# How to add dimming functionality to a solar lighting system

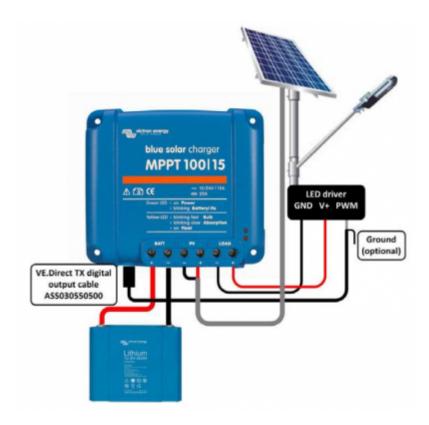
### **Benefits of dimming**

- Energy consumption can be substantially reduced by light-dimming when appropriate.
- Lower energy consumption will reduce overall system cost, and increase light availability even when the battery has only been partially charged due to bad weather.

#### Cable required for dimming

Use the VE.Direct TX digital output cable ASS030550500 (previously called PWM light dimming cable) which can then be used together with an MPPT 75/10, 75/15 or 100/15.

- This cable is intended for solar lighting applications (more applications may follow later).
- The TX cable connects the TX pin on the VE.Direct connector of an MPPT 75/15 or 100/15 to the PWM light dimming input of a LED driver.



## Firmware and software requirements

- The MPPT solar charge controller must have firmware version V1.15 or higher.
- An MPPT with an older version can be upgraded with VE Power Setup.
- The latest firmware can be requested from service@victronenergy.com

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- A VE.Direct to USB interface (ASS030530000) is needed to connect the MPPT controller to a computer.
- To configure the MPPT controller, download VictronConnect.

#### **Tested LED drivers**

The dimming function has been tested with the following LED drivers:

- RECOM RBD-12
- Glacial Power GP-LD7048-0B
- Glacial Power GP-LD3548-0B
- MEAN WELL LDH-45

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