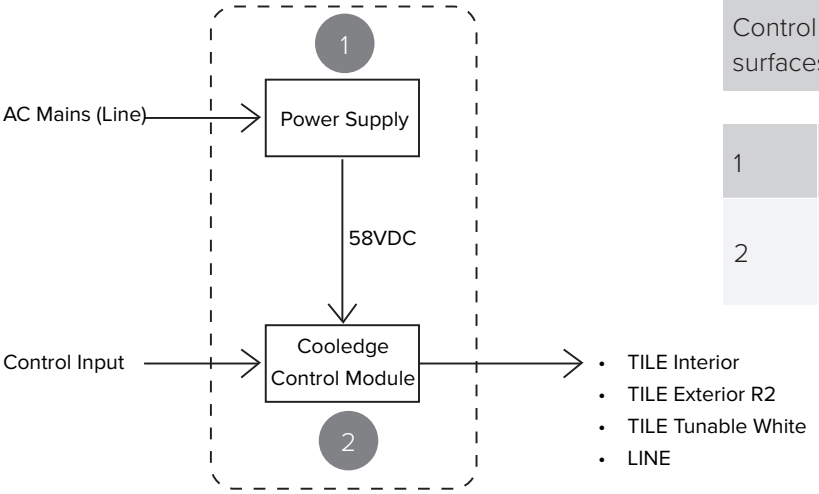
COOLEDGE™

COOLEDGE cUL LISTED POWER & CONTROL (58V) SPECIFICATIONS

PROJECT		REFERENCE TYPE	
SPECIFIED BY		QUANTITY	
DATE		NOTE	For Luminous Surfaces

SYSTEM OVERVIEW



Control on the scale of nature enables large luminous surfaces using industry standard protocols.

1	Power Supply: converts AC mains (line) power to safe low voltage 58V power
2	Cooledge Control Module: receives control input signals to dim and/or tune Cooledge Lighting Systems. Output is max. 90W per channel

GENERAL

Operating Temp.	-20 to 55°C (-4 to 131°F)
Storage Temp.	-40 to 70°C (-40 to 158°F)
Relative Humidity	90% max (non-condensing)
Operating Voltage	Nominal 58VDC

CERTIFICATIONS

c UL us LISTED

RoHS

CALIFORNIA JA8 TITLE 24 COMPLIANT

Contact Cooledge for ordering information for JA8 compliant models.

WARRANTY

5 YEAR SYSTEM WARRANTY 5 5 YEAR SYSTEM WARRANTY

5 Year Limited Warranty:
Parts and workmanship.

FEATURES

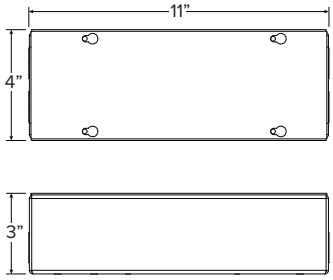
- Compatible with a full range of industry standard control protocols from simple analog (0/1-10V), to digital (DALI/DMX), and wireless (Casambi) options
- Up to four 90W channels of power enables larger luminous surfaces while reducing the number of line voltage connections required
- Simple and economic control for dynamic illumination that includes deep dimming and tunable CCT
- Incorporates Cooledge's proprietary "C-Tune" technology that significantly increases the affordability of tunable CCT
- Test mode available for on-site troubleshooting.

Cooledge Lighting Inc.
110-13551 Commerce Parkway
Richmond, BC V6V 2L1 Canada

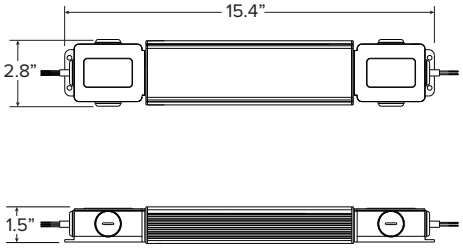
O +1 604 273 2665
F +1 604 273 2660
T +1 844 455 4448
W cooledgelighting.com

1 POWER SUPPLIES AND LED DRIVERS = 1

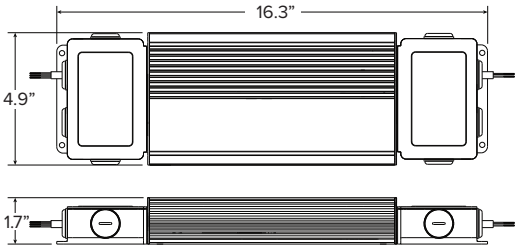
Purpose: Converts AC mains (line) power to nominal 58VDC power.



