

## CEC Title 20 Regulation

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### What is the CEC Title 20 Regulation?

The California Energy Commission (CEC) established new energy efficiency requirements with the 2015 Appliance Efficiency Regulations (California Code of Regulations, Title 20) for regulated products sold in the state of California. Regulated products manufactured on or after July 1, 2016 must comply with the requirements in the CEC Title 20 regulation and be certified through the CEC.

The CEC Title 20 regulation includes new requirements for fluorescent dimming ballasts. The new metric, “Weighted Ballast Luminous Efficiency (weighted BLE)”, is a weighted efficiency value based on measurements made at both maximum output and dimmed levels. Additionally, the CEC has set a maximum standby power limitation for fluorescent dimming ballasts. The scope of the CEC Title 20 regulation is limited to fluorescent dimming ballasts which control 4 ft T5 or 4 ft T8 linear lamps. Fluorescent dimming ballasts that control other lamp types are exempt from this regulation.

### How this Affects Lutron Ballasts:

As a result of this new regulation, select models of Lutron fluorescent dimming ballasts will no longer be offered for sale or use in the state of California. The rest of this document is dedicated to explaining this in more detail. Visit [www.lutron.com/title20ballasts](http://www.lutron.com/title20ballasts) for future updates to this document.

## Affected Model Numbers

The T5 and T8 Lutron fluorescent dimming ballast model numbers shown in **Table 1** manufactured on or after July 1, 2016 will be unavailable for sale or use in the state of California. Also, custom ballast factor will no longer be offered in California for these models.

T5 and T8 Lutron fluorescent dimming ballast models manufactured prior to July 1, 2016 are exempt from the new energy efficiency requirements mandated by the CEC Title 20 regulation. Lutron is maintaining a LIMITED stock of these models that are available for sale or use in California on a first come, first served basis.

Any existing stock of Lutron fluorescent dimming ballasts models shown in **Table 1** manufactured before July 1, 2016 currently in your inventory can still be sold or used in the state of California (customer is responsible for checking the manufacturing date code on the product label). Date code is in the format DD-MM-YYYY.

**Table 1: Affected model numbers**

Ballast	Model Numbers		
	Lutron	Lutron Buy American Act (BAA)	Grainger
EC5	EC5T528JUNV1	UEC5T528JUNV1	-
	EC5T528JUNV2	UEC5T528JUNV2	-
	EC5T554JUNV1	UEC5T554JUNV1	-
	EC5T554JUNV2	UEC5T554JUNV2	-
	EC5T832JUNV1	UEC5T832JUNV1	-
	EC5T832JUNV2	UEC5T832JUNV2	-
	EC5T8RWJUNV1	UEC5T8RWJUNV1	-
	EC5T8RWJUNV2	UEC5T8RWJUNV2	-
	EC5T8RWGUNV3L	UEC5T8RWGUNV3	-
	EC5T832GUNV2	-	-
	EC5T832GUNV2L	UEC5T832GUNV2L	-
	EC5T832GUNV3L	UEC5T832GUNV3L	-
	EC5T832GUNV317L	UEC5T832GUNV317L	-
EHD	EHDT832GU310	UEHDT832GU310	18C853
	EHDT832GU317	UEHDT832GU317	18C854
H3D	H3DT832GU110	UH3DT832GU110	5NUJ0
	H3DT832GU117	UH3DT832GU117	-
	H3DT832GU210	UH3DT832GU210	5NUJ1
	H3DT832GU217	UH3DT832GU217	-
	H3DT832GU310	UH3DT832GU310	4LFW3
	H3DT832GU317	UH3DT832GU317	4LFX3

Note: Model number list is subject to change.

### CEC Title 20 Compliant Model Numbers

The EC5NS, EHD, and H3 fluorescent dimming ballast models in Table 2 comply with the requirements of the CEC Title 20 regulation and have been certified through the CEC. These models will continue to be available for sale in the state of California.

