LOW VOLTAGE FLUORESCENTS from *MED Electronics*

Using LVF Luminaire Part No 12VDC 9WL and 11WL

The luminaires employing LVF electronic HF ballasts are designed for use with compact fluorescent lamps (CF) rated at 9W and 11W, operating from a 12VDC battery supply. ***Constant Power*** is maintained to the lamp by the use of a PWM microchip operating in constant current mode.
The ballast has a 4-pin connection to the lamp. This is to ensure that the heaters in the lamp are energised during normal operation.
To maintain proper lamp life the heaters should always be connected. Only the rated lamp wattage marked on the Luminaire should be used.
Please ensure the correct polarity when connecting your Luminaire to the 12VDC source. The Luminaire ballast will only operate from a DC Direct Current source. Do **NOT EVER** connect to the mains 115VAC or 230VAC, Alternating Current
Although each ballast has reverse polarity connection protection it is inadvisable to leave the polarity permanently connected the wrong way round.
The Luminaires are protected against lamp failure or lamp missing. However it is not recommended that the Luminaire be left with a lamp out or missing for long periods.

Absolute maximum ratings

Supply voltage 16VDC. Maximum ambient temperature 50 deg C. Operation beyond this may cause permanent damage to the ballast. Never connect to a mains outlet at **115VAC or 230VAC**, the ballast will be destroyed.

Nominal supply voltage is 10.5 to 14.7VDC. Nominal input current 0.93 Amp at 12VDC. As the supply voltage increases the input current will decrease, a feature of the ***Constant Power*** characteristic of the PWM controller. When the battery voltage falls below 10.5V the ballast should be switched off until the battery is recharged to prevent damage to the battery.

All electronics apparatus generates waste heat, and if that heat is confined and not allowed to dissipate the temperature rise could eventually cause permanent damage to the electronics. LVF Luminaires run very efficiently but during normal operation the lamp gets very hot and natural cooling should not be restricted.

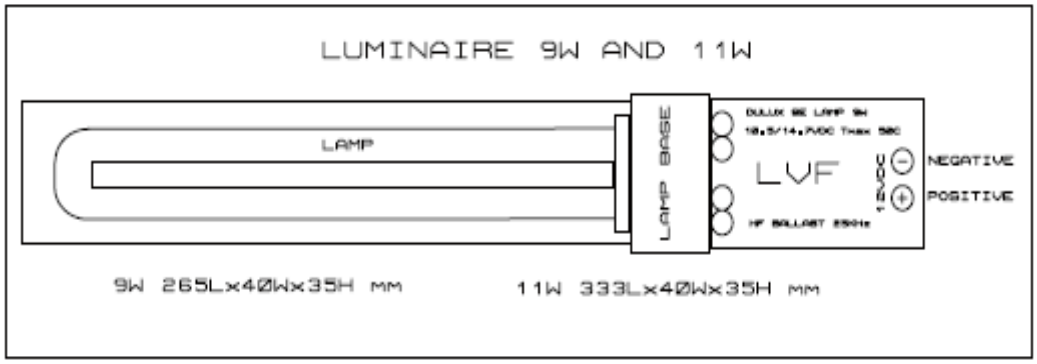
The Luminaires should be connected as follows and allowed to have free air circulation when permanently installed to prevent overheating. The ballast part of the luminaire should not be covered up preventing free air circulation.

Supply cable sizing

The recommended cable size to the Luminaire is 2.5mm CSA
(Cross Sectional Area), however for short lengths of cable from the 12VDC source, of less than 2 metres (10ft) 1.5mm CSA would do. (The Luminaire

12VDC connector will accept conductor diameter up to 2.5mm diameter, about 14AWG, that is 4.9mm CSA) If multiple Luminaires are to be run from the same 12VDC source it is recommended that a DC bus be used of at least 6mm CSA with spurs from that bus to each luminaire in turn being at least 1.5mm CSA.
All supply cables should be twin and not separate wires. If separate wires are available and used they **must** be twisted together.

Luminaire Layout, Connections and Dimensions



Three 3.5mm holes are provided in the base plate to allow fixing to a ceiling or wall. Weight of Luminaire is only 150gms complete with lamp plugged in. The lamp can be easily removed by pulling horizontally, it simply plugs in, either way round, it is **not** screwed in.

Caution

Never ever connect the Luminaire Ballast to the mains electricity 115VAC or 230VAC supply. The Ballast will be instantly destroyed

Do not under any circumstances connect the battery to either of the lamp terminals on the ballast. The ballast will be destroyed
It is strongly recommended that the 12VDC source is separately fused in proportion to the number of Luminaires supplied from it. For example, two Luminaires draw about 2 Amps therefore fuse the 12VDC at 6A, four Luminaires at 12A and so on. DC only 10.5V to 14.7V to be used.

Shipping

Luminaires and Ballasts will be shipped to your home address via **DHL**, or other established international carrier, for overseas buyers, and by Royal Mail for UK buyers, all shipping will be at cost, no additional charges applied.

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