90W LED Driver



200W Power Supply



400W Power Supply

SPECIFICATIONS

	90W LED Driver	200W Power Supply	400W Power Supply
TILE Exterior R2	No	Yes	Yes
IP Rating	IP20	IP66	IP66
Dimensions (in)	11 x 4 x 3	15.4 x 2.8 x 1.5	16.3 x 4.9 x 1.7
Maximum Output Power (W)	90	200	400
Output Voltage (VDC)	58	58	57
Input Voltage Range (VAC)	Nom. 120-277	Nom. 120-277	Nom. 120-277
Efficiency (% at full load – typ.)	89 (120V), 92 (277V)	93 (typ)	95 (277V)
Power Factor (full load)	0.998	0.98 (120V), 0.95 (277V)	0.98 (120V), 0.95 (277V)
Total Harmonic Distortion (%)	< 10 (full load)	≤ 20 (>50% load)	≤ 20 (>40% load)
Start-up Time (sec)	1.0	0.5	0.5
Max. Inrush Current	per NEMA 410-2015	75A (per NEMA 410)	35A (per NEMA 410)
Dimming Frequency (Hz)	1800	Not Applicable	Not Applicable
Dimming Range (%)	1 - 100	Not Applicable	Not Applicable
Certification	UL Listed	UL Listed	UL Listed
Rated Lifetime (hr)	70,000	62,000	62,000
Weight	4.88lbs / 2214g	3.39lbs / 1538g	6.85lbs / 3107g

HOW TO ORDER

Output Power	Ordering Code	Description
90W	EPSD-090-1CH-58V-010[1]	Enclosed LED Driver, 1% Dimming, 90W, 1 Channel, 58V, 0/1-10V, 1.8kHz
200W	EPSS-200-58V	Meanwell (configured for Cooledge) 200W Power Supply, 58V (UL Listed) with integrated IP66 wiring enclosure
	EPSS-200-58V-EXT[2]	Meanwell (configured for Cooledge) 200W Power Supply, 58V (UL Listed) with integrated IP66 wiring enclosure
400W	EPSS-400-58V	Meanwell (configured for Cooledge) 400W Power Supply, 58V (UL Listed) with integrated IP66 wiring enclosure
	EPSS-400-58V-EXT[2]	Meanwell (configured for Cooledge) 400W Power Supply, 58V (UL Listed) with integrated IP66 wiring enclosure

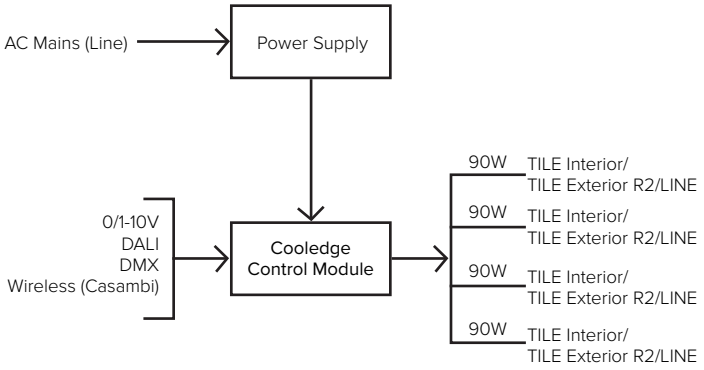
[1]Not compatible with Cooledge Control Module
[2]Suitable for exterior applications. Includes two conduit adapters kits ½" Male BSPP x ½" Female NPT for the wiring enclosures

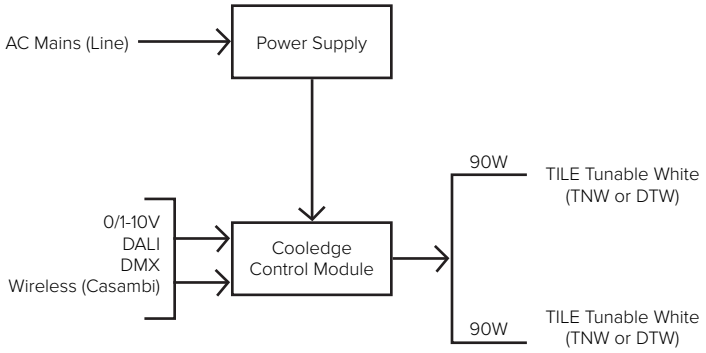
2 COOLEDGE CONTROL MODULE: GENERAL = 2

Purpose: Cooledge Control Modules perform two functions: 1) convert a single incoming DC power source to multiple Class 2 output (<100W) channels; and 2) convert incoming control signals to dimming and/or CCT tuning output to operate Cooledge TILE and LINE products.

