CONSTELLATION
MINI 1.5 DOUBLE - RECESSED DOWNLIGHT

MERCURY® Lighting Products

5 YEARS LIMITED WARRANTY · IC RATED · JA8 TITLE 24 COMPLIANT · Intertek

355° · IC (400mA) · NON-IC · TRIAC 1-10V DIMMABLE · DAMP LOCATION

SOURCE INFORMATION

DELIVERED LUMENS	Up to 888lm per Light Engine
CONSUMPTION	Up to 10W per Light Engine
CURRENT	Up to 500mA
EFFICACY	Up to 104.4 lm/W per Light Engine
INPUT VOLTAGE	120VAC-277VAC
DIMMING	TRIAC/ELV / 0-10V (1%) / 10V PWM
CRI	90+ CRI, 3-Step SDCM
COLOR TEMP-CCT	2700K/3000K/3500K/4000K/ Dim to Warm: 1800K–3000K
LIFE EXPECTANCY	L80 50,000 hrs.
ADJUSTABLE TILT	30°, 360° Rotation
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. 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.

OPTICS ACCESORY

Honeycomb louver & Linear Spread Lens

MATERIAL

Aluminum Die-Casting, Electrostatic Powder Coating

MINIMUM PLENUM SPACE

The minimum plenum space required is 4.5 inches.

CEILING THICKNESS

Up to 1 3/16"

COMPATIBLE CEILING TYPES

Drywall, T-Bar Grid, Acoustic Tile, Metal Ceiling.
And any material within the compatible thickness.

PERFORMANCE - WHITE STATIC - PER LIGHT ENGINE

CONFIGURATION	3000K	APPROX. LM/W
Fixed	888 lm	104.4
Adjustable	842 lm	99.0
Wallwash	544 lm	64.0

PERFORMANCE - DIM TO WARM - PER LIGHT ENGINE

CONFIGURATION	DW	APPROX. LM/W
Fixed	464 lm	46.4
Adjustable	406 lm	40.6
Wallwash	273 lm	27.3

LENS BEAM ANGLE

15° Spot · 24° Narrow Flood · 36° Flood · 60° Wide Flood

TRIM FINISH

Black · White · Trim white with black reflector insert · Custom

Fixture type:	Job information:

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ORDERING MATRIX IFORMATION

Ex: CTL-M-1.5-RC-TF-FX-DB-30K-15-OP-WH-40M-1-U-EM10-RM-HL

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

1 SERIES

- ☐ **CTL-M** Constellation Mini

2 LIGHT ENGINE TYPE

- ☐ **1.5** 1.5 High Efficiency Standard

3 TRIM SHAPE

- ☐ **RD** Round

4 MOUNTING PAN

- ☐ **TF** Flanged Trim

5 APPLICATION TYPE

- ☐ **FX** Fixed
- ☐ **AD** Adjustable
- ☐ **WW** Wall Wash (Available only with 15° Lens Beam Angle)

6 LIGHT ENGINES

- ☐ **DB** Double

7 COLOR TEMP-CCT (90 CRI)

- ☐ **27K** 2700K
- ☐ **30K** 3000K
- ☐ **35K** 3500K
- ☐ **40K** 4000K
- ☐ **DW** Dim to Warm: 1800K–3000K (Only available in standard Light Engine)

8 LENS BEAM ANGLE

- ☐ **15** 15° Spot
- ☐ **24** 24° Narrow
- ☐ **36** 36° Flood
- ☐ **60** 60° Wide Flood

9 REFLECTOR - INSERT

- ☐ ☐ **WH** White
- ☐ ■ **BK** Black
- ☐ ◪ **BW** Trim white Wall Wash with Black Insert (This applies to Wall Wash Reflector only)

