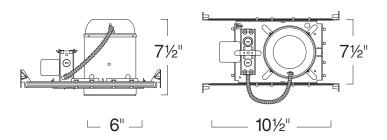
TYPE





SPECIFICATION

Ceiling cut-out: 6 1/2"

Application: This energy efficient General Purpose recessed LED housing is perfect for low to medium height ceilings in residential and light commercial applications. A variety of trim styles, finishes, beam spreads and wattages are available to achieve a desired look and lumen output.

Mounting: Housing suitable for new construction installations only, supplied with (2) 24" adjustable hanger bars with 90 degrees repositioning ability. Hanger bars equipped with nail-less install 3/4" serrated barbed studs and with captive nails, for faster and easier secure mounting in wood joists. Set-screws lock into position and prevent shifting after installation. Earthquake structural cable compatible for drop panel ceiling or any other mounting that requires direct support from structural ceilings.

Power Connection: LED heat sinked lamp module is replaceable via onboard quick exclusionary disconnect terminal. No tools required. Meets CA Title 24 Requirements and other standards restricting the use of Medium Base or Bi-Pin Sockets.

Driver: Electronic Direct Current U.L. Listed driver mounted away from LED Array for cool operation and end-of-life modularity. Comes standard with 120VAC input and available with optional 120V/277V universal voltage input.

Dimming: Dimming option smoothly dims down as low as 10% of initial light output with flicker-free operation. *Incandescent* dimming option (-DIN) works with standard Incandescent dimmers. Factory qualified for use with LUTRON Brand Dimmers: S600PR, DVSCCL-153P & DV600PR as well at Leviton# IP106-600W. *Low Voltage* dimming option (-DLV) works with standard Electronic Low Voltage Dimmers. Factory qualified for use with LUTRON Brand Dimmers: SELV-300P, DVELV-300P, NELV-450 along with 3-Way versions. (-DLV) Dimming Option also compatible with Grafik Eye and Home Works Dimming

Emergency Option: Emergency LED Battery Back-up available, remotely mounted adjacent to housing by installer. When AC power fails, the device immediately switches to the emergency mode, operating the LEDs for a minimum of 90 minutes. Remote test switch, plate cover and junction box included. Optional Generator Transfer Device switches the driver to auxiliary generator power during the loss of normal AC power, (recommended for applications requiring individual circuit switching).

Junction Box :16 gauge pre-wired galvanized steel Junction Box, 32 cubic-inch for a maximum of (8) #12 AWG wires. Furnished with (7) 3/4" and (4) Romex knock-outs. Strain clamps to install or remove covers for easy access and ground wire. Equipped with safety standard fitting for flex-conduit.

Insulation Contact: Energy Efficient LED housing comes standard with IC rating for direct contact with loosefill blown and rolled insulation.

Airflow: Airtight option is designed to restrict air flow from room into plenums in compliance to the WSEC - Washington State Energy Code, (Less than 2.0 CFM -Cubic Feet per Minute). Complies to Title 24 air flow requirements (Air-tight).

FEATURE:









Application: This adjustable LED trim is perfect for low to high height ceilings in residential and light commercial applications. This LED trim provides directional adjustability not commonly found in LED fixtures, allowing it to function as both a downlight and an accent light. A variety of finishes and beam spreads are available to achieve a desired look and lumen output.

Mounting: Steel pressure springs mounted on trim to ensure positive retention inside housing.

Power Connection: LED heat sinked lamp module is replaceable via onboard quick exclusionary disconnect terminal. No tools required. Meets CA Title 24 Requirements and other standards restricting the use of Medium Base or Bi-Pin Sockets.

Lumen Maintenance: Minimum 35,000 hours L70 life based on ANSI TM-21 calculations from LM80 standardized test results.

Thermal Management: Effective thermal dissipation facilitated by integral cast-aluminum, finned heat sink design for maximum heat rejection to provide long LED life.

Color Temperature: Comes standard with 3,000K Warm White LED's binned according to ANSI C78 377A for color temperature and chromaticity ranges. Available with other color temperatures with ANSI binning of 2,700K, 3,500K & 4,000K. To order use "-T" Suffix followed by color temperature. Example 4000K= T40. Consult factory as extended lead times and minimum order quantities apply.

Warranty: Covered by a 3 Year Warranty to be free of defects in materials and craftsmanship. Recommended for applications where ambient temperatures do not exceed 35°C, installations exceeding this temperature will result in reduced LED lamp life and a voided warranty.