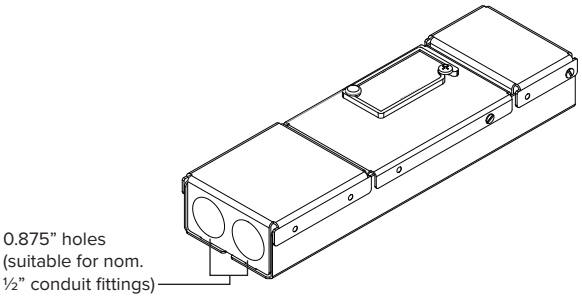
There are 3 types of Control Modules depending upon the TILE/LINE product to be controlled:

- **SCT** = Static Color Temperature > SCT Control Modules are used for dimming only with TILE Interior, TILE Exterior R2 or LINE products.
- **TNW** = Tunable White > TNW Control Modules are used to select CCT and dim TILE Tunable White when used for constant lumen output across all CCTs in the range.
- **DTW** = Dim-to-Warm > DTW Control Modules are used to select a CCT + Dim combination when used with the dim-to-warm TILE Tunable White product.

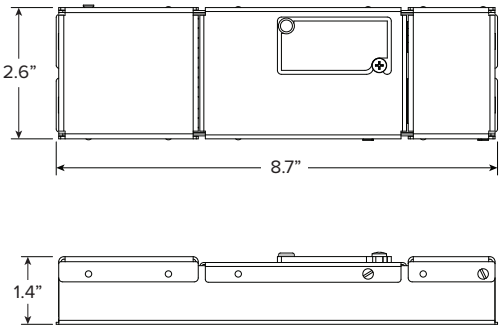




Static Color Temperature (SCT)



Tunable White (TNW) & Dim-to-Warm (DTW)



SPECIFICATIONS

Dimensions (in)	8.7 x 2.6 x 1.4
Output Power (W per channel)	90 (Class 2): SCT = up to 4CH; TNW/DTW[1] = 2 CH
Input Power (W)	Up to 400 (Class 1)
Circuit Protection	Overcurrent, Overvoltage, Reverse Polarity, Short Circuit
Dimming Frequency (Hz)	3950
Dimming Range (%)	0.05 - 100 (SCT, DTW); 1 - 100 (TNW)
Standalone Test Mode	Available
Maximum Control Current (Source)	0.5 mA
Max. Wire Size	12 AWG
Rated Lifetime (hr)	70,000
EMI	FCC Part 15, Class B
Location	Indoor; Dry locations. Outdoor use requires suitable enclosure[2]
Weight	0.47 lbs

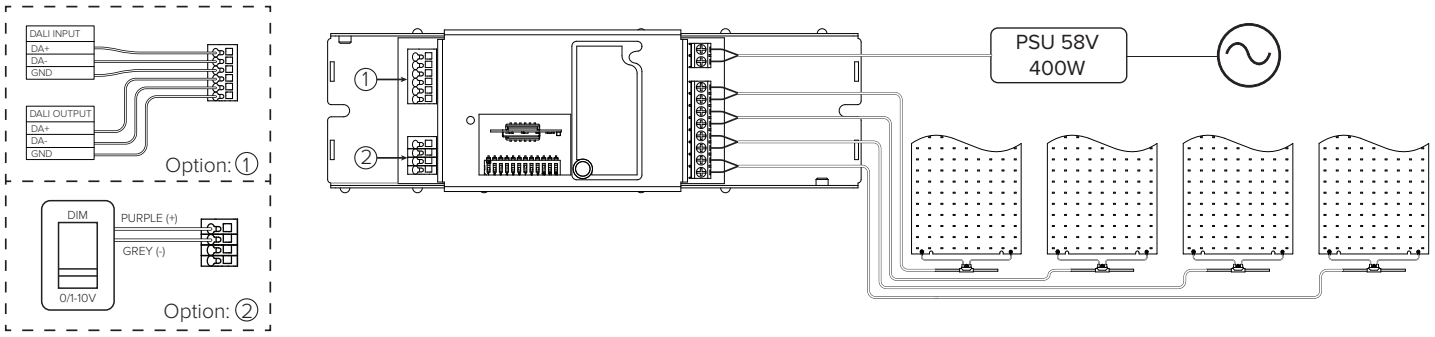
[1]TNW/DTW not compatible with TILE Exterior R2

[2]For exterior applications, Cooledge Control Modules must be mounted within an appropriate IP65 or higher enclosure is 14.2" L x 6.3" W X 3.6" H. Please contact Cooledge Lighting for recommendations.