10 TRIM FINISH

- ☐ ☐ **WH** White
- ☐ ■ **BK** Black
- ☐ **CS** Custom RAL No. _____

11 LUMEN PACKAGE

- ☐ **30M**
- ☐ **35M**
- ☐ **40M**
- ☐ **45M**
- ☐ **50M**

See page 4 for Available Light Engine Lumen packages

Check mA to Lumen values in the charts

12 DRIVER

- ☐ **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

13 VOLTAGE

- ☐ **U** Uni 120-277V

OPTIONS

14 STANDBY MODULES

- ☐ **EM10** Emergency Battery Pack 10W
- ☐ **EM12** Emergency Battery Pack 12W
- ☐ **NO** No Option

Remote Emergency Battery Pack, for field install

Max distance with EM = 50 ft

15 INSTALLATION TYPE

- ☐ **RM** Remote
- ☐ **NC** New Construction Non-IC Frame
- ☐ **IC** New Construction IC Box

15 OPTIC MEDIA

- ☐ **HL** Honeycomb louver
- ☐ **LS** Linear Spread Lens

Accessories are not suitable for wallwash fixtures

Honeycomb louver

Linear Spread Lens

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MERCURY Lighting Products

FIXED

ADJUSTABLE

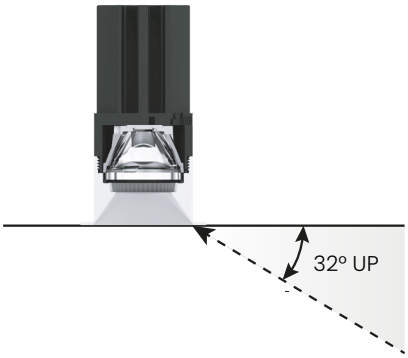
WALLWASH

FLANGED TRIM

OPTIC MEDIA LIST

OPTIC	
1.5-HL	Honeycomb Louver
1.5-LS	Linear Spread Lens
1.5-15	Standard light-engine lens; provides 15° beam angle
1.5-24	Standard light-engine lens; provides 24° beam angle
1.5-36	Standard light-engine lens; provides 36° beam angle
1.5-60	Standard light-engine lens; provides 60° beam angle
1.5-15DW	Dim-to-warm lens; provides 15° beam angle
1.5-24DW	Dim-to-warm lens; provides 24° beam angle
1.5-36DW	Dim-to-warm lens; provides 36° beam angle
1.5-60DW	Dim-to-warm lens; provides 60° beam angle

CUTOFF ANGLE



INSTALLATION	
1.5-DB-NC	New Construction Plate for Double Light Engines
1.5-IC	IC BOX for 1 and 2 Light engines
1.5-RM	Remote driver box with driver

CONSTELLATION
MINI 1.5 DOUBLE - RECESSED DOWNLIGHT

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FIXED — CTL-M-1.5-RD-TF-FX-DB

CRI	90+
LENS BEAM ANGLE	15°/24°/36°/60°

3000K

IC/NON-IC	LUMEN OUTPUT CODE	CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (W)
IC/NON-IC	30M	300x2=600	549x2=1098	4.9x2=9.8W
IC/NON-IC	35M	350x2=700	637x2=1274	5.8x2=11.6W
IC	40M	400x2=800	723x2=1446	6.7x2=13.4W
NON-IC	45M	450x2=900	807x2=1614	7.6x2=15.2W
NON-IC	50M	500x2=1000	888x2=1776	8.5x2=17W

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

DIM TO WARM

IC/NON-IC	LUMEN OUTPUT CODE	CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (W)
IC/NON-IC	30M	300x2=600	279x2=558	4x2=8W
IC/NON-IC	35M	350x2=700	325x2=650	6x2=12W
IC	40M	400x2=800	371x2=742	8x2=16W
NON-IC	45M	450x2=900	418x2=836	9x2=18W
NON-IC	50M	500x2=1000	464x2=928	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%

