

Patent No.	Issued Date	Title
5,635,799	6/3/97	Lamp Protection Circuit for Electronic Ballasts
5,650,925	7/22/97	Diode Clamping Arrangement for Use in Electronic Ballasts
5,731,666	3/24/98	Integrated-Magnetic Filter Having a Lossy Shunt
5,831,395	11/3/98	Three Way Fluorescent Adapter
5,838,181	11/17/98	Pulse-Width Modulator Circuit For Use in Low-Cost Power Factor Correction Circuit
5,877,592	3/2/99	Programmed-Start Parallel-Resonant Electronic Ballast
5,925,990	7/20/99	Microprocessor Controlled Electronic Ballast
5,936,357	8/10/99	Electronic Ballast that Manages Switching Frequencies for Extrinsic Purposes
5,959,408	9/28/99	Symmetry Control Circuit for Pre-Heating in Electronic Ballasts
5,973,455	10/29/99	Electronic Ballast with Filament Cut-Out
5,982,113	11/9/99	Electronic Ballast Producing Voltage Having Trapezoidal Envelope for Instant Lamps
6,023,132	2/8/00	Electronic Ballast Deriving Auxiliary Power from Lamp Output
6,031,340	2/29/00	Device & Method for Capacitive Bi-Level Switching of High Intensity Discharge Lighting
6,051,940	4/18/00	Safety Control Circuit for Detecting the Removal of Lamps from a Ballast and Reducing the Through-Lamp Leakage
6,091,199	7/18/00	Heat Spreader for Electronic Ballast
6,111,365	8/29/00	Fast Starting, Surge Limited, Electronic Ballast
6,137,239	10/24/00	Electronic Ballast with Selective Load Control
6,177,769	1/23/01	Electric ballast with Selective Power Dissipation
6,291,944	9/18/01	System & Method for Limiting Through-Lamp Ground Fault Currents in Non-Isolated Electronic Ballasts
6,333,605	12/25/01	Light Modulating Electronic Ballast
6,437,520	8/20/02	Electronic Ballast with Cross-Coupled Outputs
6,720,741	4/13/04	Electronic Ballast Having Open Circuit in Output
6,813,125	11/2/04	Secondary Ground Fault Protected Neon Transformer
7,015,652	3/21/06	Electronic Ballast Having End of Life, Overheating, and Shut Down Protections, And Reignition and Multiple Striking
7,019,662	3/28/06	LED Drive for Generating Constant Light Output
7,098,606	8/29/06	Electronic Ballast with Open Circuit Voltage Control and Cable Compensation
7,098,607	8/29/06	Electronic Ballast with Lossless Snubber Capacitor Circuit
7,098,608	8/29/06	Lossless Circuit for Sampling of Lamp Voltage
7,132,803	11/7/06	High efficiency 4 lamp instant start ballast
7,239,094	7/3/07	Electronic Ballast with Adaptive Lamp Preheat and Ignition
7,247,998	7/24/07	Transient Detection of End of Lamp Life Condition Apparatus and Method.
7,391,168	6/24/08	Digital Control of Electronic Ballasts Using AC Power Lines as a Communication Medium
7,394,204	7/1/08	Zero crossing detection of line voltage/current of variable amplitude
7,423,386	9/9/08	Power supply circuits and methods for supplying stable power to control circuitry in an electronic ballast
7,432,660	10/7/08	IC-based low cost reliable electronic ballast with multiple striking attempts and end of lamp life protection
7,443,113	10/28/08	Software controlled electronic dimming ballast
7,679,294	3/16/10	Method and system to eliminate fluorescent lamp striations by using capacitive energy compensation
7,705,544	4/27/10	Lamp circuit with controlled ignition pulse voltages over a wide range of ballast-to-lamp distances
7,719,204	5/18/10	Method for controlling striations in a lamp powered by an electronic ballast
7,768,215	8/3/10	Method and system for controlling transient current signals in an electronic ballast
7,768,755	8/3/10	Over-voltage protection and automatic re-strike circuit for an electronic ballast
7,786,391	8/31/10	Ballast housing having rolled edge lead wire exit
7,800,928	9/21/10	Method of operating a resonant inverter using zero current switching and arbitrary frequency pulse width modulator
7,843,141	11/30/10	Low cost step dimming interface for an electronic ballast
7,843,145	11/30/10	System and method for power line carrier communication using high frequency tone bursts
7,848,114	12/7/10	Ballast housing with an integral circuit board grounding device
7,889,463	2/15/11	Fused lead wire for ballast protection
7,923,942	4/12/11	Constant current source mirror tank dimmable ballast for high impedance lamps
7,952,303	5/31/11	Electronic ballast for a gas discharge lamp with controlled filament heating during dimming
7,977,894	7/12/11	Programmed start ballast for gas discharge lamps
7,990,243	8/2/11	Gull wing surface mount magnetic structure
8,002,445	8/23/11	LED luminaire with automatic luminance compensation
8,031,040	10/4/11	Magnetic component having a bobbin structure with integrated winding
8,035,308	10/11/11	Software controlled electronic dimming ballast
8,044,601	10/25/11	High voltage discharge lamp lighting device
8,084,952	12/27/11	Method and system to detect zero current conditions in an electronic ballast by monitoring voltage across a buck in
8,116,089	2/14/12	Method and apparatus for securing a magnetic component to a printed circuit board for soldering
8,129,920	3/6/12	Discharge lamp ballast and fixture with controlled preheating
8,138,679	3/20/12	Organic electroluminescent light emitting device for restoring normal operation after low-voltage errors
8,143,809	3/27/12	LED illuminating device

