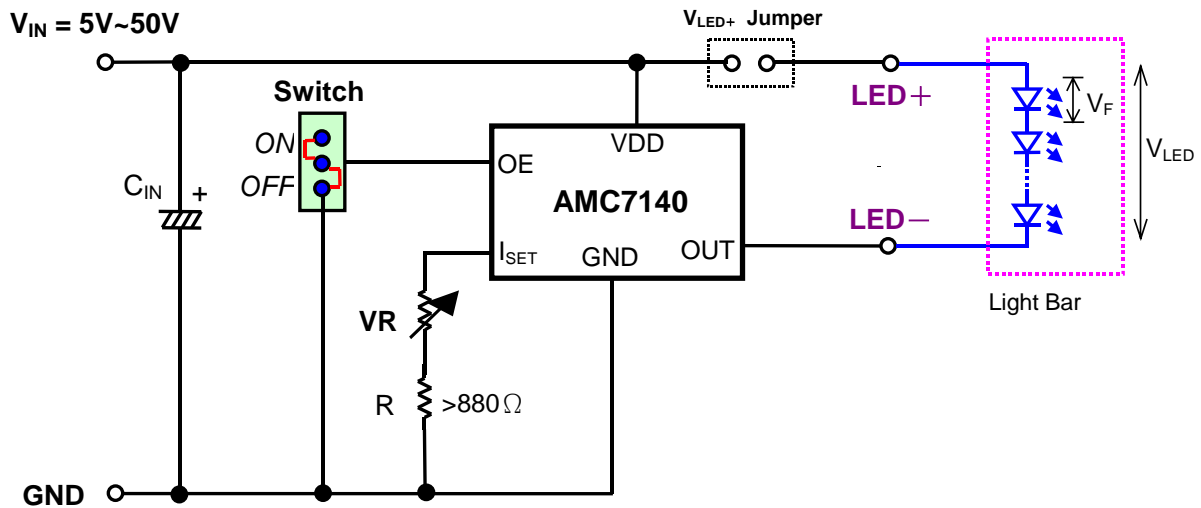
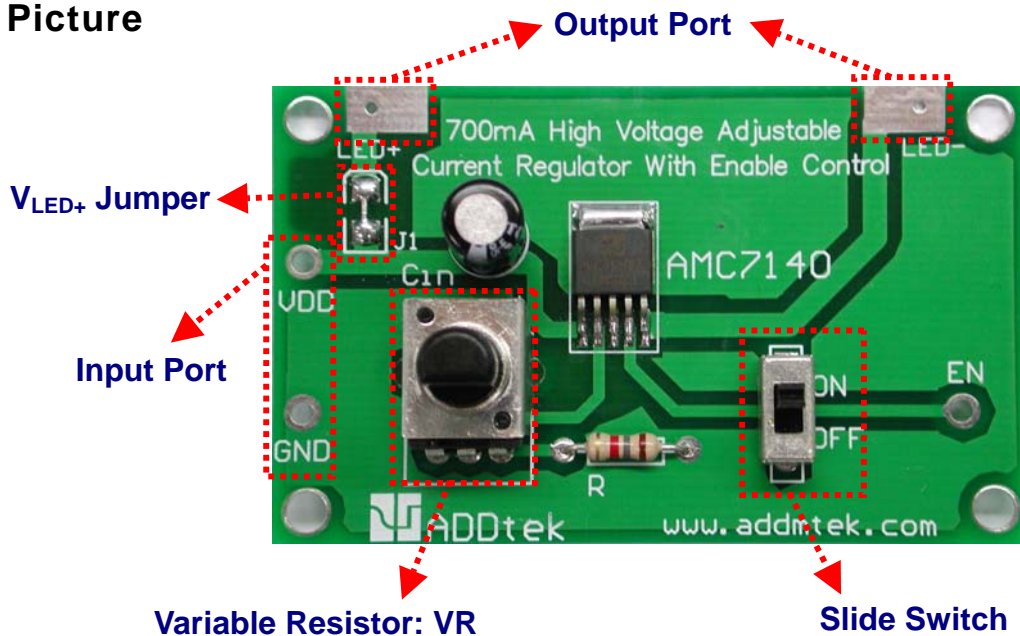