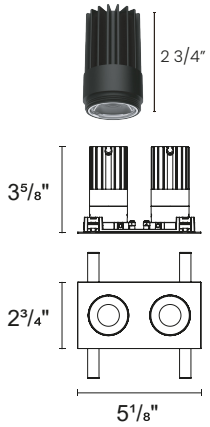
Multiplier for Optics Accesories

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

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

DIMENSIONS



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

ADJUSTABLE (30°) — CTL-M-1.5-RD-TF-AD-DB

CRI	90+
LENS BEAM ANGLE	15°/24°/36°/60°

3000K

IC/NON-IC	LUMEN OUTPUT CODE	CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (W)
IC/NON-IC	30M	300x2=600	521x2=1042	4.9x2=9.8W
IC/NON-IC	35M	350x2=700	604x2=1208	5.8x2=11.6W
IC	40M	400x2=800	686x2=1372	6.7x2=13.4W
NON-IC	45M	450x2=900	765x2=1530	7.6x2=15.2W
NON-IC	50M	500x2=1000	842x2=1684	8.5x2=17W

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

DIM TO WARM

IC/NON-IC	LUMEN OUTPUT CODE	CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (W)
IC/NON-IC	30M	300x2=600	244x2=488	4x2=8W
IC/NON-IC	35M	350x2=700	284x2=496	6x2=12W
IC	40M	400x2=800	325x2=650	8x2=16W
NON-IC	45M	450x2=900	366x2=732	9x2=18W
NON-IC	50M	500x2=1000	406x2=812	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%

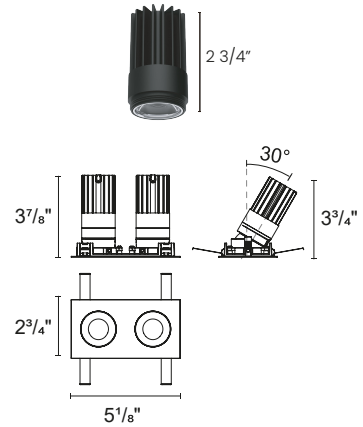
Multiplier for Optics Accesories

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

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

DIMENSIONS



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

WALLWASH — CTL-M-1.5-RD-TF-WW-DB

CRI	90+
LENS BEAM ANGLE	15° only

3000K

IC/NON-IC	LUMEN OUTPUT CODE	CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (W)
IC/NON-IC	30M	300x2=600	357x2=714	2x2=4W
IC/NON-IC	35M	350x2=700	396x2=792	3x2=6W
IC	40M	400x2=800	441x2=882	4x2=8W
NON-IC	45M	450x2=900	489x2=978	4.5x2=9W
NON-IC	50M	500x2=1000	544x2=1088	5x2=10W

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

DIM TO WARM

IC/NON-IC	LUMEN OUTPUT CODE	CURRENT (mA)	DELIVERED LUMEN (lm)	FIXTURE CONSUMPTION (W)
IC/NON-IC	30M	300x2=600	179x2=358	2x2=4W
IC/NON-IC	35M	350x2=700	199x2=398	3x2=6W
IC	40M	400x2=800	221x2=442	4x2=8W
NON-IC	45M	450x2=900	246x2=492	4.5x2=9W
NON-IC	50M	500x2=1000	273x2=546	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%

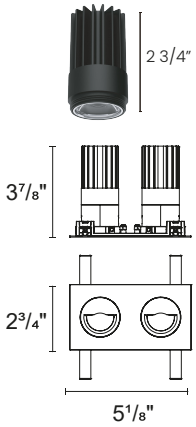
Multiplier for Optics Accesories

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

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

DIMENSIONS



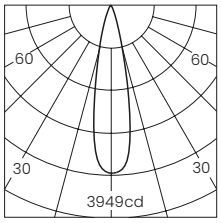
Cut out: 2 13/32" x 4 24/32"