**Table 2: Certified EC5NS, EHD, and H3 fluorescent dimming ballasts**

Ballast	Model Numbers		
	Lutron	Lutron Buy American Act (BAA)	Grainger
EC5NS	EC5NST528CU110R	-	-
	EC5NST528CU210R	-	-
	EC5NST554CU110R	-	-
	EC5NST554CU210R	-	-
	EC5NST832CU1C85R	-	-
	EC5NST832CU2C85R	-	-
EHD	EHDT525MU1RW	UEHDT525MU1RW	-
	EHDT525MU2RW	UEHDT525MU2RW	-
	EHDT528MU110	UEHDT528MU110	18C863
	EHDT528MU210	UEHDT528MU210	18C864
	EHDT549MU1RW	UEHDT549MU1RW	-
	EHDT549MU2RW	UEHDT549MU2RW	-
	EHDT554MU110	UEHDT554MU110	18C859
	EHDT554MU210	UEHDT554MU210	18C860
	EHDT828MU1RW	UEHDT828MU1RW	-
	EHDT828MU2RW	UEHDT828MU2RW	-
	EHDT832MU110	UEHDT832MU110	18C849
	EHDT832MU117	UEHDT832MU117	18C851
	EHDT832MU210	UEHDT832MU210	18C850
	EHDT832MU217	UEHDT832MU217	18C852
H3	H3T832GU310	-	-
	H3T832GU317	-	-
	H3T832GU3C85	-	-

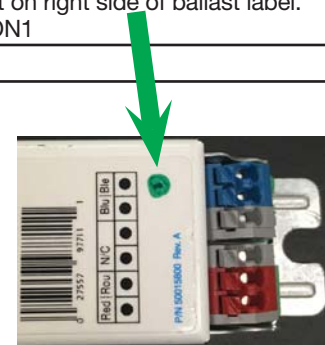
The H3D fluorescent dimming ballast models in Table 4 are compliant with the CEC Title 20 regulation if they meet the requirements in Table 3.

**Table 3: H3D ballast date codes**

Date Code (DD-MM-YYYY)	CEC Title 20 Regulation Status
Before 01-07-2016 (July 1, 2016)	Exempt - can sell or use in California.
01-07-2016 to 16-09-2016 (July 1, 2016 to Sept. 16, 2016)	May be compliant - can sell or use in California if green dot is present on right side of ballast label. If no green dot, contact Lutron Customer Assistance at 1.844.LUTRON1
After 16-09-2016 (Sept. 16, 2016)	Compliant - can sell or use in California.

**Table 4: Certified H3D fluorescent dimming ballasts**

Lutron	Lutron Buy American Act (BAA)	Grainger
H3DT528CU110	UH3DT528CU110	4LFW4
H3DT528CU210	UH3DT528CU210	4LFW5
H3DT554CU110	UH3DT554CU110	6ZER6
H3DT554CU210	UH3DT554CU210	6ZER7
H3DT832CU110	UH3DT832CU110	4LFW1
H3DT832CU117	UH3DT832CU117	4LFX1
H3DT832CU210	UH3DT832CU210	4LFW2
H3DT832CU217	UH3DT832CU217	4LFX2



## Alternative Model Numbers

A list of alternative Lutron fluorescent dimming ballasts for models listed in **Table 1** is shown in **Table 5**.

