

MINI 1.5 DOUBLE RECESSED DOWNLIGHT



MATERIAL

Aluminum Die-Casting, Electrostatic Powder Coating

SOURCE INFORMATION

DELIVERED LUMENS	Up to 888lm per Light Engine
CONSUMPTION	Up to 10W per Light Engine
CURRENT	500mA
INPUT VOLTAGE	120VAC-277VAC
DIMMING	TRIAC/ELV / 0-10V (1%) / 10V PWM
CRI	90+
COLOR TEMP-CCT	2700K/3000K/3500K/4000K/ DW (DIM TO WARM)
OPERATING TEMP	32°F to 77°F

OPERATING TEMPERATURE Luminaire should be installed and operated ONLY in dry environments where the ambient temperature ranges from 32°F to 77°F (0°C to 25°C). Luminaire operation in environments outside the listed temperature range voids the warranty AND may damage the product or adversely impact lamp life, lumen output and color consistency.

UGR

CCT	2700K	3000K	3500K	4000K
UGR 20°	<16	<19	<16	<16
UGR 30°	<13	<16	<13	<13
UGR 40°	<19	<16	<19	<19
UGR 50°	<22	<19	<22	<22

TYPE OF LED

COB by Bridgelux

MINIMUM PLENUM SPACE

The minimum plenum space required is 4.5 inches.

WARRANTY

5 years



FIXED



ADJUSTABLE



WALLWASH

FLANGED TRIM



LENS BEAM ANGLE



15°
Spot



24°
Narrow Flood



36°
Flood



60°
Wide Flood

TRIM FINISH



Black



White



Custom

Fixture type:

Job information:

CONSTELLATION

MINI 1.5 DOUBLE - RECESSED DOWNLIGHT



PRODUCT DEFINITION SHEET

Ex: CTL-M-1.5-RC-FX-TF-DB-30K-15-OP-WH-4L-V10-U-EM10-RM-NN

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

1	2	3	4
SERIES	LIGHT ENGINE TYPE	TRIM SHAPE	REFLECTOR TYPE
☐ CTL-M Constellation Mini	☐ 1.5 1.5 High Efficiency Standard	☐ RC Rectangle	☐ FX Fixed ☐ AD Adjustable ☐ WW Wall Wash

5	6	7	8	9
MOUNTING PAN	LIGHT ENGINES	COLOR TEMP-CCT (90 CRI)	LENS BEAM ANGLE	REFLECTOR - INSERT
☐ TF Flanged Trim	☐ DB Double	☐ 27K 2700K ☐ 30K 3000K ☐ 35K 3500K ☐ 40K 4000K ☐ DM Dim to Warm	☐ 15 15° Spot ☐ 24 24° Narrow ☐ 36 36° Flood ☐ 60 60° Wide Flood	☐ OP Open

10	11	12	13
TRIM FINISH	LUMEN OUTPUT	DRIVER	VOLTAGE
☐ WH White ☐ BK Black ☐ Custom RAL No. _____	☐ 4L 400lm ☐ 5L 500lm ☐ 6L 600lm ☐ 7L 700lm ☐ 8L 800lm ☐ 13L 1300lm ☐ 17L 1700lm See page 3 for Light Engine Output Lumen packages available	☐ 1 0-10V 1% Dimming ☐ TLV TRIAC/ELV 1% Dimming ☐ PWM 10V PWM 1% Dimming Remote Constant Current Driver Max distance: 196-ft using 12 AWG wire 100-ft using 16 AWG wire 50-ft using 18 AWG wire	☐ U Uni 120-277V

14	15	16
STANDBY MODULES	INSTALLATION TYPE	OPTICS ACCESSORY
☐ EM10 Emergency Battery Pack 10W ☐ EM12 Emergency Battery Pack 12W ☐ NO OPTION Remote Emergency Battery Pack, for field install Max distance with EM = 50 ft	☐ RM Remote ☐ NCNIC New Construction Non-IC Frame ☐ NCIC New construction IC	☐ NN None ☐ HL Honeycomb louver + PC sheet ☐ SG Linear Spread Lens Accessories are not suitable for wallwash fixtures



