

Volta

Tunable White - 4.5" Shallow Regressed Downlight

R4RD1T | R4RD1L | R4SD1T | R4SD1L

Fixture Type: _____

Project: _____

Catalog#: _____

Location: _____



LINE DRAWING



PRODUCT DESCRIPTION

Volta 4.5" Tunable White recessed series represents an innovation in design and technology for architectural lighting. This high lumen and adaptable family of fixtures with a comprehensive set of round and square fittings, affords a sustainable solution for commercial, corporate, and upscale residential applications. A built-in field selectable light engine height allows for a cut-off angle adjustment of 32-40°.

SPECIFICATIONS

Construction:	Durable die-cast self flanged aluminum construction
Mounting:	Heavy gauge retention clips support trim firmly Ceiling cut out (Round): Trim $\varnothing$ 5 1/8" $\bigcirc$ Trimless $\varnothing$ 5 1/8" $\bigcirc$ Ceiling cut out (Square): Trim 5 1/8" x 5 1/8" $\square$ Trimless 5 1/8" x 5 1/8" $\square$ Accommodates ceiling thickness of 1/2" - 1 1/2"
Light Source:	High output 3-step Mac Adam Ellipse COB Rated life of 50,000 hours at L70
Input:	Universal 120-277V AC, 50/60 Hz
Dimming:	2 Channel 0-10V: 100-0.1% 2 Channel DMX512-A with RDM: 100-0.1% linear dimming. Channels for intensity and CCT tuning.
Maximum Delivered Intensity:	Up to 7,986 cd (Square Narrow Flood 25°, TWA 4000K, CRI 98)
Maximum Delivered Output:	Up to 2,772 lm (Square Narrow Flood 25°, TWA 4000K, CRI 98)
Standards:	ETL & cETL Wet location listed, Title 24 JA8 Compliant
Warranty:	5 year WAC Lighting guaranteed warranty

BEAM ANGLES



FINISHES



TRIM STYLES



Model	Beam	Lumens Ref Output*	CBCP	Color Temp	CRI
R4RD1T Round Trim R4RD1L Round Trimless	N 25° Round	2325	6725	TWA 1800K-4000K	98
	Square	2490	7195		
	F 45° Round	2205	3630		
R4SD1T Square Trim R4SD1L Square Trimless	Square	2390	3935	TWB 2700K-6500K	98
	W 60° Round	2255	2410		
	Square	2410	2575		
R4SD1T Square Trim R4SD1L Square Trimless	N 25° Round	2315	6600	TWB 2700K-6500K	98
	Square	2475	7060		
	F 45° Round	2235	3610		
	Square	2425	3910		
	W 60° Round	2300	2415		
	Square	2455	2585		

Lumens and CBCP are reference values for TWA/TWB trim tuned to 3000K Color Temperature with 36 housing. Refer to Multiplier Table in Performance Data to determine other outputs.

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ORDERING INFORMATION

CONFIGURATION TABLE				
Model & Power	Beam	Color Temperature & CRI	Reflector Finish	Trim Finish
R4RD1T	N: Narrow Flood - 25°	TWA - 1800K-4000K	BK - BLACK	WT - WHITE
R4SD1T	F: Flood - 45°	TWB - 2700K-6500K	CB - COPPER	
R4RD1L	W: Wide Flood - 60°		HZ - HAZE	
R4SD1L			WT - WHITE	

R4RD1T-____-____ Example: R4RD1T-NTWA-WT

HOUSINGS (Required)						
	Model	Trim	Power		Rating	Driver
New Construction Airtight	R4RN (Round) R4SN (Square)	T Trim L Trimless	15	20W	IC	T-X DMX512-A T-Z 2CH 0-10V
			25	29W	IC	
			36	44W	Non-IC	
New Construction Airtight Chicago Plenum	R4RC (Round) R4SC(Square)	T Trim L Trimless	15	20W	IC	T-X DMX512-A T-Z 2CH 0-10V
			25	29W	IC	
			36	44W	Non-IC	
Remodel Round or Square	R4BR	T Trim	15	20W	Non-IC	T-X DMX512-A T-Z 2CH 0-10V
			25	29W	Non-IC	
			36	44W	Non-IC	
Remodel	R4RR (Round) R4SR (Square)	L Trimless	15	20W	Non-IC	T-X DMX512-A T-Z 2CH 0-10V
			25	29W	Non-IC	
			36	44W	Non-IC	

