> = Tuscan Bronze		
			<b>40</b> = 4000K			

Solite® is a registered trademark of AGC Flat Glass North America

**Notes:** (1) Only product configurations with this designated prefix are built to be compliant with the Trade Agreements Act of 1979 (TAA). Please refer to [DOMESTIC PREFERENCES](#) website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

\*Outdoor rated lamp only (purchase separately)