**Table 5: Alternative Lutron fluorescent dimming ballast recommendations**

Ballast	Lutron	Grainger	Alternative	What Will Change
EC5	EC5T528JUNV1	-	EC5NST528CU110R	no sensor inputs
	EC5T528JUNV2	-	EC5NST528CU210R	no sensor inputs
	EC5T554JUNV1	-	EC5NST554CU110R	no sensor inputs
	EC5T554JUNV2	-	EC5NST554CU210R	no sensor inputs
	EC5T832JUNV1	-	EC5NST832CU1C85R	no sensor inputs
	EC5T832JUNV2	-	EC5NST832CU2C85R	no sensor inputs
	EC5T8RWJUNV1 *	-	EC5NST832CU1C85R	no sensor inputs
	EC5T8RWJUNV2 *	-	EC5NST832CU2C85R	no sensor inputs
	EC5T832GUNV2	-	EC5NST832CU2C85R	case size, no sensor inputs
	EC5T832GUNV2L	-	EC5NST832CU2C85R	case size, not pre-wired, no sensor inputs
	EC5T8RWGUNV3L *	-	EC5NST832CU1C85R with EC5NST832CU2C85R	case size, number of devices in fixture, not pre-wired, additional address required if connecting on an EcoSystem link, no sensor inputs
		-	H3T832GU3C85	low end light level, not pre-wired, no sensor inputs, 3-wire control only**
	EC5T832GUNV3L	-	EC5NST832CU1C85R with EC5NST832CU2C85R	case size, number of devices in fixture, not pre-wired, additional address required if connecting on an EcoSystem link, no sensor inputs
		-	H3T832GU3C85	low end light level, not pre-wired, no sensor inputs, 3-wire control only**
EC5T832GUNV317L	-	H3T832GU317	low end light level, not pre-wired, no sensor inputs, 3-wire control only**	
EHD	EHDT832GU310	18C853	H3T832GU310 with C5-BMF-2A	number of devices in fixture
			EHDT832MU110 with EHDT832MU210	case size, number of devices in fixture, additional address required if connecting on an EcoSystem link
	EHDT832GU317	18C854	H3T832GU317 with C5-BMF-2A	number of devices in fixture
			EHDT832MU117 with EHDT832MU217	case size, number of devices in fixture, additional address required if connecting on an EcoSystem link
H3D	H3DT832GU110	5NUJ0	H3DT832CU110	case size
	H3DT832GU117	-	H3DT832CU117	case size
	H3DT832GU210	5NUJ1	H3DT832CU210	case size
	H3DT832GU217	-	H3DT832CU217	case size
	H3DT832GU310	4LFW3	H3T832GU310 with C5-BMF-2A†	number of devices in fixture
	H3DT832GU317	4LFX3	H3T832GU317 with C5-BMF-2A†	number of devices in fixture

If the ballast application does not require low-voltage sensors or controls attached to the EC5 ballasts, then use the alternative EC5NS or H3 models shown above. If the ballast application requires low-voltage sensors or controls attached to the ballast, a C5-BMF-2A will need to be used with the alternative ballast identified above. Confirm the additional device will fit in the fixture. See the wiring diagrams and dimensions shown on the next two pages.

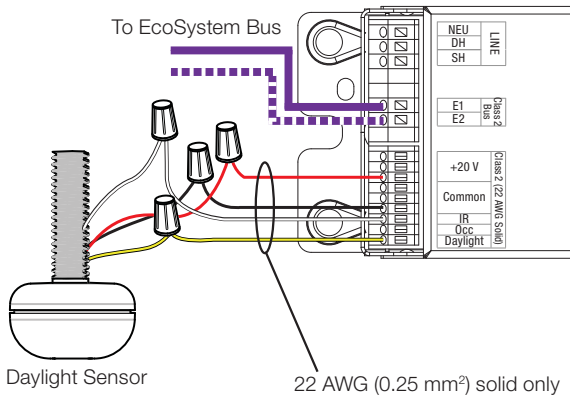
\* For fixtures using reduced wattage lamps, replace with T8 32 W lamps.

\*\* Alternative ballast uses 3-wire control. For applications with digital control, use with a C5-BMF-2A.

