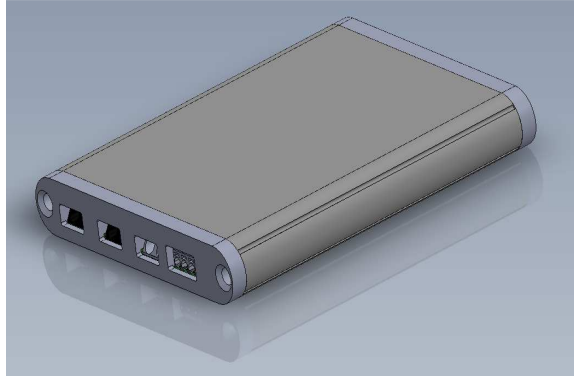


Metrolight VDrive™ 360

Smart VDrive - Driverless Driver™

6ch x 60W Output



Overview

Metrolight VDrive technology offers highly efficient, proven and programmable solution based on DALI2 and wireless METROLIGHT RF technology that drives and controls LEDs at a competitive price for IoT applications.

The VDrive offers complete adaptability to the LED design and user's needs.

This VDrive is a part of large IoT network suitable for SmartCity SmartOffice and SmartHome solutions.

The VDrive provides Independence control of each channel with fault protection of either the LED or the VDrive.

Once selecting the required output current (which can be re-programmed at any time) the driver automatically applies the adequate current and voltage to the LEDs.

Any LED design change which may be required in the future, involves mere programming of the LED driver to the newly required current.

No configuration required – be it a single luminaire or multiple LED lamps connected in parallel to the same chain with various power requirements, the VDrive will configure itself to provide each lamp with its appropriate power, provided that they are all built for the same voltage input.

No radio connection loss – using a proprietary technology, RF connectivity is assured with immunity to physical barriers and radio interferences. The DLD provides highly efficient communication infrastructure.

Failure safe lighting – LED luminaire most common cause for failure is thermal failure of its driver electronics. By removing the driver, and by controlling the temperature of the light engine, we make LED lighting almost immune to failure.

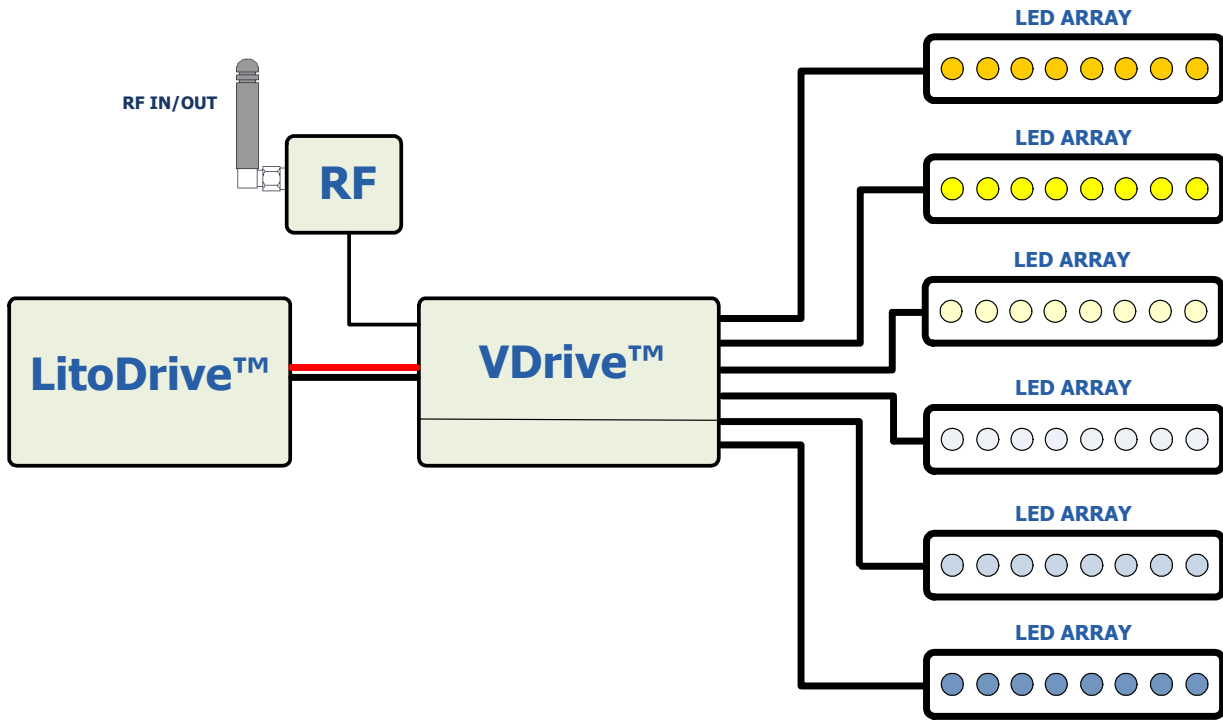
Luminaire design versatility – removal of the drivers from the luminaire gives designers much greater flexibility to design retrofits for existing conventional lighting fixtures, or the design of new ones.

