

12- and 16- Channel Computer-Controlled Universal LED Controllers with 1mA Current Resolution

(Part Numbers: SLC-MA12-U, SLC-MA12-S, SLC-MA16-U and SLC-MA16-S)

PRODUCT DESCRIPTION

FEATURES

- ◆ Computer controlled
- ◆ Dual control modes: DC and Strobe
- ◆ Universal - suitable for any LED
- ◆ User friendly application software with GUI
- ◆ Capable of driving variable loads
- ◆ Full-featured SDK
- ◆ Up to 1,000mA output current
- ◆ High precision with 1mA current resolution

APPLICATIONS

- ◆ Machine vision
- ◆ Displays
- ◆ Semiconductor equipment
- ◆ Test instruments
- ◆ Microscopy
- ◆ Medical instruments

Mightex's High-Precision 12- and 16- Channel Computer-Controlled Universal LED Drivers are designed to drive a broad range of LED light sources. Each unit comes with a powerful PC-based software with a user-friendly GUI, which enables users to drive LEDs without the need to write any code. In addition, a full-featured SDK is provided, in order for users to write their own software and to integrate Mightex's LED drivers into their own systems. Furthermore, the drivers have a built-in protection feature, allowing users to limit LED driving current and voltage.



Each channel can be individually configured to work under one of the following two modes:

- **Normal Mode (or DC Mode):** The output current is a constant, which can be adjusted (using software) from 0 mA to 1,000 mA, through the USB interface;
- **Strobe Mode:** A Pulse-Width-Modulated (or PWM) periodic strobe pattern is output from the channel, which can be turned on by a software trigger. The strobe pattern may last indefinitely or for a preset number of cycles. The frequency of the PWM strobe can be up to 500Hz.

In addition, each channel can be individually **DISABLED** and **ENABLED**. No voltage or current is output from a DISABLED channel.

ELECTRICAL SPECIFICATIONS

Parameters	SLC-MA12-U/-S	SLC-MA16-U/-S	Unit
Number of Channels	12	16	
Power Supply Input Voltage (V_{dc})	9 ~ 24		V
Maximum Output Voltage (V_{max}) ¹	<21		V
Maximum Per Channel Output Current (I_{max})	1,000		mA
Maximum Per Channel Output Power (P_{max}) ²	10		W
Output Current Resolution	1		mA
Output Current Accuracy	±5 mA or ±1.0%, whichever is larger		mA
Output Current Repeatability	±2 mA or ±0.5%, whichever is larger		mA
PWM Timing Resolution ³	100		µs
PWM Timing Minimum Step Size ³	1,000		µs
Interface	USB (-U) or RS232 (-S)		

1. Maximum Output Voltage is 3V less than the Power Supply Input Voltage, i.e. $V_{max} = V_{dc} - 3V$. For instance, with a Power Supply Input Voltage of $V_{dc}=24V$, the Maximum Output Voltage V_{max} would be $(V_{dc}-3V)=21V$;

2. If the channel output voltage is V_d and the output current is I_d , they must simultaneously satisfy: (1) $V_d \leq V_{max}$; (2) $I_d \leq I_{max}$; and (3) $V_d * I_d \leq P_{max}$; and

3. Each period of a PWM square wave comprises of ON time and OFF time, i.e. two (2) 'steps'. The minimum value for each step is 1000µs, and the minimum increment is 100µs.

CHANNEL I/O PIN DEFINITION

Each Channel has two pins, defined as following:

Label	LED+	LED-
Description	LED Anode	LED Cathode

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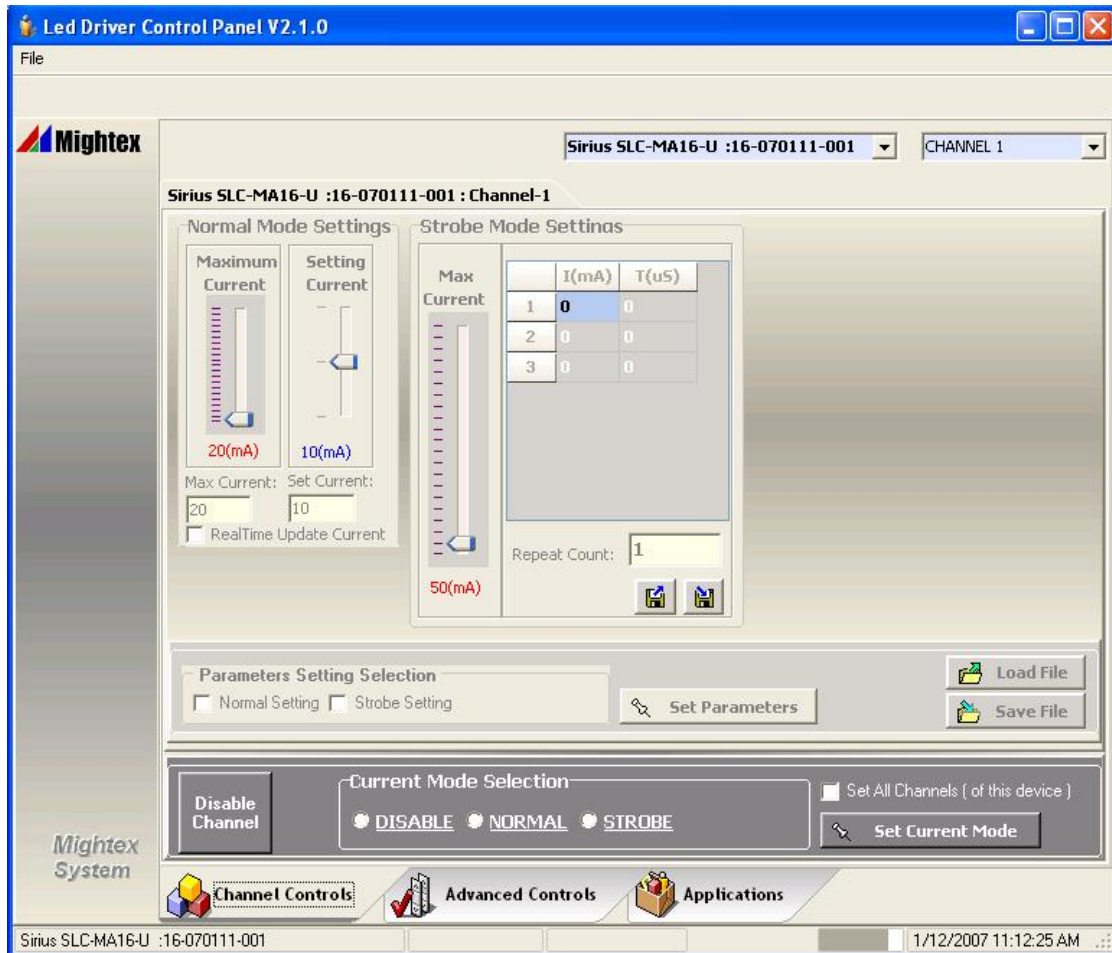
OPERATION CONDITION

Operating Temperature Range: 0°C ~ 45°C
Storage Temperature Range: -25°C ~ 85°C
Relative Humidity, Non-condensing: 5% ~ 95%

DIMENSION AND WEIGHT

Dimension: 180.5mm(L) x 180mm (W) x 34.5mm (H)
Weight: 400g

EXAMPLE OF GRAPHICAL USER INTERFACE



For customized solutions, please call 1-416-840 4991 or email sales@mightex.com.