Honeycomb louver + PC sheet



Linear Spread Lens

CONSTELLATION

MINI 1.5 DOUBLE - RECESSED DOWNLIGHT



FIXED	RC-FX-TF-DB
CRI	90+
LENS BEAM ANGLE	15°/24°/36°/60°

3000K

CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (w)	
		PER LUMEN ENGINE	TOTAL
300x2=600	549 x 2	4.9x2	9.8W
350x2=700	637 x 2	5.8x2	11.6W
400x2=800	723 x 2	6.7x2	13.4W
450x2=900	807 x 2	7.6x2	15.2W
500x2=1000	888 x 2	8.5x2	17W

DIM TO WARM

CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (w)	
		PER LUMEN ENGINE	TOTAL
300x2=600	279 x 2	4x2	8W
350x2=700	325 x 2	6x2	12W
400x2=800	371 x 2	8x2	16W
450x2=900	418 x 2	9x2	18W
500x2=1000	464 x 2	10x2	20W

Actual performance may differ by +/- 5% when operating between 120V-277V +/- 10%.

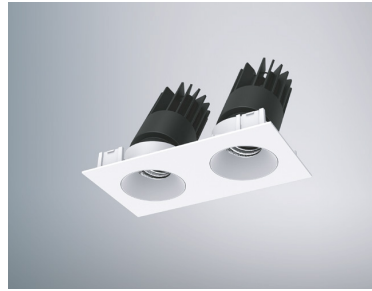
Multiplier for other Color Temp (K)

2700K	90%
3500K	110%
4000K	120%



Multiplier for Optics Accessories

Clear (None)	100%
Honeycomb louver	67%
Linear Spread Lens	72%



ADJUSTABLE (30°)	RC-AD-TF-DB
CRI	90+
LENS BEAM ANGLE	15°/24°/36°/60°

3000K

CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (w)	
		PER LUMEN ENGINE	TOTAL
300x2=600	521 x 2	4.9x2	9.8W
350x2=700	604 x 2	5.8x2	11.6W
400x2=800	686 x 2	6.7x2	13.4W
450x2=900	765 x 2	7.6x2	15.2W
500x2=1000	842 x 2	8.5x2	17W

DIM TO WARM

CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (w)	
		PER LUMEN ENGINE	TOTAL
300x2=600	244 x 2	4x2	8W
350x2=700	284 x 2	6x2	12W
400x2=800	325 x 2	8x2	16W
450x2=900	366 x 2	9x2	18W
500x2=1000	406 x 2	10x2	20W

Actual performance may differ by +/- 5% when operating between 120V-277V +/- 10%.

Multiplier for other Color Temp (K)

2700K	90%
3500K	110%
4000K	120%



Multiplier for Optics Accessories

Clear (None)	100%
Honeycomb louver	67%
Linear Spread Lens	72%



WALLWASH	RC-WW-TF-DB
CRI	90+
LENS BEAM ANGLE	15° only

3000K

CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (w)	
		PER LUMEN ENGINE	TOTAL
300x2=600	357x2	2x2	4W
350x2=700	396x2	3x2	6W
400x2=800	441x2	4x2	8W
450x2=900	489x2	4.5x2	9W
500x2=1000	544x2	5x2	10W

DIM TO WARM

CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (w)	
		PER LUMEN ENGINE	TOTAL
300x2=600	179x2	2x2	4W
350x2=700	199x2	3x2	6W
400x2=800	221x2	4x2	8W
450x2=900	246x2	4.5x2	9W
500x2=1000	273x2	5x2	10W

Actual performance may differ by +/- 5% when operating between 120V-277V +/- 10%.