Increased retrofit power – LED retrofits should fit into existing lamp casings. Given the reduced heat sensitivity of the lamp casings (without the driver), retrofits can sustain higher temperatures – opening room for greater power where existing luminaire space is limited.

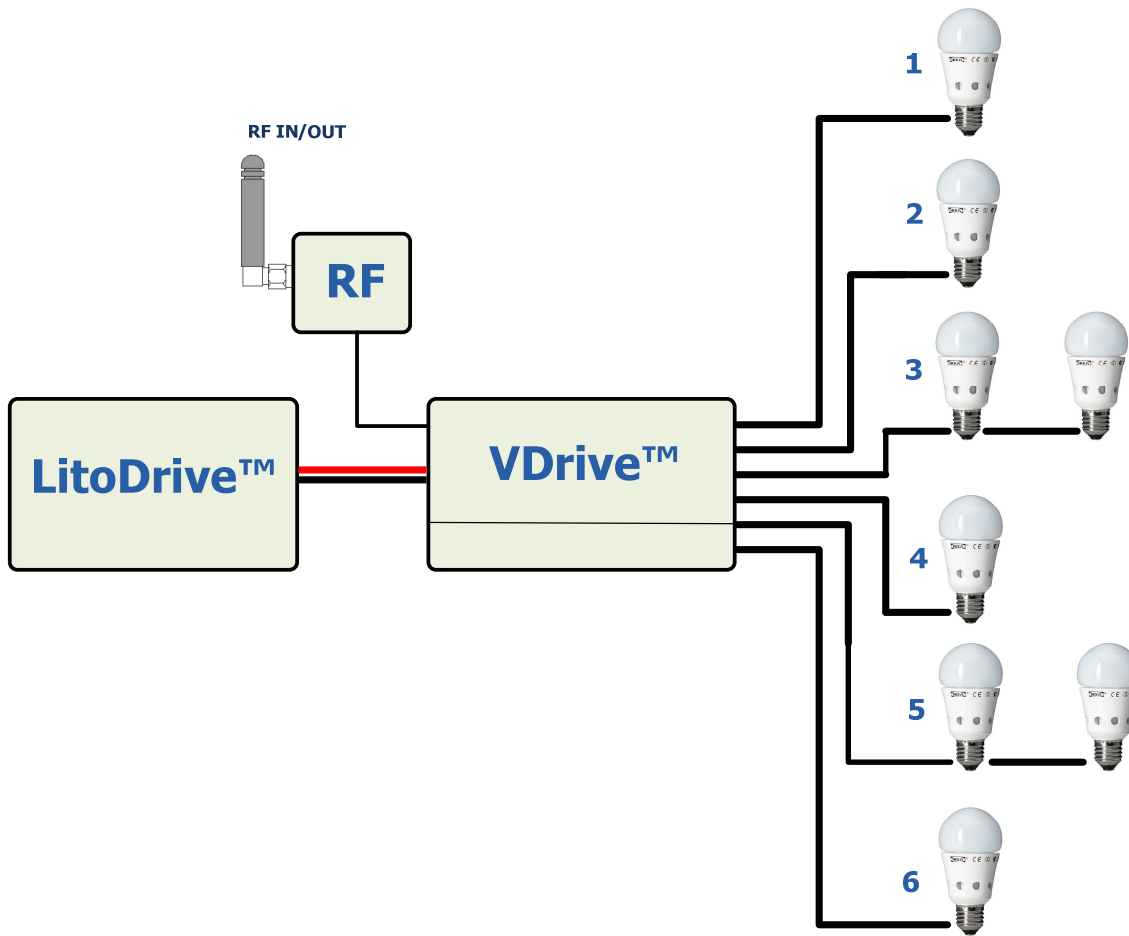
Benefits

- DC input (10-54VDC)
- Reprogramming of output current at any time.
- Self-adapting Output Voltage, with large range of output voltages to match different LED loads
- High Efficiency (up to 97%)
- Protections: Short circuit, Over Current, Over Voltage, Over Temperature
- 6 channels with dimming function control
- Programmable set-up via wireless technology like RF or 2 wires
- Suitable for LED lighting and street lighting applications
- Failure safe – Since there is no internal driver, no failures are expected.
- Lamp Design Versatility – Since no driver inside the lamp, no need to consider Class 1 or Class 2 isolation, and no need for extremely large space to accommodate the driver.
- Simple retrofitting of existing luminaires – Since no driver is required, easy to fit on any existing luminaires.
- Lamp Size – since lamps have no driver, size is small and can fit any existing luminaires.
- Independent cable length – No dependency on length of power line cables.
- Connection Failure safe – No need for repeaters, connection is guaranty at any installation.
- 5 years warranty
- Low Cost
- RoHS

Typical Luminaire connection scheme



Typical Lamps connection scheme



Operating Specifications

Parameter description		DLD 1ch LED Output	DLD Combined 6ch Output
OUTPUT	Output Current Range	0-1.2A	0-7.2A
	Output Voltage	10-54Vdc	10-54Vdc
	Rated Power	60W	360W
	Ripple Current (max.)	20mA	20mA
	Output current regulation	±2%	±2%