8.143.796	3/27/12	Electronic ballast with controlled filament preheating using half-wave lamp current detection
8.154.214	4/10/12	Switching power supply for an illumination device with precision current control
8.183.791	5/22/12	System and method for preventing low dimming current startup flash
8.193.727	6/5/12	Lamp end of life protection circuit and method for an electronic dimming ballast
8.198.824	6/12/12	Electronic ballast for restarting high-pressure discharge lamps in various states of operation
8.203.273	6/19/12	Ballast circuit for a gas discharge lamp that reduces a pre-heat voltage to the lamp filaments during lamp ignition
8.203.282	6/19/12	Electronic ballast with lamp end of life detection and protection circuits
8.207.690	6/26/12	High-pressure discharge lamp ballast with rapid lamp restart circuit
8.207.680	6/26/12	Discharge lamp ballast having an auto-transformer for high voltage detection
8.212.643	7/3/12	Bobbin for an inductive electronic component
8.222.835	7/17/12	Electronic ballast with adjustable filament preheating based on output current symmetry
8.222.834	7/17/12	HID lamp ballast with controlled DC step down circuit
8.228.003	7/24/12	Electronic ballast for an hid lamp with lamp re-start control
8.232.727	7/31/12	Ballast circuit for a gas-discharge lamp having a filament drive circuit with monostable control
8.232.741	7/31/12	Electronic ballast with controlled lamp preheating
8.242.870	8/14/12	Magnetic component with a notched magnetic core structure
8.253.351	8/28/12	Electronic ballast with multimode lamp power control
8.258.712	9/4/12	Ballast circuit for reducing lamp striations
8.274.234	9/25/12	Dimming ballast with parallel lamp operation
8.274.237	9/25/12	LED driver circuit with over-current protection during a short circuit condition
8.278.835	10/2/12	Modular electronic ballast
8.288.956	10/16/12	Lamp preheat circuit for a program start ballast with filament voltage cut-back in steady state
8.294.385	10/23/12	High-pressure discharge lamp ballast with multi-mode lamp starting circuit
8.294.384	10/23/12	Dimming electronic ballast with preheat current control
8.299.727	10/30/12	Anti-arcing protection circuit for an electronic ballast
8.299.723	10/30/12	Electronic ballast with lamp flicker suppression during start-to-steady state transition
8.310.160	11/13/12	Anti-arcing circuit for current-fed parallel resonant inverter
8.319.447	11/27/12	Hid lamp ballast with multi-phase operation based on a detected lamp illumination state
8.324.813	12/4/12	Electronic ballast with frequency independent filament voltage control
8.324.829	12/4/12	Startup control for a high pressure discharge lamp ballast
8.330.382	12/11/12	Electronic ballast for correcting asymmetrical current flow across a gas discharge lamp
8.330.378	12/11/12	Illumination device and method for controlling a color temperature of irradiated light
8.339.056	12/25/12	Lamp ballast with protection circuit for input arcing and line interruption
8.344.628	1/1/13	Dimming electronic ballast with lamp end of life detection
8.350.678	1/8/13	Power line dimming controller and
8.354.795	1/15/13	Program start ballast with true parallel lamp operation
8.378.579	2/19/13	Ballast circuit for a gas discharge lamp with a control loop to reduce filament heating voltage below a maximum hea
8.405.488	3/26/13	System and method for encoding ballast control signals
8.406.007	3/26/13	Magnetic circuit board connector component
8.427.074	4/23/13	PLC controller and discharge lighting ballast receiver with high noise immunity
8.441.203	5/14/13	Dimming electronic ballast for true parallel lamp operation
8.449.145	5/28/13	Mounting apparatus for a light emitting diode module
8.450.946	5/28/13	Zone addressing circuit for an electronic ballast
8.471.475	6/25/13	Modular dimming ballast with decoupled half-bridge topology
8.482.944	7/9/13	Electronic ballast with inrush protection circuit
8.498.124	7/30/13	Magnetic circuit board stacking component
8.536.801	9/17/13	System and method for individually modulating an array of light emitting devices
8.564.216	10/22/13	Asymmetric end-of-life protection circuit for fluorescent lamp ballasts
8.581.497	11/12/13	Electronic ballast circuit and method for detecting removal of parallel connected lamp filaments in low level dimming
8.593.078	11/26/13	Universal dimming ballast platform
8.638.042	1/28/14	System and method for regulating an open circuit voltage of an HID lamp ballast
8.654.485	2/18/14	Electronic ballast with protected analog dimming control interface
8.680.776	3/25/14	Lighting device including a fast start circuit for regulating power supply to a PFC controller
8.699.244	4/15/14	Electronic ballast with load-independent and self-oscillating inverter topology
8.698.424	4/15/14	Power line dimming controller and receiver
8.716.937	5/6/14	Lighting ballast with reduced filament drive and pin current balancing
8.810.146	8/19/14	Lighting device with circuit and method for detecting power converter activity
8.847.750	9/30/14	Network of dual technology occupancy sensors and associated lighting control method
8.847.512	9/30/14	Program start ballast having resonant filament heating circuit with clamped quality factor
8.896.213	11/25/14	Adaptive lamp warm up control for dimming ballast based on lamp impedance sensing
8.909.382	12/9/14	Occupancy detection system and method having automatic adaptation capabilities
8.922.131	12/30/14	Series resonant inverter with capacitive power compensation for multiple lamp parallel operation
8.928.250	1/6/15	Method and circuit for LED load management
8.928.236	1/6/15	LED driver circuit with unified controller

Products and Supporting Patents

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Products and Supporting Patents

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Products and Supporting Patents

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Products and Supporting Patents

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Products and Supporting Patents

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