Multiplier for other Color Temp (K)

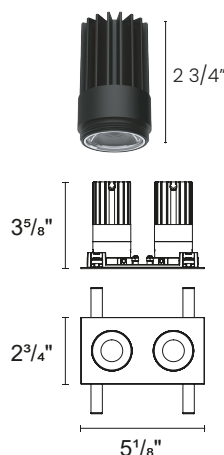
2700K	90%
3500K	110%
4000K	120%



Multiplier for Optics Accessories

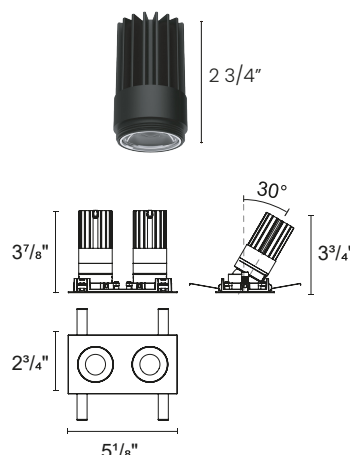
Clear (None)	100%
Honeycomb louver	67%
Linear Spread Lens	72%

DIMENSIONS



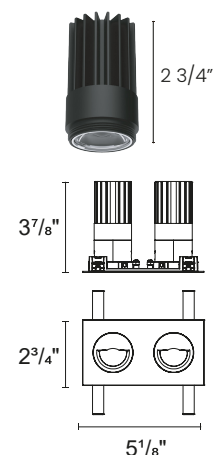
Cut out: 2 13/32" x 4 24/32"

DIMENSIONS



Cut out: 2 13/32" x 4 24/32"

DIMENSIONS



Cut out: 2 13/32" x 4 24/32"

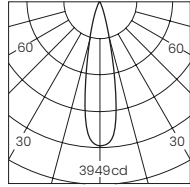
CONSTELLATION

MINI 1.5 DOUBLE – RECESSED DOWNLIGHT

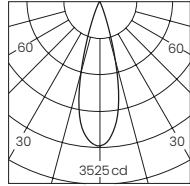


PHOTOMETRICS

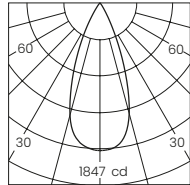
FIXED RC-FX-TF-OP



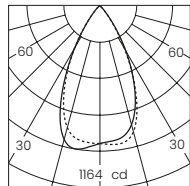
H(m)	D(m)	E(lx)
Lens beam angle 15°		
1.0	0.39	2794
2.0	0.79	698
3.0	1.18	310
4.0	1.58	174
5.0	1.97	111



H(m)	D(m)	E(lx)
Lens beam angle 24°		
1.0	0.51	2466
2.0	1.02	616
3.0	1.54	274
4.0	2.05	154
5.0	2.56	98

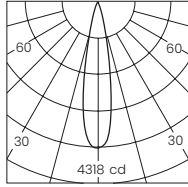


H(m)	D(m)	E(lx)
Lens beam angle 36°		
1.0	0.75	1275
2.0	1.49	318
3.0	2.24	141
4.0	2.99	79
5.0	3.74	50

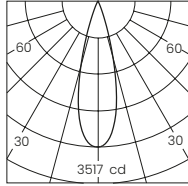


H(m)	D(m)	E(lx)
Lens beam angle 60°		
1.0	1.00	745
2.0	2.00	186
3.0	2.99	82
4.0	3.99	46
5.0	4.99	29

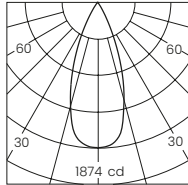
ADJUSTABLE RC-AD-TF-OP



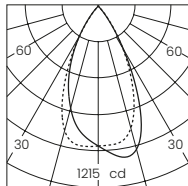
H(m)	D(m)	E(lx)
Lens beam angle 15°		
1.0	0.36	3011
2.0	0.72	752
3.0	1.08	334
4.0	1.43	188
5.0	1.79	120



