



Project: _____

Fixture Type: _____

Location: _____

Contact/Phone: _____

4" IC AND TC 1000 LUMEN INTERNALLY ADJUSTABLE LED DOWNLIGHT NEW CONSTRUCTION

IC4AL, TC4AL (10LM) RECESSED HOUSING



DOWNLIGHT TRIMS

PRODUCT DESCRIPTION

Patent pending dedicated LED, Air-Loc® sealed new construction housing with integral internally adjustable light engine • Double wall, shallow housing construction • IC4AL series can be completely covered with insulation and installs in 2 x 6 construction • TC4AL series for use in non-insulated areas (If installed where insulation is present, the insulation must be pulled back 3" from all sides of the TC housing) • Fully sealed housing stops infiltration and exfiltration of air, reducing heating and cooling costs without the use of additional gaskets • LED housing is designed to provide 50,000 hours of life • 5 year limited warranty on LED components.

ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- No harmful ultraviolet or infrared wavelengths
- No lead or mercury, RoHS compliant
- Comparable light output to 75W incandescent

PRODUCT SPECIFICATIONS

LED Light Engine LED array attached to cast aluminum sliding heatsink integrated directly with housing provides superior heat transfer to ensure long life of the LED • Replaceable light engine mounts directly to inner housing assembly and incorporates the latest generation, high lumen output LED array • LEDs are binned within a 3-step MacAdam Ellipse exceeding ENERGY STAR® requirements for superior fixture to fixture color uniformity • 2700K, 3000K, 3500K, or 4000K color temperatures available • 90 CRI minimum.

Optics Three field interchangeable, TIR optics available in 18°, 30° and 40° beam angles • Module can accommodate one 2-inch diameter beam control lens or filter.

Aesthetic Trim Selections Aluminum downlight reflector in clear, black, pewter, white, haze and wheat haze • Shadow free, knife edge design blends seamlessly into ceiling.

LED Driver Choice of dedicated 120 volt (120) driver or universal voltage (MVOLT) driver that accommodates input voltages from 120-277 volts AC at 50/60Hz • Power factor > 0.9 at 120V input • 120 volt only driver is dimmable with the use of most incandescent, magnetic low voltage and electronic low voltage wall box dimmers • Universal voltage driver is dimmable with the use of most 0-10V wall box dimmers • For a list of compatible dimmers, see [JUNOICLED-DIM](#).

Life Rated for 50,000 hours at 70% lumen maintenance.

Labels IC4AL is ENERGY STAR® certified • IC4AL is certified to the high efficacy requirements of California T24 JA8-2016 • UL listed for U.S. and Canada for through-branch wiring, damp locations • Union made • UL and cUL.

Testing All reports are based on published industry procedures; field performance may differ from laboratory performance.

Specifications subject to change without notice.

HOUSING FEATURES

Housing IC4AL designed for use in IC (insulated ceiling) or non-IC construction • TC4AL designed for use in non-IC construction • Aluminum housing sealed for Air-Loc® compliance • Housing is vertically adjustable to accommodate up to a 1 1/2" ceiling thickness.

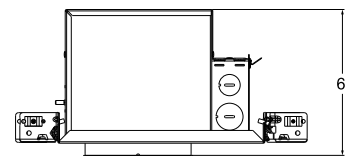
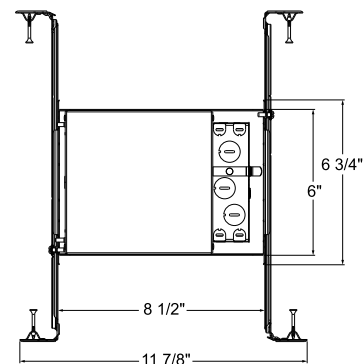
Junction Box Pre-wired junction box provided with (6) 1/2" and (1) 3/4" knockouts, (4) knockouts for 12/2 or 14/2 NM cable and ground wire • UL listed and cUL listed for through-branch wiring, maximum 4 #12 branch circuit conductors • Junction box provided with removable access plates • Knockouts equipped with pryout slots • Quick connect electrical connectors supplied as standard for fast, secure installation.

Mounting Frame 22-gauge die-formed galvanized steel mounting frame • Rough-in section (junction box, mounting frame, housing and bar hangers) fully assembled for ease of installation.

Real Nail 3 Bar Hangers Patented (US Patent D552,969) Real Nail® 3 bar hangers: telescoping system permits quick placement of housing anywhere within 24" O.C. joists or suspended ceilings • Includes removable nail for repositioning of fixture in wood joist construction • Integral T-bar notch and clip for suspended ceilings.