CONSTELLATION
MINI 1.5 DOUBLE - RECESSED DOWNLIGHT

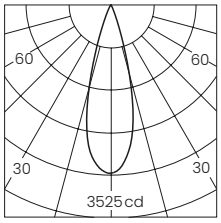
MERCURY® Lighting Products

PHOTOMETRICS

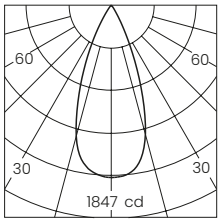
FIXED RC-FX-TF-OP



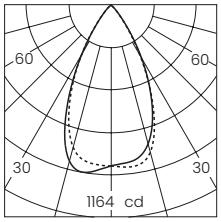
H(m)	D(m)	E(lx)
Lens beam angle 15°		
1.0	0.39	2794
2.0	0.79	698
3.0	1.18	310
4.0	1.58	174
5.0	1.97	111



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

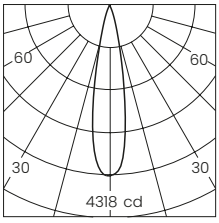


H(m)	D(m)	E(lx)
Lens beam angle 36°		
1.0	0.75	1275
2.0	1.49	318
3.0	2.24	141
4.0	2.99	79
5.0	3.74	50

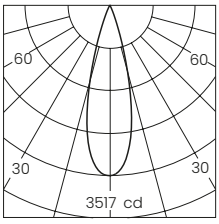


H(m)	D(m)	E(lx)
Lens beam angle 60°		
1.0	1.00	745
2.0	2.00	186
3.0	2.99	82
4.0	3.99	46
5.0	4.99	29

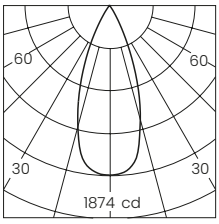
ADJUSTABLE RC-AD-TF-OP



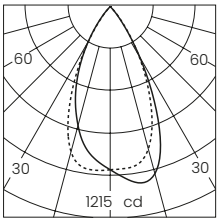
H(m)	D(m)	E(lx)
Lens beam angle 15°		
1.0	0.36	3011
2.0	0.72	752
3.0	1.08	334
4.0	1.43	188
5.0	1.79	120



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

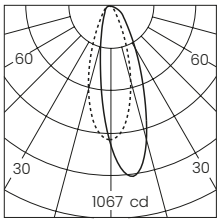


H(m)	D(m)	E(lx)
Lens beam angle 36°		
1.0	0.72	1299
2.0	1.44	324
3.0	2.16	144
4.0	2.88	81
5.0	3.60	51



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
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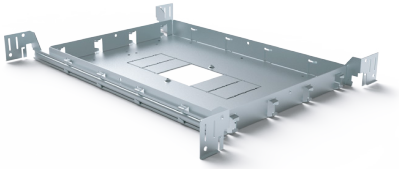
MERCURY Lighting Products

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 13/32" x 4 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 13/32" x 4 24/32"

NEW CONSTRUCTION IC BOX

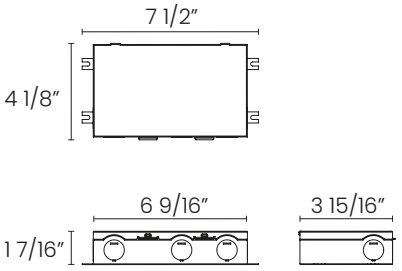
For Constellation Mini 1.5 Double flanged trim