H(m)	D(m)	E(lx)
Lens beam angle 24°		
1.0	0.49	2518
2.0	0.98	629
3.0	1.48	279
4.0	1.97	157
5.0	2.46	100

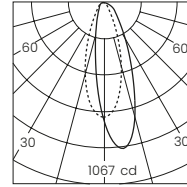


H(m)	D(m)	E(lx)
Lens beam angle 36°		
1.0	0.72	1299
2.0	1.44	324
3.0	2.16	144
4.0	2.88	81
5.0	3.60	51



H(m)	D(m)	E(lx)
Lens beam angle 60°		
1.0	0.92	784
2.0	1.83	196
3.0	2.75	87
4.0	3.66	49
5.0	4.58	31

WALLWASH RC-WW-TF-OP



H(m)	D(m)	E(lx)
Lens beam angle 15° (Wallwash)		
1.0	0.50	630
2.0	1.01	157
3.0	1.51	70
4.0	2.02	39
5.0	2.52	25

CONSTELLATION

MINI 1.5 DOUBLE – RECESSED DOWNLIGHT



HOUSING



REMODEL/REMOTE ENCLOSED DRIVER

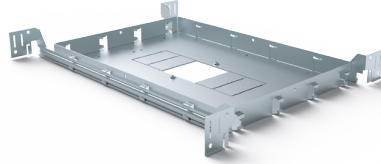
For Constellation Mini 1.5 Double flanged trim

Installs from below, service from below

Type: Remote driver box

2 light engine flanged trim

Cut out: $2\frac{13}{32}'' \times 4\frac{24}{32}''$



NEW CONSTRUCTION NON-IC FRAME

For Constellation Mini 1.5 Double flanged trim

Installs from above, service from below

Type: New construction frame

2 light engine flanged trim

Cut out: $2\frac{13}{32}'' \times 4\frac{24}{32}''$



NEW CONSTRUCTION IC BOX

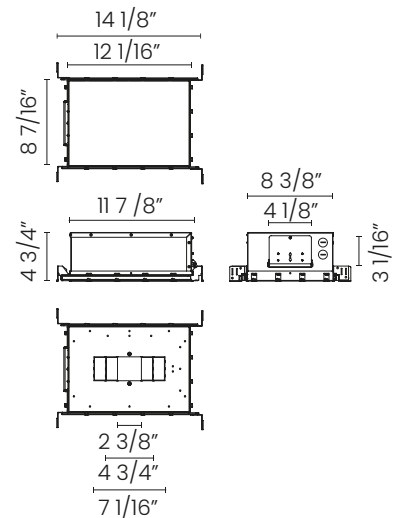
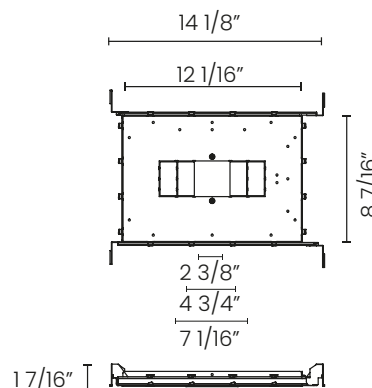
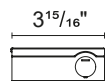
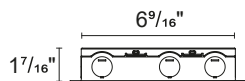
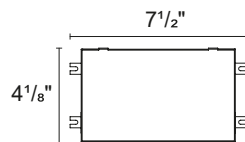
For Constellation Mini 1.5 Double flanged trim

Installs from above, service from below

Type: IC Box

2 light engine flanged trim

Cut out: $2\frac{13}{32}'' \times 4\frac{24}{32}''$



CUTOUT ACCESSORIES



For Constellation Mini 1.5 Double

Cut out:

