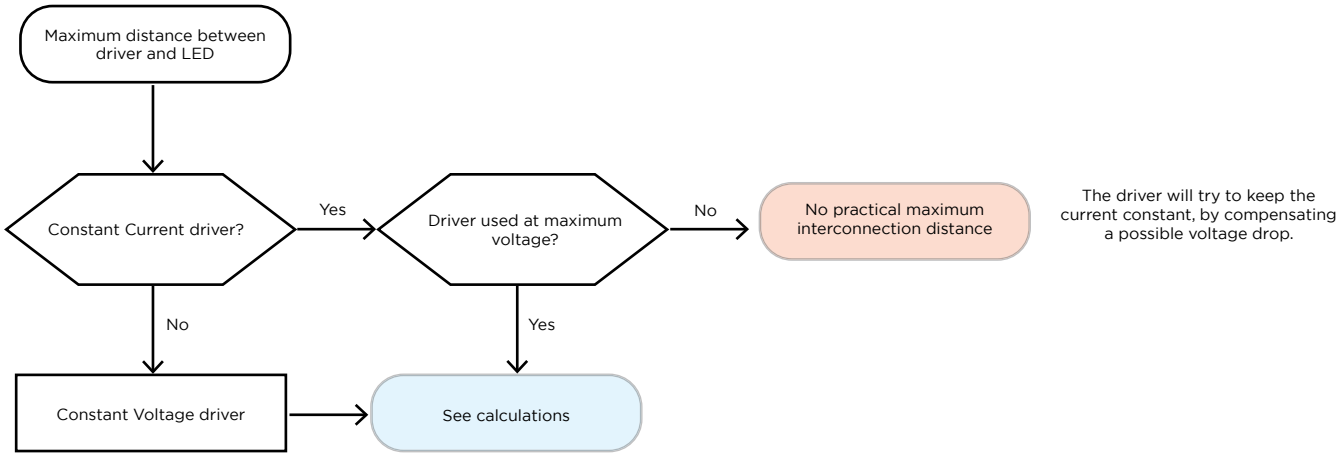
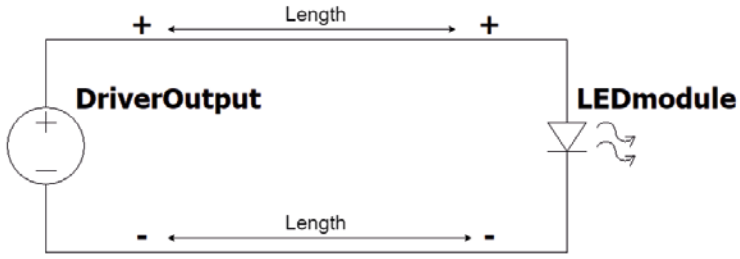
Good to *know*


Maximum distance between driver and LED
Constant Current driver?
Yes
Driver used at maximum voltage?
No
No practical maximum interconnection distance
The driver will try to keep the current constant, by compensating a possible voltage drop.
No
Yes
Constant Voltage driver
See calculations

Good to *know*

The situation:



The maximum length of a connection is calculated as follows:

$$length = \frac{\Delta U \sigma A}{2I} \tag{1}$$

As an example, the following table with assumption is used.

Quantity	Description	Assumption
ΔU	Voltage drop over the connection	0,5V
σ	conductivity of the electric connection cables (copper cables)	$5,96 * 10^7 \frac{S}{m}$
A	cross section area	$1{,}5\ mm^2$
I	The maximum current	700 mA (= 0,7 A)

The blue values are application dependent. So, feel free to change them in the formula to calculate the maximum distance for your own application. The voltage drop over the length of the cables is limited to 0,5V due to stability of the LED module and quality requirements. These assumptions lead to maximum distance of 30 meters, as calculated in equation 2.

$$length = \frac{0,5 * 5,96 * 10^7 * \frac{1{,}5}{1000^2}}{2 * 0,7} \approx 30m \tag{2}$$

The maximum distance will obviously vary with respect to the assumptions. Since the assumptions depend on the specific situation, it is advised to calculate the maximum length for every specfic situation.