ACCESSORIES			
LENS-73-HLD	Accessory Holder	LENS-73-GRN	Green Lens
LENS-73-HCM	Honeycomb Louver	LENS-73-RED	Red Lens
LENS-73-CRL	Cross Louver	LENS-73-FR	Frosted Lens
LENS-73-SNOOT	Snoot	LENS-73-SPR	Spread Lens
LENS-73-AMB	Amber Lens	LENS-73-BEL	Beam Elongating Lens
LENS-73-BLU	Blue Lens		

FIELD REPLACEABLE DRIVER (New Construction)	
D-R4N-15T-X	DMX512-A Driver for 20W
D-R4N-25T-X	DMX512-A Driver for 29W
D-R4N-36T-X	DMX512-A Driver for 44W
D-R4N-15T-Z	2CH 0-10V Driver for 20W
D-R4N-25T-Z	2CH 0-10V Driver for 29W
D-R4N-36T-Z	2CH 0-10V Driver for 44W

INTERCHANGEABLE REFLECTORS	
REF-R4-N	Narrow Flood Beam
REF-R4-F	Flood Beam
REF-R4-W	Wide Beam

ORDERING NOTES	
1.	The “White” trim finish is only available with the reflector finishes “Black” and “Haze”.
2.	Trimless fixtures cannot be ordered with a trim finish.
3.	The “Narrow Flood - 25°”, “Flood - 45°”, “Wide Flood - 60°” beam angles are available in 20W, 29W, and 44W.

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FEATURES

Optics: Field selectable light engine height for cut-off angle adjustment (30°-34°) and accessory use	Construction: - Durable die-cast self flanged aluminum construction - Heavy gauge retention clips support trim firmly
LED: - High output COB LED with a 3-step Mac Adam ellipse - Rated operational life of 50,000 hours at L70 (LED maintains 70% of its initial delivered lumens when brand new for 50,000 hours of use.) - Natural and Vivid Precision LED CCT Tuning - Consistent 98 CRI across all settings	Trim and Reflector: Integral patterned tempered trim lens included standard with every fixture
Electrical: - Volta is compatible with 120-277 VAC, 50/60 Hz - Housings for the Volta 4.5" family are available in 20W, 29W, 44W, with varying ratings and standards	Installation: - Requires housing for installation. - New Construction housings for this fixture are IC rated based on power level. The 36 power level is non-IC rated. - All Remodel housings are non-IC rated.
Dimming: - Linear dimming: 1st channel input is intensity changing, 2nd channel input is CCT changing 2 Channel 0-10V: 100 - 0.1% 2 Channel DMX512-A with RDM: 100 - 0.1%	Warranty: - WAC Architectural limited warranty up to 5 years - Full warranty found at: waclighting.com/warranty
Notes: - Trim and trimless fixtures of the same shape (Round/Square) have the same performance. Minor variations occur due to fixture shape. - The White and Black finishes are powder coated while the Haze is enamel coated and the Copper Bronze is plated and brushed. - The Volta product family is compatible with a wide range of accessories. - Use the DMX Byte Value vs CCT table to determine how to set each CCT value.	

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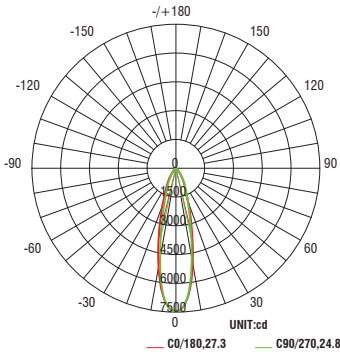
PERFORMANCE DATA

Polar Candela Distribution Charts

Samples shown with a 44W fixture set to 4000K and 98 CRI.