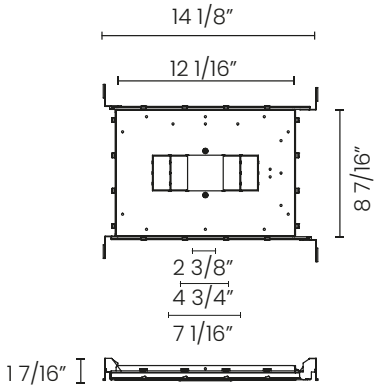
Installs from above, service from below

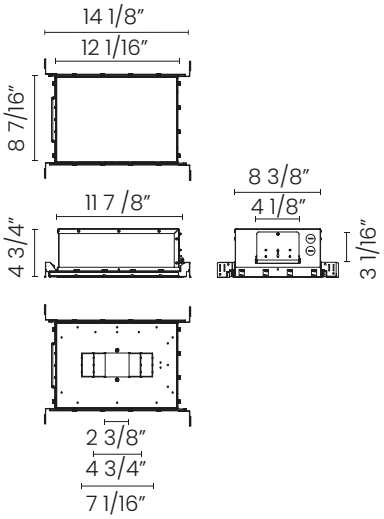
Type: IC Box

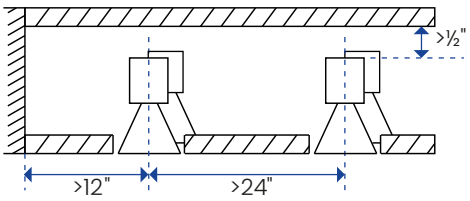
2 light engine flanged trim

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









CONSTELLATION
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MERCURY Lighting Products

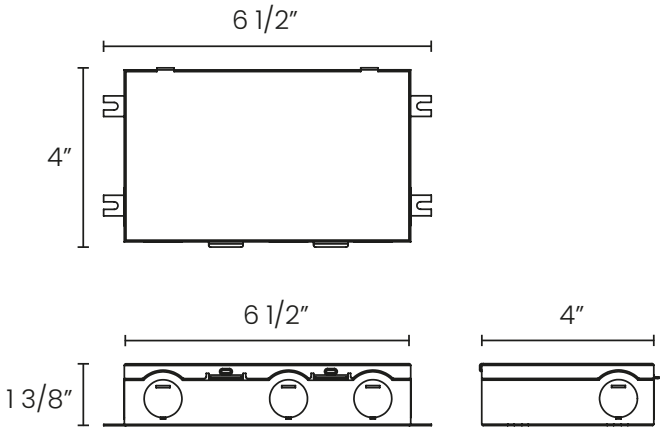
KIG-C-DWJ Series 40W

ICES-005 Class P SELV RoHS Reach

FEATURES

- Output: Constant Current
- Range: 100-277VAC
- PFC design: Built-in active PFC function
- Efficiency: Up to 81%
- 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



STANDBY MODULE

An emergency battery pack is available as an option for field installation by others. AC Electronics emergency battery is California Title 20 Compliant and provides backup power for 90 minutes. EM fixtures are provided with an integral emergency battery that requires above ceiling access for service, and a remote test switch, which comes with a 24" lead length for location of the test switch. Remote EM test switch is dry/damp only.

