

# EXAMPLE TEST RESULT

## 2013 Common 1000W Ballast



EMI

### WITHOUT FILTER



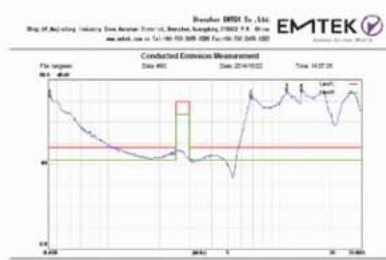
EMI

### WITH INPUT/OUTPUT FILTER



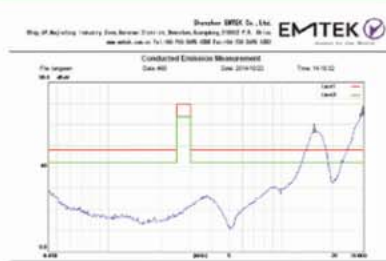
EMC

### WITHOUT FILTER



EMC

### WITH INPUT/OUTPUT FILTER



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# RF REDUCTION FILTER SET



# INFORMATION & SPECIFICATIONS



The **Nanolux RF Reduction Filter Set** reduces both the emitted and conducted RF radiation from Digital/Electronic ballasts. It has come to the industry's attention in the last year that virtually every Digital/Electronic ballast does not meet the FCC regulations for the emissions of excessive RF interference. This can have interference effects on radios ( AM and FM ), televisions, cellular phones, police and fire department communications and Ham radios. The RF interference can be triangulated if someone wants to identify the source of the interference which may lead to your garden...



## TWO SOURCES OF EMISSIONS ARE THE PROBLEM

- **Conducted Emissions** – This is RF current which is conducted back through the input cord of the ballast and through the lamp cord. RF interference causes the internal copper wiring of the building to act as a large antenna.
- **Radiated Emissions** – These are the electromagnetic fields which are radiated out of the electrical wiring. Radiation is a natural consequence of radio frequency current and voltage flowing through conductors. This allows the cords to act as antenna to transmit the RF radiation.

## – TWO FILTERS REQUIRED –



### INPUT FILTER

The INPUT filter is installed in-line with the IEC input power cord of the ballast. The input filter will reduce the RF levels of any Digital / Electronic power supply to be close to or surpass the FCC required limits for both EMC and EMI. It specifically reduces the conducted emissions from traveling back into the electrical wiring of the building.



### OUTPUT FILTER

The OUTPUT filter is installed onto the output cord of the ballast. The filter uses the "standard" male plug (if you have an HF ballast, you will need an adaptor). The filter has dual female outlets which accept both styles. The OUTPUT filter specifically reduces the EMI from the high frequency signal generated by the ballast traveling through the lamp cord. The output filter will reduce the RF levels of any Digital / Electronic power supply to be close to or surpass the FCC required limits for both EMC and EMI.

# SPECIFICATIONS

## RF FILTER SET - OUTPUT

**Max Voltage:** 600V **Max Current:** 10A  
**Max Conducted Emission**  
(0.45MHz - 30MHz): 25dB  
**Max Radiated Emission**  
(30MHz - 1000MHz): 25dB  
**Reference Standard:** FCC Part 18 Class B

## RF Filter Set - INPUT

**Input Voltage:** 120/240/277Vac  
**Max Current:** 15A **Frequency:** 50/60Hz  
**Max Conducted Emission Reduction**  
(0.45MHz - 30MHz): 45dB  
**Max Radiated Emission Reduction**  
(30MHz - 1000MHz): 23dB  
**Reference Standard:** FCC Part 18 Class B

### CAUTION:

This device is used for reducing the EMI and EMC of ballasts, use for INPUT & OUTPUT respectively. Make sure that all plug connections are good and that RF Filter Set is secured.