Round : $\varnothing 1\frac{26}{32}''$

Square : $\square 1\frac{26}{32}''$

CONSTELLATION

MINI 1.5 DOUBLE - RECESSED DOWNLIGHT



DRIVER



ICES-005 Class P SELV RoHS



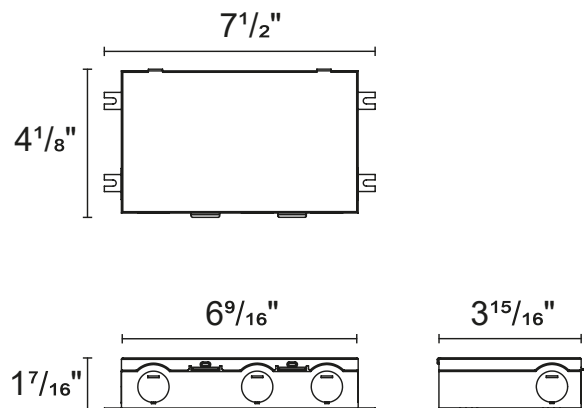
KIG-DWJ Series 40W



FEATURES

- Output: Constant Current
- Range: 100-277VAC
- PFC design: Built-in active PFC function
- Efficiency: Up to 82%
- Protections: Short circuit / Over temperature
- Heat dissipation: Cooling by free air convection
- Waterproof performance: Driver built-in Junction box, for dry and damp locations.
- Dimming function: Phase dimming: work with Forward phase, MLV and Reverse phase, ELV, TRIAC dimmers
- 0-10V dimming: 0-10V/1-10V/Potentiometer/10V PWM 4 in 1
- Dimming range: 1-100%
- Application: Suitable for the application of indoor LED lighting
- Warranty: 5 years warranty

DIMENSIONS



DRIVER

KIG-DWJ Series 40W

TECHNICAL PARAMETERS

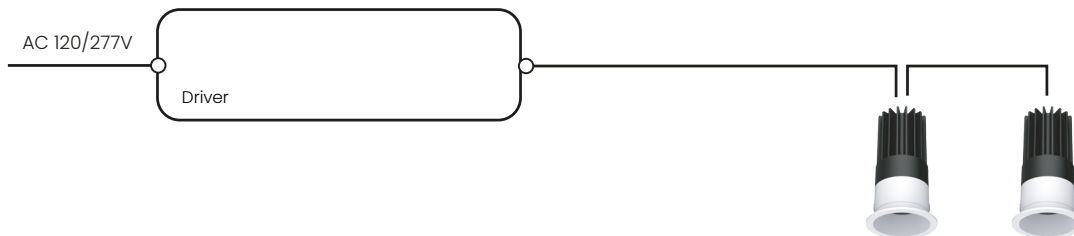
Certificate		UL / cUL / FCC / ICES-005 / Class P / SELV / ROHS / REACH																	
Output	Rated current (A) T ON ↓ OFF	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4		
	DIP Code	⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇			
	DIP Code		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		⬇⬇⬇⬇		
	Current Tolerance	±5%																	
	No-Load Voltage	75V max.																	
	DC Voltage (V)	3-65								3-62	3-57	3-50	3-45	3-40	3-37	3-34	3-31	3-29	
	Rated power (W)	19.5	22.8	26	29.3	32.5	35.8	39	40										
Input	Rated Voltage	100-277VAC																	
	Rated Frequency	50 / 60HZ																	
	Power Factor	>0.9																	
	THD@full load	≤20%																	
	Efficiency (Typ.)	≥82% @120VAC 60Hz ≥82% @277VAC 60Hz																	
	AC Current (Max.)	0.52A																	
	Inrush Current (Typ.)	3.12A, 36us@50% Ipeak 120VAC 9.2A, 34us@50% Ipeak 277VAC																	
	Leakage current	<0.50mA																	
Protection	Short Circuit	Constant current mode, recovers automatically after fault condition is removed																	
	Over temperature	Ambient temp. over 50°C±5°C, output current will be reduced to 50% ; Ambient temp. over 60°C±5°C, recovers automatically after the temp.drops.																	
Environ- ment	Working TEMP.	-40~+60°C																	
	Working Humidity	20-95% RH, non-condensing																	
	Storage TEMP. Humidity	-40~+80°C,10-95% RH																	
	TEMP. coefficient	±0.03% /°C (0-50°C)																	
	Vibration	10-500Hz, 5G 12min./1 cycle,period for 72min.each along X,Y,Z axes																	
Safety & EMC	Safety standards	UL 8750 CAN/CSA-C22.2 No. 250.13																	
	Withstand voltage	I/P-O/P:1.88KVAC I/P-F G:1.88KVAC O/P-F G:0.5KVAC																	
	Isolation resistance	I/P-O/P:100MΩ / 500VDC / 25°C / 70% RH																	
	EMC Immunity	FCC/ICES do not request this test.																	
	EMC Emission	FCC Part 15 Subpart B; ICES-005 Issue 5; ANSI C63.4a-2017																	
Others	Net Weight	0.57KG																	
	Dimension	190.2*103.9*36mm(L *W*H)																	
	Packing	540*235*235mm 20pcs/CTN																	
Notes	1. All parameters NOT specially mentioned are measured at 120VAC input, rated load and 25°C of ambient temperature. 2. Tolerance: includes set up tolerance, line regulation and load regulation.																		