DRIVER

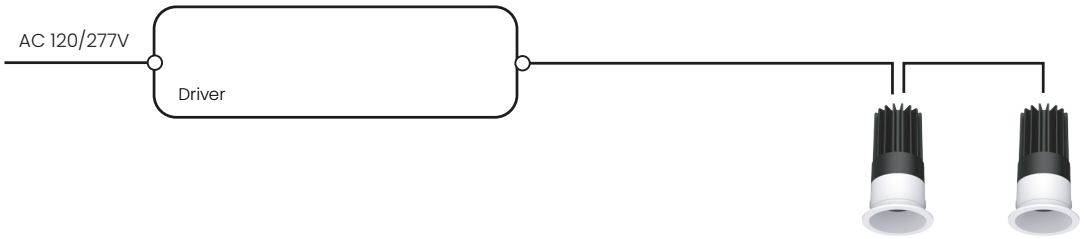
KIG-C-DWJ Series 40W

TECHNICAL PARAMATERS

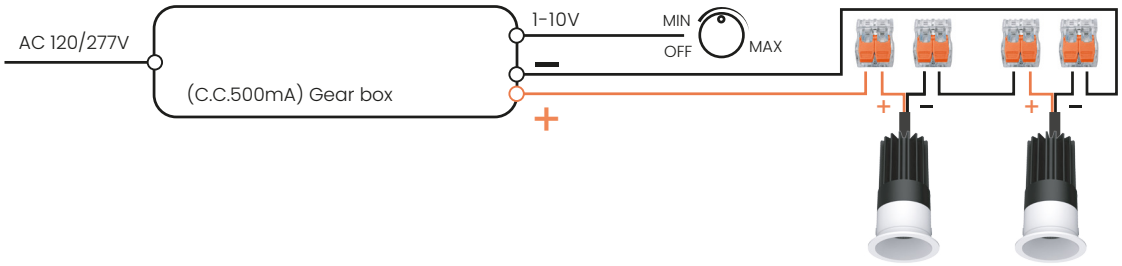
Certificate		UL / cUL / FCC / ICES-005 / Class P / SELV / ROHS / REACH															
Output	Rated current (A) ▼ON ▲OFF	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
	DIP Code	▲▲▲▲		▼▲▲▲		▲▼▲▲		▼▼▲▲		▲▲▲▼		▼▲▲▼		▲▼▼▼		▲▼▼▼	
	DIP Code		▼▼▲▲		▼▼▲▲		▼▲▼▲		▼▼▼▲		▼▲▲▼		▼▼▲▼		▼▲▼▼		▼▼▼▼
	Current Tolerance	±5%															
	No-Load Voltage	58V max															
	DC Voltage (V)	3-50										3-45	3-40	3-37	3-34	3-31	3-29
	Rated power (W)	15	17.5	20	22.5	25	27.5	30	32.5	35	40						
Input	Rated Voltage	100-277VAC															
	Rated Frequency	50 / 60HZ															
	Power Factor	>0.9															
	THD@full load	⩽20%															
	Efficiency (Typ.)	⩾81% @120VAC 60Hz ⩾81% @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 122°F±41°F, output current will be reduced to 50% ; Ambient temp. over 140°F±41°F, recovers automatically after the temp.drops.															
Enviroment	Working TEMP.	-40 - +140°F															
	Working Humidity	20-95% RH, non-condensing															
	Storage TEMP. Humidity	-40 - +176°F, 10-95% RH															
	TEMP. coefficient	±0.03% /℃ (0-122°F)															
	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:1.88K VAC I/P-FG:1.88K VAC O/P-FG:0.5K VAC															
	Isolation resistance	I/P-O/P:100MΩ / 500VDC / 77°F / 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	1.25 lb															
	Dimension	7.5" x 4" x 1.4" (L*W*H)															
	Packing	21.26" x 9.25" x 9.25" 20pcs/CTN															
Notes	1. All parameters NOT specially mentioned are measured at 120VAC input, rated load and 25℃of ambient temperature. 2. Tolerance: includes set us tolerance, line regulation and load regulation.																

