Constant Current RGB LED Driver with I²C Control

EVAL Kit Physical Contents

Item #	Description	Quantity
1	KTD2026 EVAL Kit fully assembled PCB	1
2	MCP2221A Board - General Purpose USB to GPIO ADC I2C - Stemma QT / Qwiic	1
3	Stemma QT / Qwiic JST SH 4-pin Cable - 100mm Long	1
4	Anti-static bag	1
5	KTD2026 EVAL Kit Quick Start Guide -- printed 1-page (A4 or US Letter)	1
6	EVAL Kit box	1

QR Links for Documents

IC Datasheet	EVAL Kit Landing Page
https://www.kinet-ic.com/KTD2026/	https://www.kinet-ic.com/ktd2026ewe-mmev01/

User-Supplied Equipment

1. Bench Power Supply for VIN 5V and 0.5A, as needed for the intended application.
2. Digital Multimeter – one or more, used to measure input/output voltages and currents.

Quick Start Procedures

- Connect the Stemma QT 4-wire cable (GND, 3V3, SDA, SCL) to the KTD2026 evaluation board connector CN1, as shown in the Typical Test Setup Figure below.
- Connect the other end of the Stemma QT 4-wire cable to the MCP2221A USB to I2C interface board.
- Connect the MCP2221A board to a computer via the USB type-C cable.
- Once the evaluation board is connected to the computer via the MCP2221A interface board, the KTD2026 evaluation board green LED D3 should be turned on indicating that the board is powered from the computer. The on-board VIN supply voltage should be around 3.3V. No external power supply is required.

Graphical User Interface (GUI)

The program software must be installed on a computer in order to communicate and program the KTD2026 device. Install and run the KTD202x GUI executable file software on the computer as follows.

Note: Both KTD2026 and KTD2027 devices use the same KTD202x GUI software.

- Install GUI file located on EVAL Kit Page (https://www.kinet-ic.com/ktd2026ewe-mmev01/).
- Copy the executable file "KTD202x Control Panel Rev 0.3.exe" onto the computer drive.
- To run the program on the computer, double-click on the executable file "KTD202x Control Panel Rev 0.3.exe".
- The GUI window should be displayed on the computer screen with the status message "USB Device Attached" at the bottom left side of the window.
- If the displayed message is still "USB Device Detached", make sure the computer is properly connected to the MCP2221A board with a USB cable.