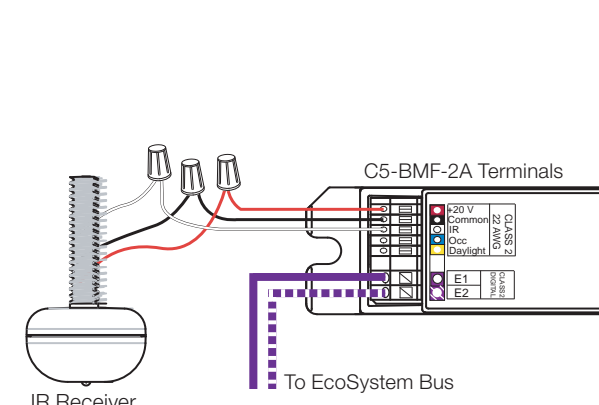
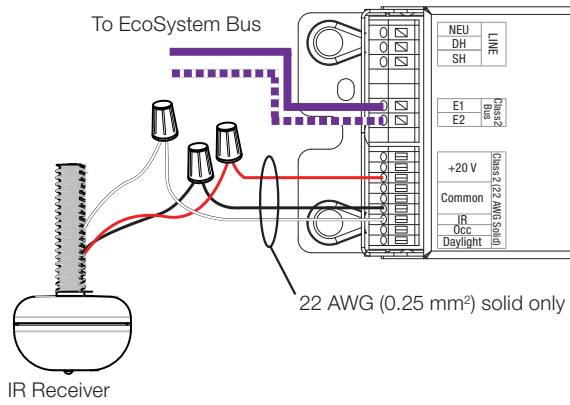
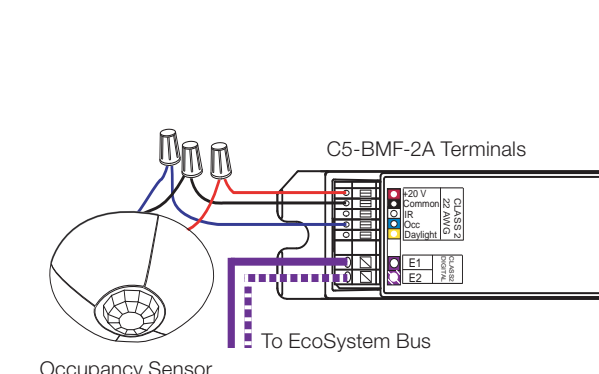
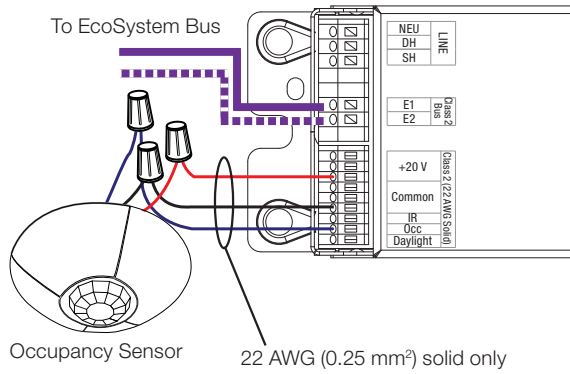
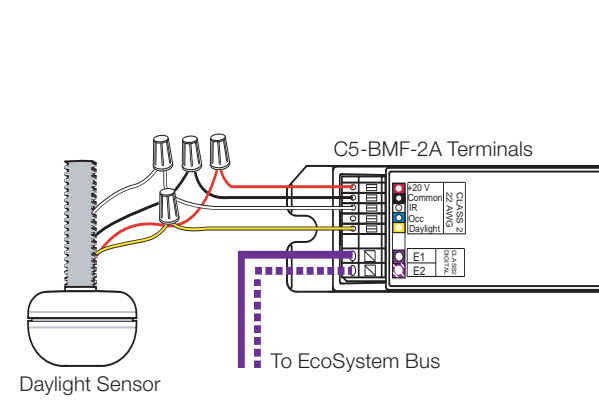
† For applications with 3-wire control, the C5-BMF-2A is not required.