DIMENSIONS



4 1/2" CEILING CUTOUT

ELECTRICAL DATA

Dedicated 120V Only Driver Option (120) 120V

Input Power	16.4W (+/-5%)	
Input Current	0.15A	
Frequency	50/60Hz	
EMI/RFI	FCC Title 47 CFR, Part 15, Class B (Residential)	
Minimum starting temp	-25°C (-13°F)	

Universal Voltage Driver (MVOLT ZT)

	120V	277V
Input Power	16.0W (+/-5%)	16.0W (+/-5%)
Input Current	0.15A	0.06A
Frequency	50/60Hz	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class A (Commercial)	FCC Title 47 CFR, Part 15, Class A (Commercial)
Minimum starting temp	-20°C (-4°F)	-20°C (-4°F)

Lutron Hi-Lume® LED Driver (MVOLT ECOS3)

	120V	277V
Input Power	16.4W (+/-5%)	16.6W (+/-5%)
Input Current	0.15A	0.07A
Frequency	50/60Hz	50/60Hz
EMI/RFI	FCC Title 47 CFR, Part 15, Class A (Commercial)	FCC Title 47 CFR, Part 15, Class A (Commercial)
Minimum starting temp	0°C (32°F)	0°C (32°F)

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IC4AL, TC4AL (10LM) RECESSED HOUSING DOWNLIGHT TRIMS

ORDERING INFORMATION Housing and trim can be ordered together or separate, but will always ship separately.

Example: IC4AL 10LM 27K 90CRI FL 120 FRPC

Series	Lumens	Color Temperature	CRI	Distribution	Voltage	Driver	
IC4AL 4" LED Internally Adjustable New Const. IC Downlight	10LM 1000 Nominal Lumens	27K 2700K	90CRI 90+ CRI	FL Flood	120 120V	FRPC Forward/Reverse Phase Cut	
		30K 3000K		NFL Narrow Flood		MVOLT Multi-Volt (120-277V)	ZT 0 - 10V Dimming Driver
		35K 3500K		SP Spot			
		40K 4000K					

Notes: 120 must be ordered with FRPC. MVOLT must be ordered with ZT

Example: TC4AL 10LM 27K 90CRI FL MVOLT ECOS3

Series	Lumens	Color Temperature	CRI	Distribution	Voltage	Driver
TC4AL 4" LED Internally Adjustable New Const. Non IC Downlight	10LM 1000 Nominal Lumens	27K 2700K	90CRI 90+ CRI	FL Flood	MVOLT Multi-Volt	ECOS3 Lumen Hi - Lume A Series, 3-wire fluorescent controls & Lutron Ecosystem
		30K 3000K		NFL Narrow Flood		
		35K 3500K		SP Spot		
		40K 4000K				

TC4AL is not ENERGY STAR® or T24 compliant

Trim/Description



42L BWH	4" Downlight Cone Trim - Black Alzak® Cone, White Trim Ring
42L CWH	4" Downlight Cone Trim - Clear Alzak® Cone, White Trim Ring
42L HZWH	4" Downlight Cone Trim - Haze Cone, White Trim Ring
42L PTSC	4" Downlight Cone Trim - Pewter Alzak® Cone, Satin Chrome Trim Ring
42L WHZABZ	4" Downlight Cone Trim - Wheat Haze Cone, Classic Aged Bronze Trim Ring
42L WHZWH	4" Downlight Cone Trim - Wheat Haze Cone, White Trim Ring
42L WWH	4" Downlight Cone Trim - Gloss White Cone, White Trim Ring

Trim Size: 5" O.D.

Alzak is a registered trademark of Alcoa Corp.

Note: In Canada when insulation is present, Type IC fixtures must be used.

Accessories (ordered separately)

Catalog Number	Description
CGF 200 MPINK	Color Glass Filter - 2" Diameter - Medium Pink
CGF 200 WRED	Color Glass Filter - 2" Diameter - Warm Red
CGF 200 DLTBLUE	Color Glass Filter - 2" Diameter - Daylight Blue
CGF 200 MBLU	Color Glass Filter - 2" Diameter - Medium Blue
CGF 200 MAMB	Color Glass Filter - 2" Diameter - Medium Amber
CGF 200 MGRN	Color Glass Filter - 2" Diameter - Medium Green
DGF 200 DRED	Dichroic Glass Filter - 2" Diameter Red
DGF 200 MGRN	Dichroic Glass Filter - 2" Diameter Medium Green
DGF 200 MBLU	Dichroic Glass Filter - 2" Diameter Medium Blue
DGF 200 DYEL	Dichroic Glass Filter - 2" Diameter Yellow (Dichroic)
DGF 200 MAGEN	Dichroic Glass Filter - 2" Diameter Magenta
DGF 200 CYAN	Dichroic Glass Filter - 2" Diameter Cyan
DCCF 200 HL4250	Dichroic Color Correction Filter - 2" Diameter - Halogen - to - Daylight
DIFF 200	Diffusion Glass Lens - 2" Diameter
UVF 200	UV Filter Lens - 2" Diameter
HCLBL 200	Hexagonal Cell Louver - Black - 2" Diameter
LSPREAD 200	Linear Spread Glass Lens - 2" Diameter
PRISM 200	Prismatic Glass Lens - 2" Diameter
TIR2 SPT	TIR Optic - Spot
TIR2 NFLD	TIR Optic - Narrow Flood
TIR2 FLD	TIR Optic - Flood

