



Cast Lighting LLC TECHNICAL MEMO

Primary Power DIMMING of ALL Existing and Current Model CAST LED Fixtures

Introduction: Contractors and homeowners have expressed a need to raise and lower the lumen / light level of entire CAST LED landscape lighting systems, specific zones or fixture groupings. The purpose of this technical memo is to detail the steps necessary for a contractor to dim an entire system or a grouping of Cast LED fixtures using a 120 Volt dimming wall switch. Contractor must follow all electrical codes. This installation requires working on the 120 Volt primary power supply which requires a licensed electrician perform this work.

Acceptable Products: All Cast Existing LED first, second and third generation drive circuits for Classic, Craftsman and Impressionist series products.

The Products you need to purchase:

1. This will only work using a CAST high efficiency Toroid Transformer in any VA / Wattage rating. No Other Transformer has been tested to work with these products. Use of any other transformer voids product warranty
2. You will need to purchase a 600 VA, 1,000 VA or 1,500VA Dimmer as manufactured by LUTRON NOVA MODEL# NLV-600 (For Cast 75 Watt, 150 Watt & 300 Watt Transformers), NLV-1000 (For Cast 600 Watt and 900 Watt Transformers) or NLV-1500 (for Cast 1200 Watt transformers) sized for the transformer. 120 Volt 60HZ. For use ONLY with MAGNETIC LOW VOLTAGE Transformers. (Do NOT USE ANY ELECTRONIC DIMMER ever for this application.)
3. Install as per manufacturer's instructions.

The Installation:

1. Residences that install a LUTRON smart home system. This feature can be integrated at a central panel and operate a dedicated receptacle outside that feeds the transformer that will be wired to the lighting fixtures to be dimmed.
2. Residences that do not have an integrated smart home system but have a need for dimming fixtures. The installer shall mount 120 Volt dimmer inside appropriate enclosure easily accessible for homeowner to raise or lower to the desired lumen level.
3. Lutron Dimmer shall be wired directly to the 120 Volt power supply either dedicated or on a wire run with ample room to accommodate the load of the transformer.
4. Lutron dimmer shall be wired directly to a GFI receptacle fitted with a “while in use” cover that the transformer will plug into.
5. The transformer and all the LED fixtures wired to THIS TRANSFORMER will now dim according to the setting of the LUTRON dimmer.

Take note: This method of dimming is referred to as PWM (Pulse Width Modulated) dimming. All CAST Lighting LED fixtures undergo extensive FCC radiated and Induct-ed emissions testing and approval using an independent FCC certified testing laboratory to insure the products do not interfere with garage door openers, life safety, radios and wireless devices. BE ADVISED: 120 Volt primary PWM dimming distorts the waveform and voids the FCC certifications and can cause FCC interference on the subject property. Cast lighting is not liable for any problems caused should a customer employ this dimming method.

Designers take note: If you install any Impressionist series products and you set the light level at the fixture make sure the LUTRON NOVA primary dimmer that is installed at the transformer is set at the Maximum setting before you set the light levels at each IMPRESSIONIST fixture. The beauty with providing your homeowner this dimming option is it LOCKS the customer out of the ability to mess with the light levels you have so meticulously set at each individual fixture, something that takes hours to dial in at the end of each job. Instead this method of dimming GLOBALLY raises or lowers the light levels of all the fixtures together that are wired to this transformer.