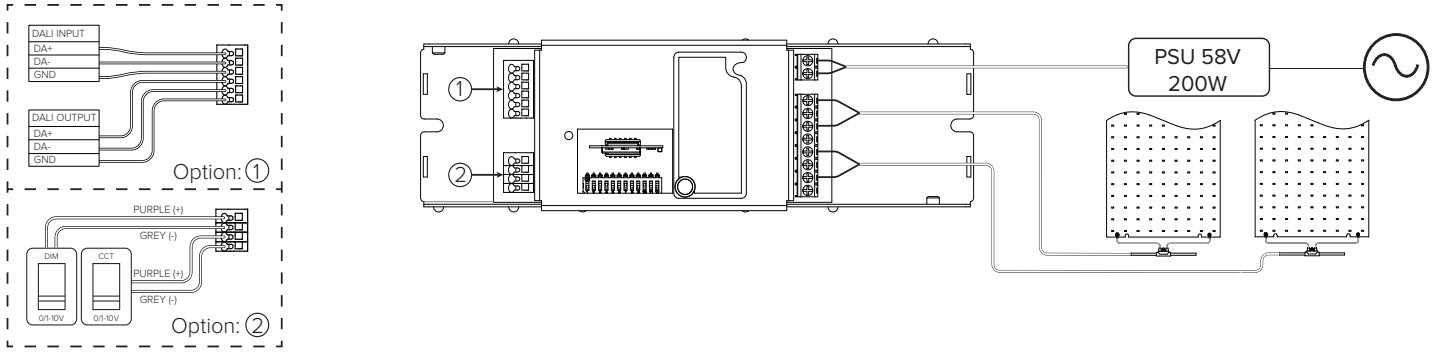
3 COOLEDGE CONTROL MODULES: DALI AND 0-10V

Control Modules identified as “DALI” have dual protocol capability:

1. if the DALI input is used the module will operate based on incoming DALI control signals and each output channel can be controlled independently.
2. if 0-10V input is used, the module will operate based on incoming 0-10V signals and all output channels will be controlled by this input.



Static Color Temperature (SCT)



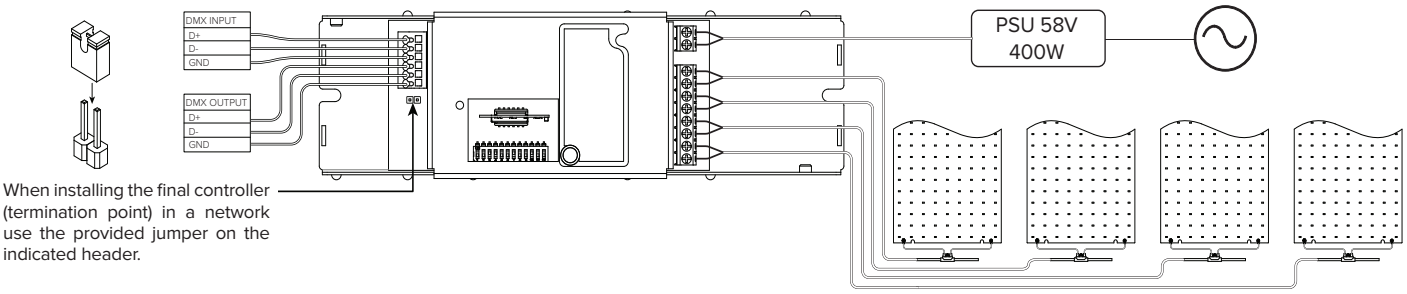
Tunable White (TNW) & Dim-to-Warm (DTW)

