

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

- 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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