	Turn-on Rise time	Programmable Soft Start 300ms-3s @ Full load	
INPUT	Voltage range	10-54Vdc	10-54Vdc
	Efficiency (Typ.)	97%	97%
	DC Current	0-1.2A	0-7.2A
PROTECTION	Over Voltage	TVS protected	
	Short Circuit	<i>Full protected</i> <i>No damage to the DLD. Recovery when the fault condition is removed.</i>	
	Over Temperature	When Tc > 90°C, the output current may decrease to protect the DLD. When temperature case reduced to below 85°C, the current returned to the full set-up value. The minimum output current will be limited to 30% (typ.) of the rated output current in OTP function.	
ENVIRONMENT	Operating Temp.	-40~60°C	
	Operating Humidity	95% RH	
	Storage Temp	-40~85°C	
	Vibration	The DLD can survive vibration towards three mutually perpendicular direction (X, Y, Z), each direction for 72 minutes. The vibration is in accordance with the sine wave with 2mm amplitude, and its frequency range from 10Hz to 500Hz with 5G acceleration	
RELIABILITY	MTBF	>500Khours @ 25°C	
	Lifetime	The life time shall be at least 10 years at 40°C (t yp. 12HRS per day) at full load and nominal input condition.	
SAFETY & EMC	Safety Standards	UL8750, EN61347-1/A2:2013, EN61347-2-13: 2006, IEC61347-1, IEC61347-2-13	
	Isolation Resistance	50MΩ min. at primary to GND with 500Vdc test voltage	
	EMC Emission	Compliance to EN55015 (CISPR15), EN61000-3-2; EN61000-3-3	
	EMC Immunity	Compliance to EN61547; EN55042, EN61000-4-2,3,4,5,6,8,11	
MECHANICAL	Dimensions	70 x 80 x 12.5mm, 2.75 x 3.15 x 0.5 Inch.	
	Weight	200±50g	
	Color	GREY	
	Packaging	30pcs/9Kg	
OTHERS	/	/	
NOTE	1. Ripple current measured at full bandwidth.		
	2. Since EMC performance depends on the installation, manufacturers must re-qualify EMC on the complete installation		

Mechanical Dimensions