CONSTELLATION

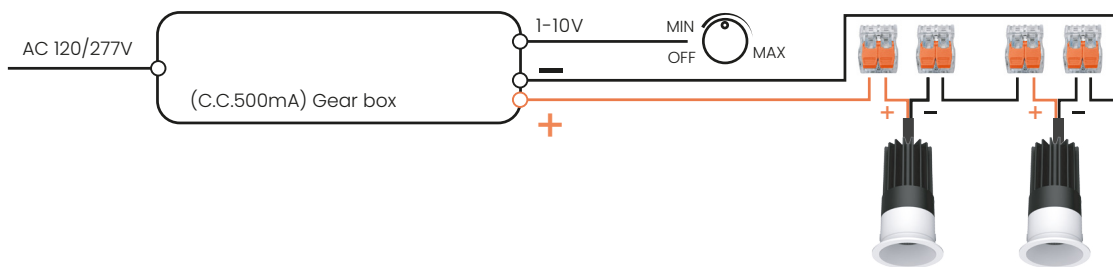
MINI 1.5 DOUBLE – RECESSED DOWNLIGHT

MULTIPLE DOWNLIGHTS WIRING DIAGRAM

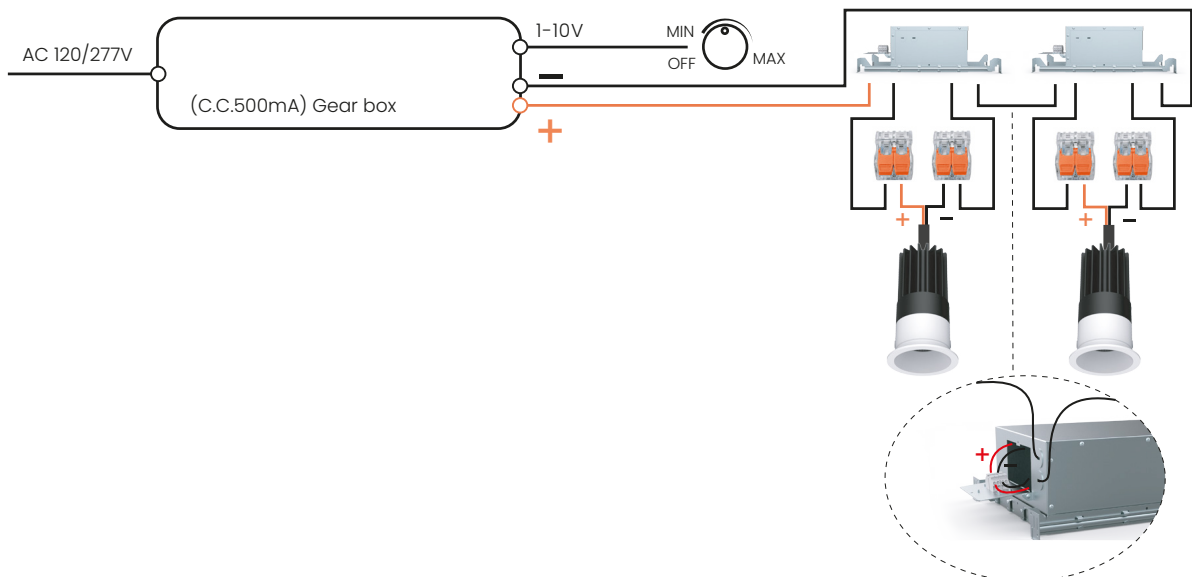
REMOTE DRIVER



NEW CONSTRUCTION NON-IC FRAME



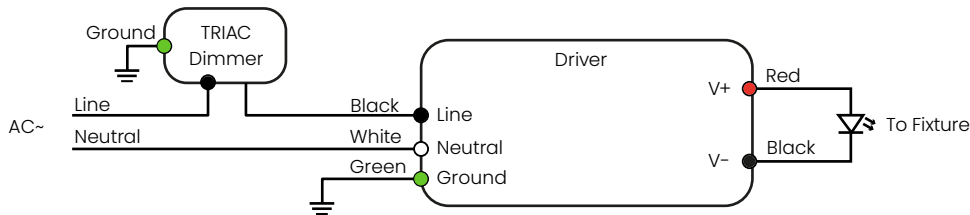
NEW CONSTRUCTION IC



DIMMING WIRING DIAGRAM

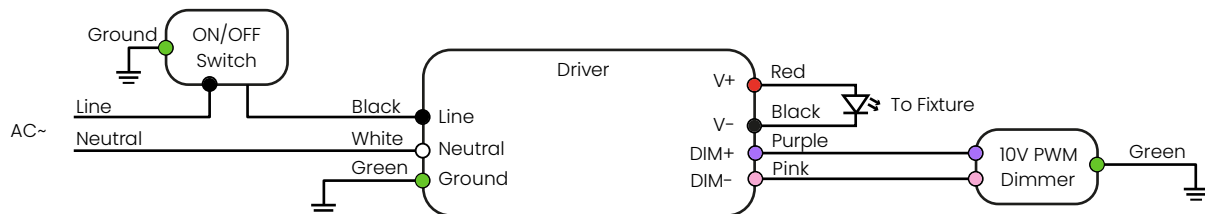
TRIAC / FORWARD PHASE / LEADING EDGE DIMMING (TRI)

1. The Pulse-Width Modulation (PWM) of output voltage can be adjusted through input terminal of the AC phase line(L) by connection a phase /Triac dimmer or lighting system.
2. Working with forward phase, MLV and Reverse phase, ELV, TRIAC dimmers or light system.
3. Min. loading is about 10%
4. Please try to use dimmers with power at least 2 times as the output power of the driver.