# AMC7140 EVM User Guide

## ◆ Circuit Scheme:



## ◆ Picture



◆ **Bill of Material**

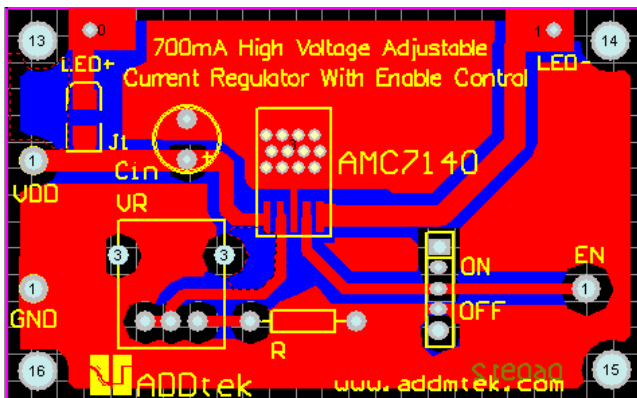
C.R No.	Q'TY	Description
PCB	1	PCB-AMC7140 (version: 060912)
IC	1	AMC7140DL
C <sub>IN</sub>	1	E. C. Cap. 10uF / 63V
R	1	$R = \frac{1.2V}{I_{SET}} ; I_{SET} = \frac{I_{OUT,MAX}}{500}$
VR	1	Variable Resistor / 20KΩ
Switch	1	3P, 180° Slide Switch

◆ **Description**

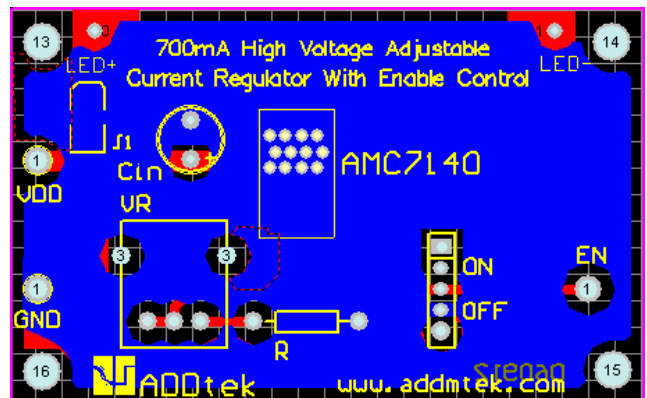
- [1] The recommended range for input voltage V<sub>IN</sub> is: **V<sub>LED</sub>+0.35V ≤ V<sub>IN</sub> ≤ V<sub>LED</sub>+1.5V**. Where, V<sub>LED</sub> is the total forward voltage drops of the LED string (V<sub>LED</sub>=n×V<sub>F</sub>, where, V<sub>F</sub> is the forward voltage of one LED, and n is the number of LEDs in the string). Too large input voltage will result in too large voltage drop between OUT pin and GND pin. In such condition, additional heat sink is necessary and appropriate size of copper foil on EVM is required.
- [2] The slide switch is used to turn ON or OFF the output stage of the chip.
- [3] The resistor R is used to set the maximum allowable LED driving current. The value of R is calculated by the following formula:  

$$I_{SET} = \frac{I_{OUT,MAX}}{500}, \quad R = \frac{V_{SET}}{I_{SET}} = \frac{1.2V}{I_{SET}}$$
- [4] The dimming function can be accomplished by variable resistor VR. The current ratio between I<sub>OUT</sub> and I<sub>SET</sub> is 500.

◆ **Reference PCB Layout**



Top Layer



Bottom Layer