## Wiring Diagrams

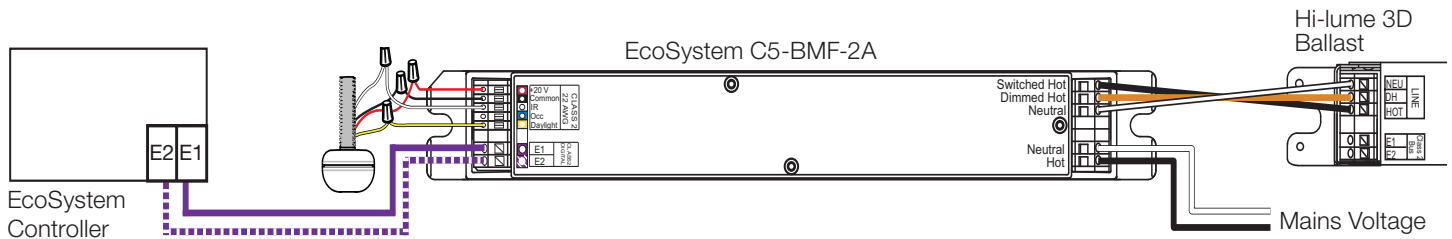
### Existing Sensor Wiring



### Alternative Sensor Wiring

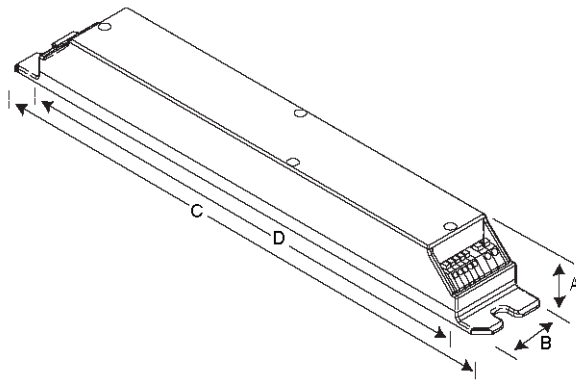


### Replacing Ballast with an Alternative Ballast and C5-BMF-2A



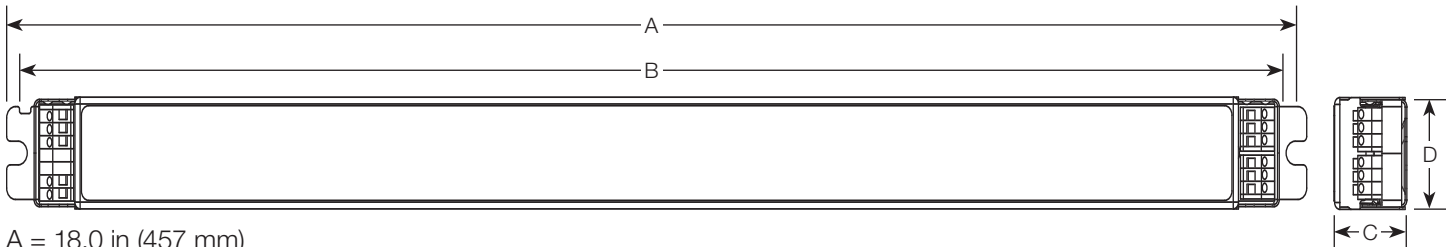
**Dimensions**

**C5-BMF-2A**



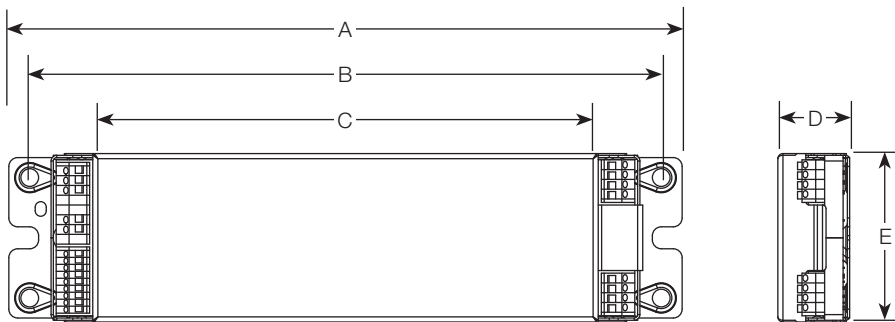
A = 1.0 in (25 mm)  
 B = 1.18 in (30 mm)  
 C = 9.3 in (236 mm)  
 D = 8.9 in (226 mm) mounting centers

**C/J Case**



A = 18.0 in (457 mm)  
 B = 17.68 in (449 mm) mounting centers  
 C = 1.0 in (25 mm)  
 D = 1.18 in (30 mm)

**G Case**



A = 9.5 in (241 mm)  
 B = 8.9 in (226 mm) mounting centers  
 C = 7.1 in (180 mm)  
 D = 1.0 in (25 mm)  
 E = 2.38 in (60 mm)

## Additional Notes

- Warranty replacements of T5 or T8 linear fluorescent dimming ballasts are not regulated under the CEC Title 20 regulation. If a job meets the criteria for a warranty replacement ([www.lutron.com/ballastwarranty](http://www.lutron.com/ballastwarranty)) and a warranty declaration form is signed, a replacement ballast will be sent free of charge. Please contact Lutron Customer Assistance at 1.844.LUTRON1.
- Affected EC5, H3D, and EHD ballasts are NOT being discontinued. They are still available for sale to customers outside the state of California.

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