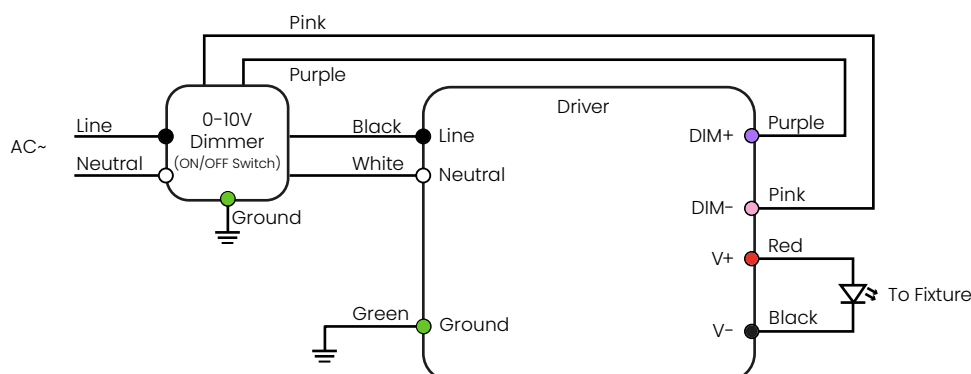
10V PWM

1. This driver should be installed by qualified and professional person.
2. Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.
3. Ensure that wiring is correct before test in order to avoid light and power supply damage.
4. If driver Cannot work normally, don't maintain privately.



0-10V DIMMING (010)

1. This driver should be installed by qualified and professional person.
2. Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.
3. Ensure that wiring is correct before test in order to avoid light and power supply damage.
4. If driver Cannot work normally, don't maintain privately.



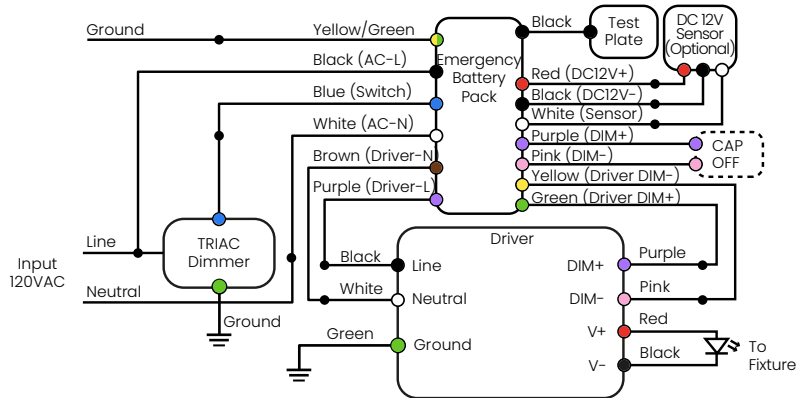
EMERGENCY BATTERY PACK WIRING DIAGRAM

TRIAC / FORWARD PHASE / LEADING EDGE DIMMING (TRI)

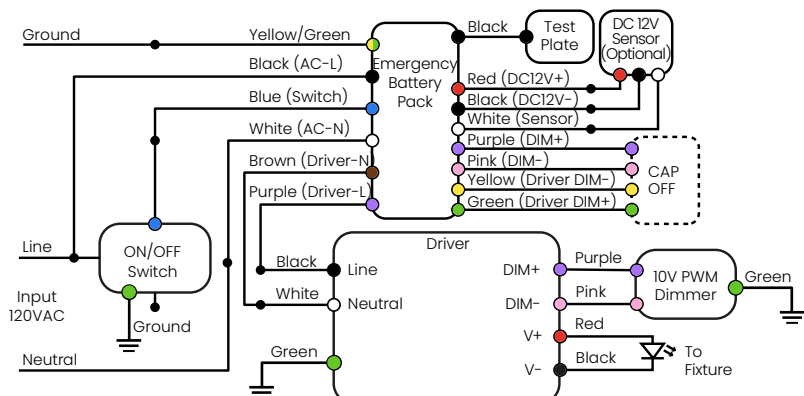
Input 120VAC 50/60Hz Range 3%-100%

NOTE: Cap off unused wires individually. DO NOT cap together.

EMERGENCY BATTERY ACCESS Above ceiling access is required for service. An access panel in the ceiling (or other form of access) adjacent to the installation location of the Emergency Battery is required.



10V PWM



0-10V DIMMING (010)

Input 120VAC-277VAC 50/60Hz Range 0.1%-100% dim to off

NOTE: Cap off unused wires individually. DO NOT cap together. Wall Switch and 0-10V dimmer may be one unit or two separate units.

EMERGENCY BATTERY ACCESS Above ceiling access is required for service. An access panel in the ceiling (or other form of access) adjacent to the installation location of the Emergency Battery is required.