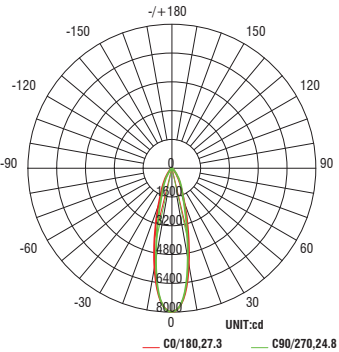
ROUND

Narrow Flood Beam: 25° Beam

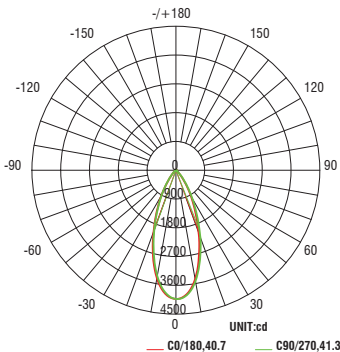


SQUARE

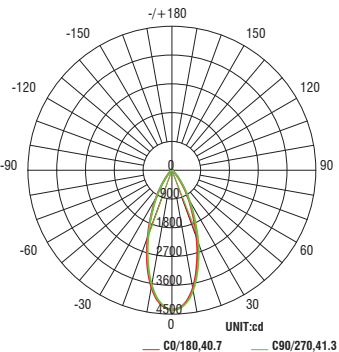
Narrow Flood Beam: 25° Beam



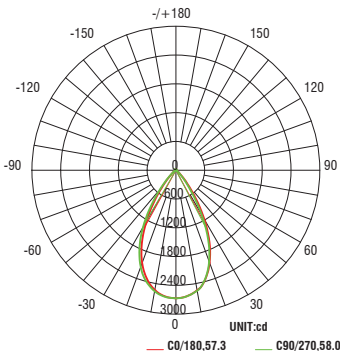
Flood Beam: 45° Beam



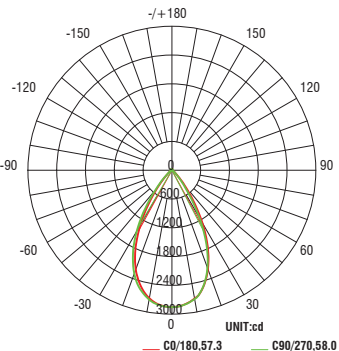
Flood Beam: 45° Beam



Wide Flood Beam: 60° Beam



Wide Flood Beam: 60° Beam



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PERFORMANCE DATA

Unified Glare Rating (UGR) Table
UGR values shown are calculated at 3000K and 90 CRI.

Round Fixture	Angle	UGR Range	Square Fixture	Angle	UGR Range
Narrow Flood	25°	≤11	Narrow Flood	25°	≤11
Flood	45°	≤11	Flood	45°	≤11
Wide Flood	60°	≤14	Wide Flood	60°	≤14

Lumens and CBCP Multiplier Table
Use the below table to determine lumens and CBCP values for the combinations of power, color temperature, and CRI values.

Lumens & CBCP Multiplier		Color Temperature					
TWA (1800K - 4000K)	Housing Power Level	1800K	2200K	2700K	3000K	3500K	4000K
	36 (44W)	0.68	0.82	0.94	1.00	1.07	1.11
	25 (29W)	0.48	0.57	0.66	0.70	0.75	0.78
	15 (20W)	0.33	0.39	0.45	0.48	0.51	0.53
TWB (2700K - 6500K)	Housing Power Level	2700K	3000K	3500K	4000K	5000K	6500K
	36 (44W)	0.96	1.00	1.06	1.09	1.12	1.11
	25 (29W)	0.67	0.70	0.74	0.76	0.78	0.78
	15 (20W)	0.46	0.48	0.51	0.52	0.54	0.53

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PERFORMANCE DATA

NATURAL TUNABLE WHITE CCT TUNING:

The CCT of the Volta Tunable White fixture may be adjusted.

Using the DMX byte values in the adjacent table mapped to CH1 and CH2 of the desired output, the Volta Tunable White fixture may be tuned to increments of 100K (Kelvin) from 1800K to 4000K for TWA and 2700K to 6500K for TWB, at full intensity.