Certification: This LED product is certified as compliant with California's Title 24 Energy Code by the California Energy Commission.

Ceiling Type: Suitable for flat and sloped ceilings.

Adjustability Lamp can be titled 35° degrees vertically and rotated 90° degrees horizontally.

Label: cETL Listed

6" LED HOUSING (10W/15W) LHLD6 10W/15W LED

WATTAGE		DRIVER TYPE		OPTIONS
LHLD610C50 :10W	Blank	:120V	Blank	:None
LHLD615C70 :15W	-DHL	:(120V/277V) Hilume Dimming*	-EM	:Emergency Back-Up (6W)
	-DLV	:ELV Dimming	-EM2	:Emergency Back-Up (10W)
	UE	:120V/277V*		
	UE-D10	:(120V/277V) 0-10V Dimming*		

* Not available for 10W option



6" OPEN HEAT SINK LED GIMBAL LRLD677 10W/15W LED Ordering example: LHLD610C50-DHL-EM2/LRLD677BM0-B120

REFLECTOR FINISH	RING FINISH	BEAM SPREAD	COLOR TEMP
LRLD677W :White	Blank :White	-B61 :Wide Flood	Blank :3000K
LRLD677B :Black	B :Black	-B120 :Super Wide Flood (SOL Lens)	
LRLD677N :All Natural	N :Natural	-B25 :Narrow Flood	
	MO :Mocha	-B45 :Flood	





File Located online www.liton.com/spec

ID#: 2104 2106

Lamp: (6)LED w/40° Optics Lens				
Total Rated Fixture Lumen	:490.85			
Total Luminaire Efficacy	:44.10 Lm/W			
Luminous Diameter	:2.76"			
Input Power (W)	:11.13			
Input Current (Amp)	:0.10			
Color Rendering Index (CRI)	:83.77			
Color Temperature	:2.933K			

6" LED Downlight
Luminaire
IESNA Standard
LM-79-2008
Test # L09111703
By:
Light Laboratory, Inc.
10W LRLD6

Lamp: (6)LED w/60° Optics	Lens
Total Rated Fixture Lumen	:493.28
Total Luminaire Efficacy	:41.70 Lm/W
Luminous Diameter	:2.76"
Input Power (W)	:11.83
Input Current (Amp)	:0.11
Color Rendering Index (CRI)	:85.35
Color Temperature	:2,820K

6" LED Downlight
Luminaire
IESNA Standard
LM-79-2008
Test # L09111704
By:
Light Laboratory, Inc.
10W LRLD6

ZONAL LUMEN SUMMARY

Zone	Lumens Beam Spread		
	40°	60°	
0 - 10	174.15	90.10	
10 - 20	182.76	201.40	
20 - 30	48.04	107.24	
30 - 40	19.42	36.12	
40 - 50	17.32	18.90	
50 - 60	12.18	10.90	
60 - 70	15.18	12.33	
70 - 80	12.35 9.26		
80 - 90	9.46	7.03	
		!	

	Beam Sp	read: 40°	Beam Spr	read: 60°
Zone	Lumens	% Fixt	Lumens	% Fixt
0 - 30	404.95	82.50	398.74	80.80
0 - 40	424.37	86.50	434.86	88.20
0 - 60	453.86	92.50	464.66	94.20
0 - 90	490.85	100.00	493.28	100.00

HORIZONTAL FOOT CANDLES: FC VALUES

	Beam Spread		Beam Spread		Beam Spread	
Distance	FC 25°	Ø	FC 40°	Ø	FC 60°	Ø
3.0'	305.9	1.3'	154.0	2.2'	144.0	3.3
6.0'	76.3	2.7'	58.0	4.4'	36.0	6.6'
9.0'	34.3	4.0'	29.0	6.6'	16.0	9.9'
12.0'	18.9	5.3'	11.0	8.7'	9.0	13.2'
19.0'	10.0	6.5'				
			11.0	8.7	9.0	13.2

CANDELA TABULATION

Zone	Luminance (CD) Beam Spread		
	40°	60°	
0.0	3370	1293	
1.0	3301	1286	
3.0	2974	1253	
5.0	2501	1204	
7.0	1992	1139	
9.0	1518	1056	
11.0	1115	946	
13.0	790	821	
15.0	546	698	
17.0	373	581	
19.5	232	445	
22.5	134	307	
25.5	83	204	
29.0	53	123	
33.0	37	67	
37.5	28	36	
42.5	23	24	
47.5	20	19	
55.0	18	15	
65.0	14	11	
75.0	10	7	
85.0	5	4	
90.0	0	0	

LUMINANCE DATA (CD./SQ.M.)