MULTIPLE DOWNLIGHTS WIRING DIAGRAM

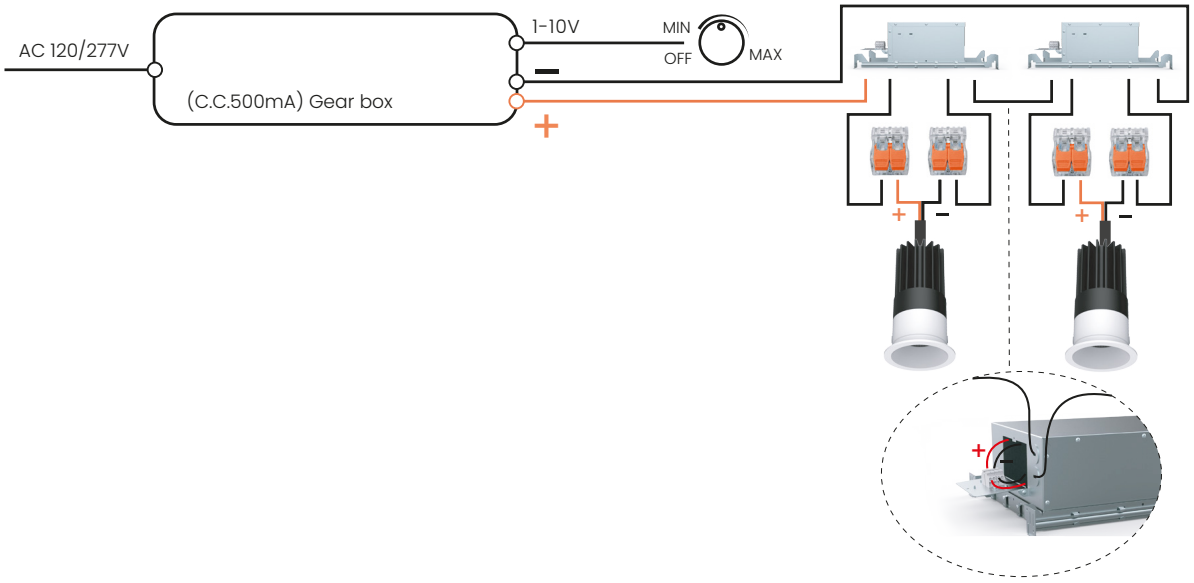
REMOTE DRIVER



NEW CONSTRUCTION NON-IC FRAME



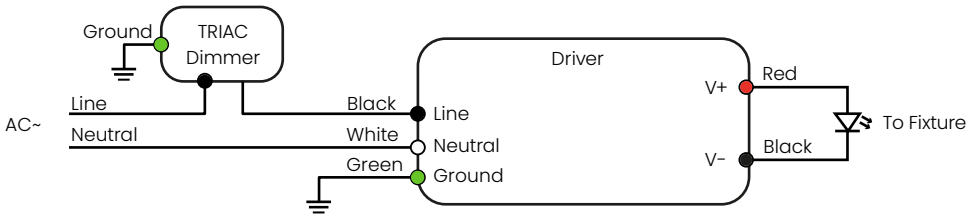
NEW CONSTRUCTION IC



DIMMING WIRING DIAGRAM

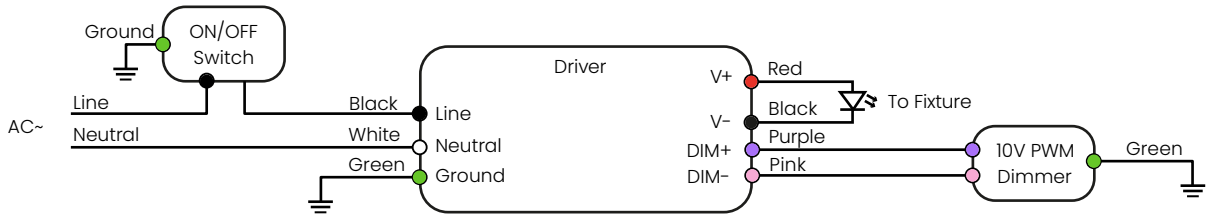
TRIAC / FORWARD PHASE / LEADING EDGE DIMMING (TRI)

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.



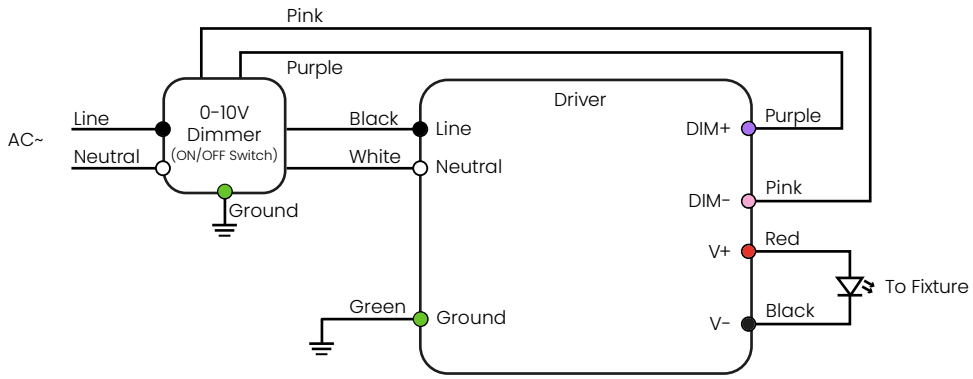
10V PWM

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.