HOW TO ORDER

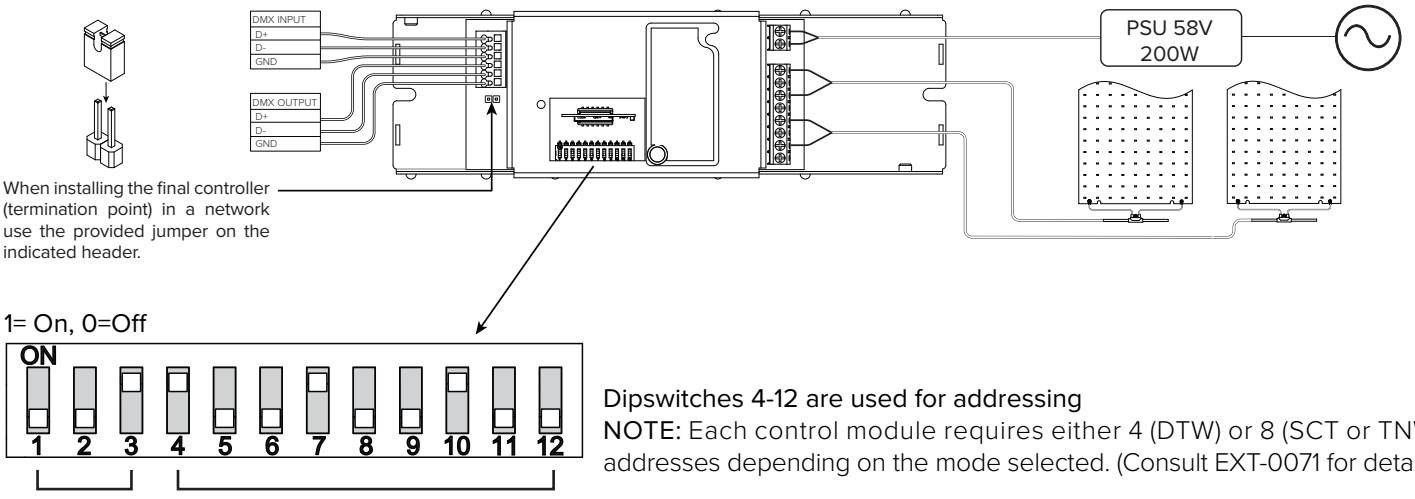
Input Control Protocol	Ordering Code	Description
0-10V & DALI	CTR-TNW-DAL-58V	200W (max.) Control Module for Tunable White, DALI/0-10V, 58V, Dual Channel x 2, 1% Dimming
0-10V & DALI	CTR-DTW-DAL-58V	200W (max.) Control Module for Dim to Warm, DALI/0-10V, 58V, Dual Channel x 2, 0.05% Dimming
0-10V & DALI	CTR-SCT-DAL-58V	400W (max.) Control Module, DALI/0-10V, 58V, Single Channel x 4, 0.05% Dimming

4 COOLEDGE CONTROL MODULES: DMX

Control Modules identified as “DMX” operate on control signals received from a DMX controller (8-bit or 16-bit) and each output channel can be controlled independently.



Static Color Temperature (SCT)



1= On, 0=Off

- Switches 1 - 3: Mode selection switches
- Switches 4 - 12: Addressing switches

Dipswitches 4-12 are used for addressing
NOTE: Each control module requires either 4 (DTW) or 8 (SCT or TNW) addresses depending on the mode selected. (Consult EXT-0071 for details)

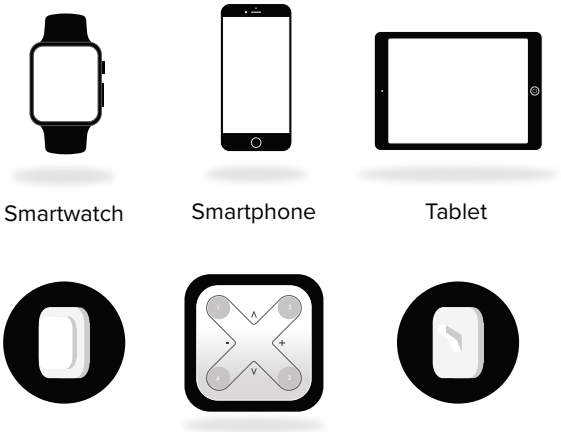
Tunable White (TNW) & Dim-to-Warm (DTW)

HOW TO ORDER

Input Control Protocol	Ordering Code	Description
DMX	CTR-TNW-DMX-58V	200W (max.) Control Module for Tunable White, DMX, 58V, Dual Channel x 2, 1% Dimming
DMX	CTR-DTW-DMX-58V	200W (max.) Control Module for Dim to Warm, DMX, 58V, Dual Channel x 2, 0.05% Dimming
DMX	CTR-SCT-DMX-58V	400W (max.) Control Module, DMX, 58V, Single Channel x 4, 0.105% Dimming