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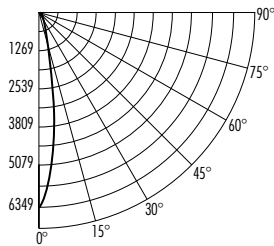
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DOWNLIGHT TRIMS

PHOTOMETRICS

PHOTOMETRIC REPORT

Test Report#: PTO9152801R
Catalog No: IC4AL 10LM 35K 90CRI 35K
SP 120 FRPC with 42L HZWH, Downlight Cone
Haze Finish Trim and Spot Optic
Luminaire Spacing Criteria: 0.30
Luminaire LPW: 64



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	6349
5	4828
15	1260
25	420
35	105
45	14
55	0
65	0
75	0
85	0
90	0

Multipliers:
27K - 0.93 35K - 1.00
30K - 0.96 40K - 1.03

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)
Ceiling 80%, Wall 50%, Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	74	67	61
5.0'	47	43	39
6.0'	33	30	27
7.0'	27	24	22
8.0'	21	19	17
9.0'	16	15	13
10.0'	12	11	10

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	956	N/A	91.3
0-40°	1031	N/A	98.5
0-60°	1046	N/A	100.0
0-90°	1046	N/A	100.0

INITIAL FOOTCANDLES

(One Unit, 16.4W, 16.9° Beam)

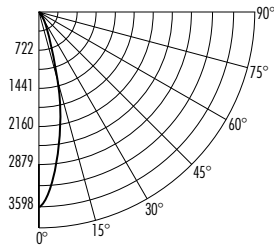
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	396.8	1.2
6	176.4	1.8
8	99.2	2.4
10	63.5	3.0

LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	3709
55	105
65	0
75	0
85	0

PHOTOMETRIC REPORT

Test Report#: PTO9152803R
Catalog No: IC4AL 10LM 35K 90CRI 35K
NFL 120 FRPC with 42L HZWH, Downlight Cone
Haze Finish Trim and Narrow Flood Optic
Luminaire Spacing Criteria: 0.46
Luminaire LPW: 62



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	3598
5	3318
15	1497
25	423
35	115
45	25
55	1
65	0
75	0
85	0
90	0

Multipliers:
27K - 0.93 35K - 1.00
30K - 0.96 40K - 1.03

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)
Ceiling 80%, Wall 50%, Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	71	64	59
5.0'	46	41	38
6.0'	32	29	26
7.0'	26	23	21
8.0'	20	18	17
9.0'	15	14	13
10.0'	11	10	9

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	910	N/A	89.5
0-40°	993	N/A	97.7
0-60°	1016	N/A	100.0
0-90°	1016	N/A	100.0

INITIAL FOOTCANDLES

(One Unit, 16.4W, 27.0° Beam)

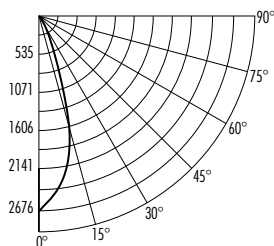
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	224.9	1.9
6	99.9	2.9
8	56.2	3.8
10	36.0	4.8

LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	6597
55	244
65	0
75	0
85	0

PHOTOMETRIC REPORT

Test Report#: PTO9152805R
Catalog No: IC4AL 10LM 35K 90CRI 35K
FL 120 FRPC with 42L HZWH, Downlight Cone
Haze Finish Trim and Flood Optic
Luminaire Spacing Criteria: 0.58
Luminaire LPW: 68



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	2676
5	2552
15	1626
25	659
35	157
45	30
55	0
65	0
75	0
85	0
90	0

Multipliers:
27K - 0.93 35K - 1.00
30K - 0.96 40K - 1.03

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)
Ceiling 80%, Wall 50%, Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	78	70	63
5.0'	50	45	40
6.0'	35	31	28
7.0'	28	25	23
8.0'	22	20	18
9.0'	17	15	14
10.0'	13	11	10

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixture
0-30°	980	N/A	87.5
0-40°	1091	N/A	97.4
0-60°	1120	N/A	100.0
0-90°	1120	N/A	100.0

INITIAL FOOTCANDLES

(One Unit, 16.4W, 35.0° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	167.3	2.5
6	74.3	3.8
8	41.8	5.0
10	26.8	6.3

LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	8041
55	35
65	0
75	0
85	0

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.