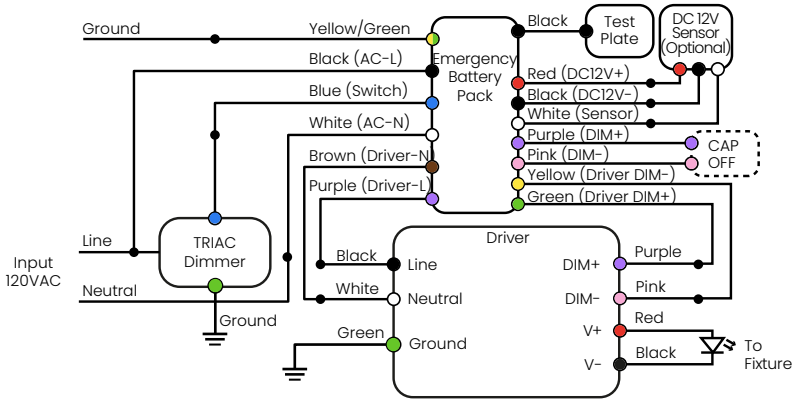
EMERGENCY BATTERY PACK WIRING DIAGRAM

TRIAC / FORWARD PHASE / LEADING EDGE DIMMING (TRI)

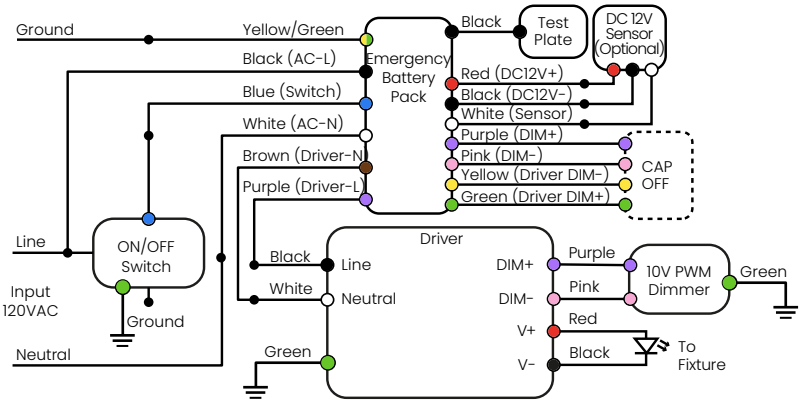
Input 120VAC 50/60Hz Range 3%-100%

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.

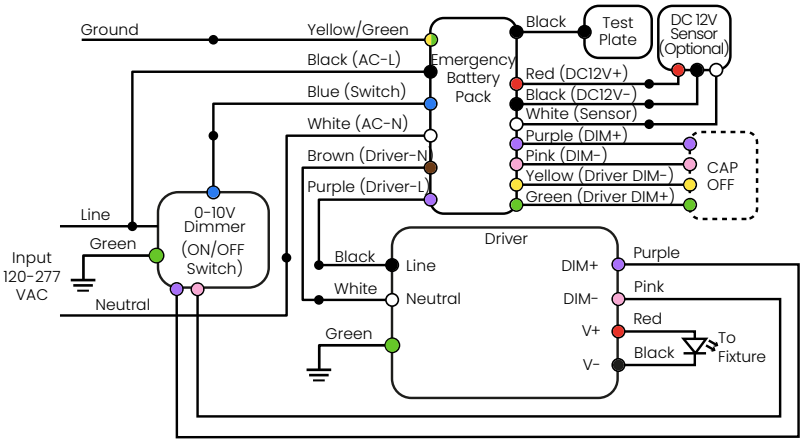


10V PWM



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.