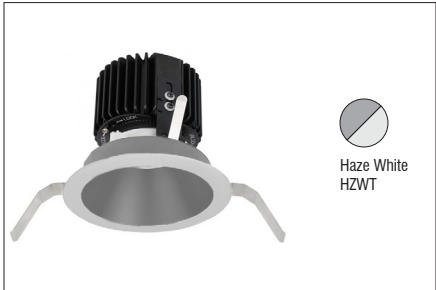
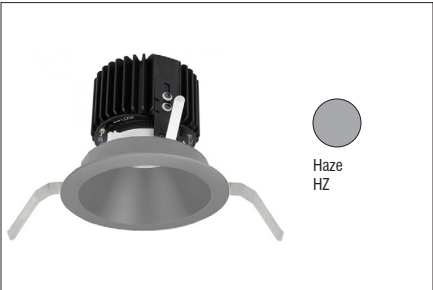
Note: Through compatible RDM tool, fixture channels can be reassigned to desired consecutive channels. Factory default is DMX channel 1 and 2.

VOLTA 4.5" TUNABLE WHITE DMX BYTE VALUE VS CCT					
TWA DMX BYTE VALUES AT FULL INTENSITY			TWB DMX BYTE VALUES AT FULL INTENSITY		
CCT (K)	CH 1: INTENSITY	CH 2: CCT	CCT (K)	CH 1: INTENSITY	CH 2: CCT
4000	255	255	6500	255	252
3900	255	250	6400	255	249
3800	255	240	6300	255	245
3700	255	230	6200	255	243
3600	255	219	6100	255	241
3500	255	207	6000	255	237
3400	255	196	5900	255	234
3300	255	186	5800	255	230
3200	255	176	5700	255	226
3100	255	163	5600	255	222
3000	255	153	5500	255	218
2900	255	140	5400	255	214
2800	255	130	5300	255	210
2700	255	117	5200	255	205
2600	255	105	5100	255	200
2500	255	92	5000	255	195
2400	255	79	4900	255	190
2300	255	66	4800	255	185
2200	255	51	4700	255	180
2100	255	38	4600	255	175
2000	255	23	4500	255	170
1900	255	10	4400	255	164
1800	255	0	4300	255	158
			4200	255	151
			4100	255	143
			4000	255	134
			3900	255	125
			3800	255	119
			3700	255	110
			3600	255	101
			3500	255	92
			3400	255	83
			3300	255	74
			3200	255	64
			3100	255	53
			3000	255	41
			2900	255	29
			2800	255	15
			2700	255	0

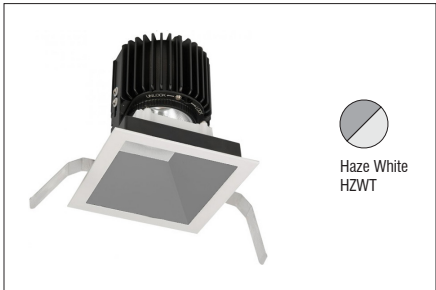
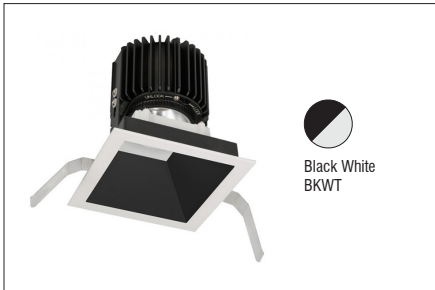
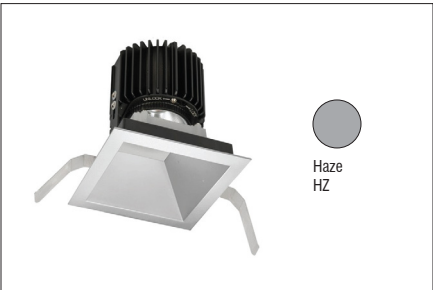
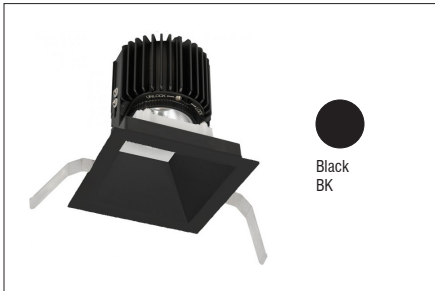
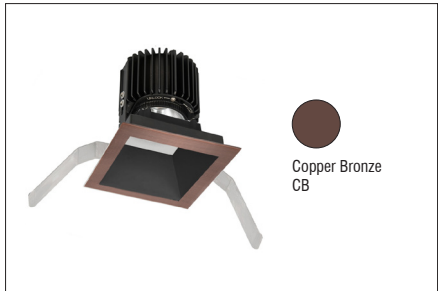
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TRIM AND HOUSING COLOR OPTIONS