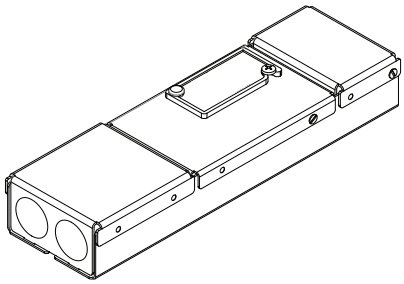
5 COOLEDGE CONTROL MODULES: WIRELESS (CASAMBI)

Control Modules identified as “CAS” operate on control signals received from a Casambi (Bluetooth Low Energy wireless protocol) enabled device including a wireless switch, smartphone or tablet.

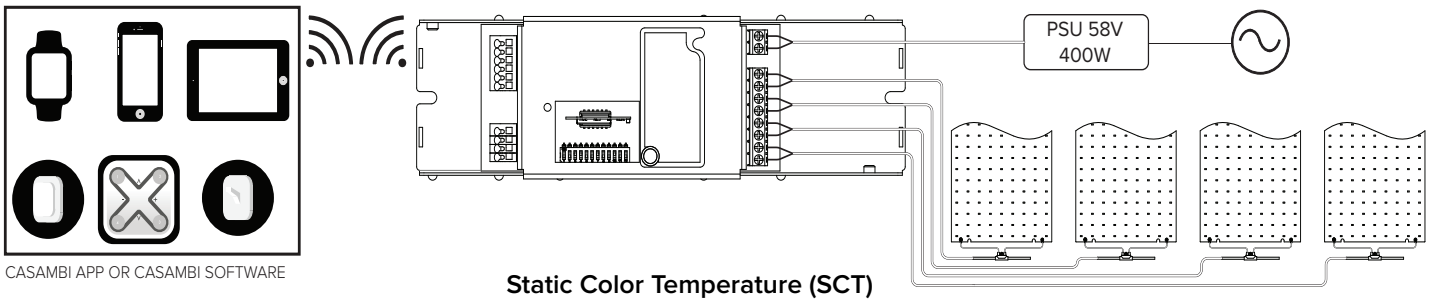


Casambi Enabled Device

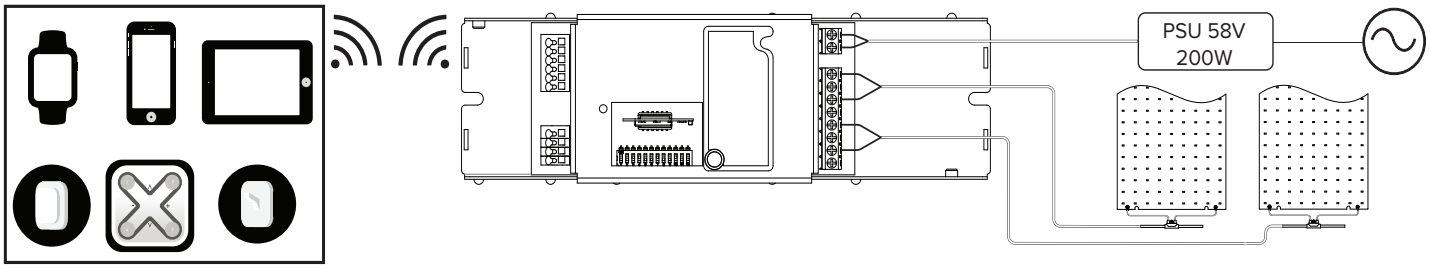
Images Courtesy of Casambi



Cooledge “CAS” Control Module



Static Color Temperature (SCT)



Tunable White (TNW) & Dim-to-Warm (DTW)

HOW TO ORDER

Input Control Protocol	Ordering Code	Description
Wireless (Casambi)	CTR-TNW-CAS-58V	200W (max.) Control Module for Tunable White, Casambi wireless, 58V, Dual Channel x 2, 1% Dimming
Wireless (Casambi)	CTR-DTW-CAS-58V	200W (max.) Control Module for Dim to Warm, Casambi wireless, 58V, Dual Channel x 1, 0.05% Dimming
Wireless (Casambi)	CTR-SCT-CAS-58V	400W (max.) Control Module, Casambi wireless, 58V, Single Channel x 4, 0.05% Dimming

Wireless range may be affected by mounting method, location and weather conditions. Cooledge recommends evaluation of wireless functionality by application.