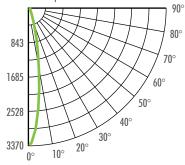
Beam Spread: 40°

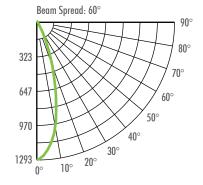
Angle	Avg. 0-Deg	Avg. 45-Deg	Avg. 90-Deg
45	7870	7870	7870
55	8123	8123	8123
65	8574	8574	8574
75	10000	10000	10000
85	14849	14849	14849

Beam Spread: 60°

45	7870	7870	7870
55	6769	6769	6769
65	6737	6737	6737
75	7000	7000	7000
85	11879	11879	11879

Beam Spread: 40°





Lamp: (6)LED w/40° Optics Lens				
Total Rated Fixture Lumen	:614.52			
Total Luminaire Efficacy	:36.06 Lm/W			
Luminous Diameter	:2.76"			
Input Power (W)	:17.04			
Input Current (Amp)	:0.15			
Color Rendering Index (CRI)	:85.20			
Color Temperature	:2.870K			

6" LED Downlight
Luminaire
IESNA Standard
LM-79-2008
Test # L09111701
By:
Light Laboratory, Inc.
15W LRLD6

Lamp: (6)LED w/60° Optics Lens			
Total Rated Fixture Lumen	:634.80		
Total Luminaire Efficacy	:36.38 Lm/W		
Luminous Diameter	:2.76"		
Input Power (W)	:17.34		
Input Current (Amp)	:0.15		
Color Rendering Index (CRI)	:85.13		
Color Temperature	:2,854K		

6" LED Downlight
Luminaire
IESNA Standard
LM-79-2008
Test # L09111702
By:
Light Laboratory, Inc.
15W LRLD6

ZONAL LUMEN SUMMARY

Zone	Lun Beam S	
	40°	60°
0 - 10	218.91	115.61
10 - 20	224.39	260.89
20 - 30	61.56	137.08
30 - 40	25.80	45.24
40 - 50	22.66	23.11
50 - 60	15.38	13.14
60 - 70	18.50	14.70
70 - 80	15.44	11.32
80 - 90	11.89	9.73
		1

	Beam Sp	read: 40°	Beam Spi	read: 60°
Zone	Lumens	% Fixt	Lumens	% Fixt
0 - 30	504.86	82.20	513.58	81.40
0 - 40	530.66	86.40	558.83	88.60
0 - 60	568.70	92.50	595.08	94.30
0 - 90	614.52	100.00	630.84	100.00
	:	:	:	:

HORIZONTAL FOOT CANDLES: FC VALUES

	Beam Spread		Beam Spread		Beam Spread	
Distance	FC 25°	Ø	FC 40°	Ø	FC 60°	Ø
3.0'	527.1	1.3'	328.0	2.2'	184.0	3.3'
6.0'	131.6	2.7'	70.0	4.4'	46.0	6.5'
9.0'	58.8	4.0'	30.1	6.6'	20.0	9.8'
12.0'	32.9	5.3'	16.8	8.7'	12.0	13.1'
14.0'	20.0	5.5'				
14.0'	10.0	5.9'				

CANDELA TABULATION

Zone	Luminar Beam S	nce (CD) Spread
	40°	60°
0.0	4318	1656
1.0	4218	1647
3.0	3783	1608
5.0	3157	1544
7.0	2481	1461
9.0	1876	1358
11.0	1368	1224
13.0	964	1067
15.0	667	906
17.0	459	753
19.5	290	575
22.5	171	394
25.5	108	259
29.0	71	154
33.0	49	84
37.5	37	45
42.5	30	29
47.5	26	23
55.0	22	18
65.0	17	13
75.0	13	9
85.0	6	6
90.0	0	0

LUMINANCE DATA (CD./SQ.M.)

Beam Spread: 40°

Angle	Avg. 0-Deg	Avg. 45-Deg	Avg. 90-Deg
45	10249	10249	10249
55	9928	9928	9928
65	10412	10412	10412
75	13001	13001	13001
85	17819	17819	17819
eam Spread: 60°	9517	9517	9517
	9517 8123	9517 8123	9517 8123
45			!
45 55	8123	8123	8123
45 55 65	8123 7962	8123 7962	8123 7962