ROUND TRIM



SQUARE TRIM

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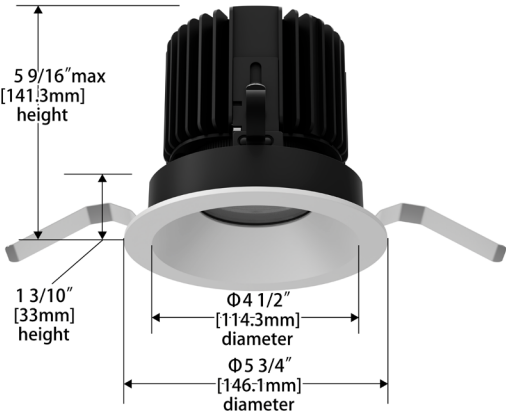
Project: _____

Catalog#: _____

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DIMENSIONAL DIAGRAMS

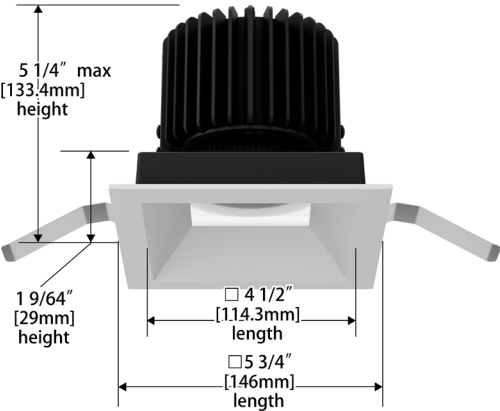
Round Trim (R4RD1T)



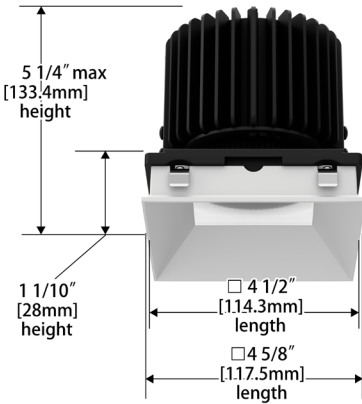
Round Trimless (R4RD1L)



Square Trim (R4SD1T)



Square Trimless (R4SD1L)

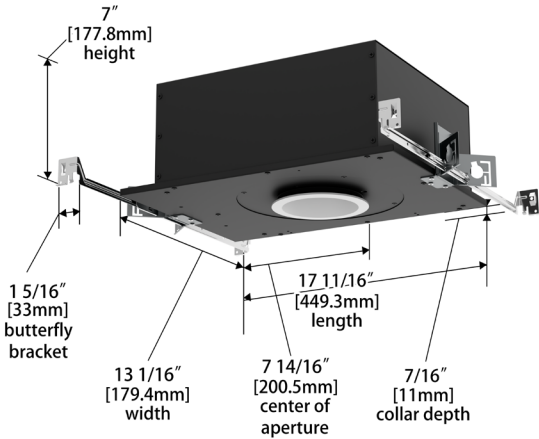


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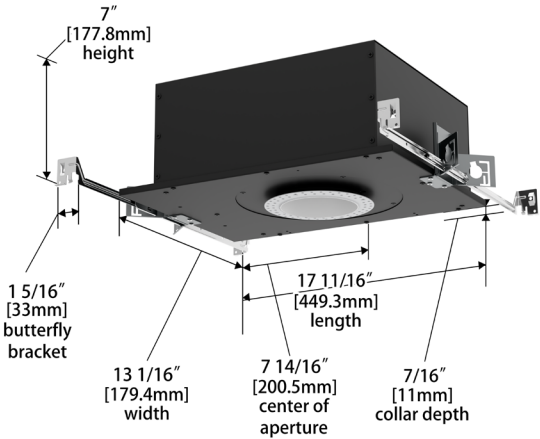
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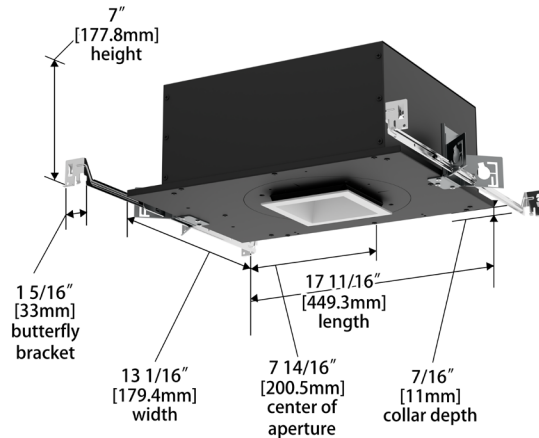
New Construction - Round Trim



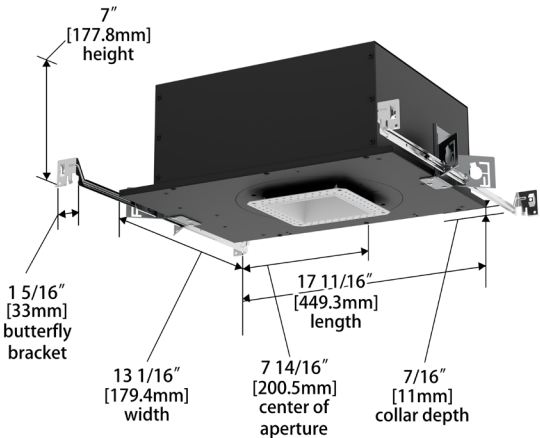
New Construction - Round Trimless



New Construction - Square Trim



New Construction - Square Trimless



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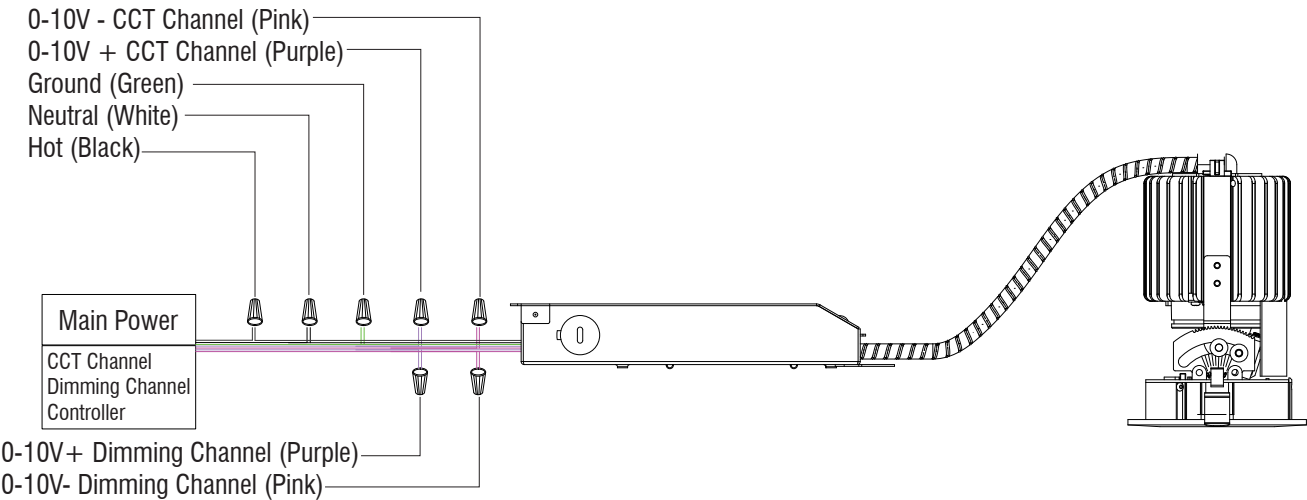
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WIRING DIAGRAMS

Remodel Installation



New Construction Installation

