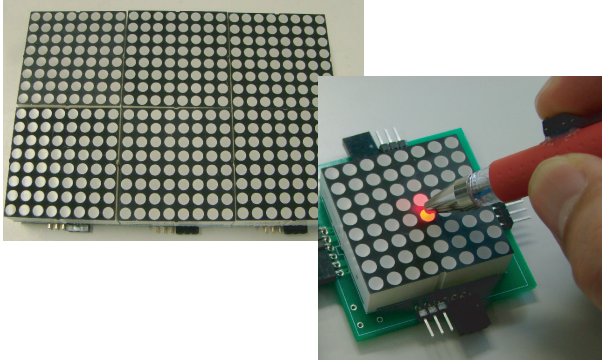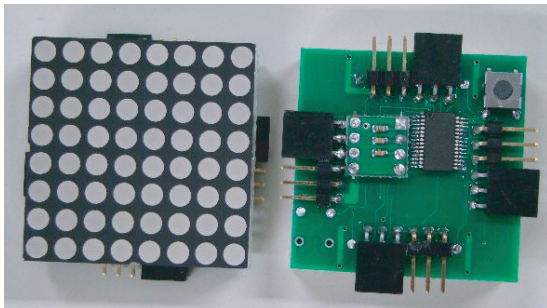## What is This?

Matrix LED Unit with Functions of:
- Pattern Drawing by Light
- Extentable by Connecting Units
- Interaction (Tilt Sensor, ...)

Specifications

- Size : 38mm x 38mm
- Resolution : 8 x 8 dots / unit
- LED Color : Red
- MCU : Cypress PSoC CY8C29466
- Display Device : LED
- Photo Sensor Device : LED
- Acc. Sensor : Freescale MMA7361L
            (3-axis, ±1.5G)
- Communication: Serial (UART), 4 dir.
            (19,200bps, half-duplex)

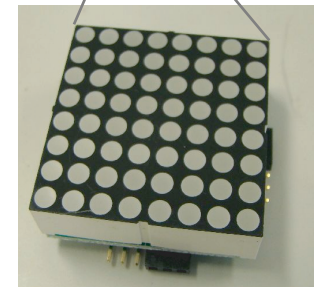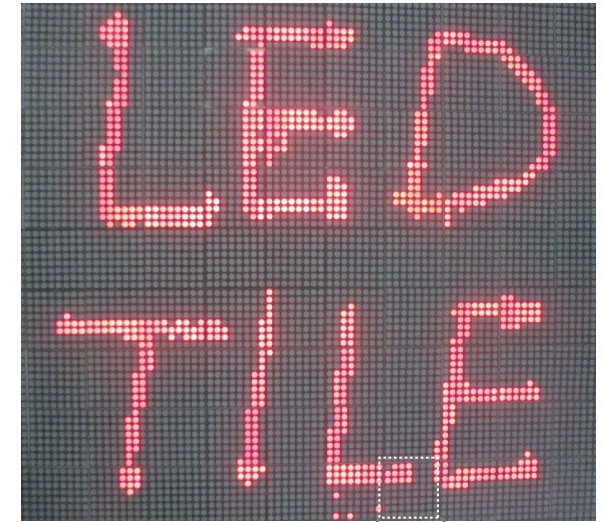## Author : Junichi Akita

merl microcontroller team (マイコンブ)

Micro-electronics Research Laboratory
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Kakuma, Kanazawa, Ishikawa, 920-1192 Japan

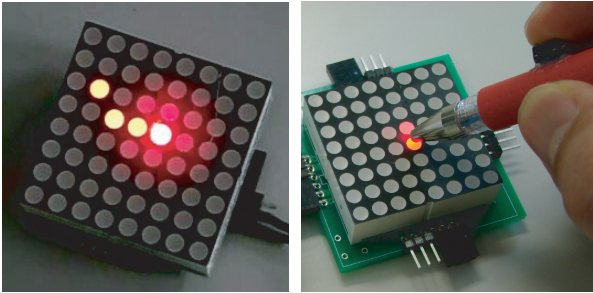URL: http://merl.jp/   http://akita11.jp/
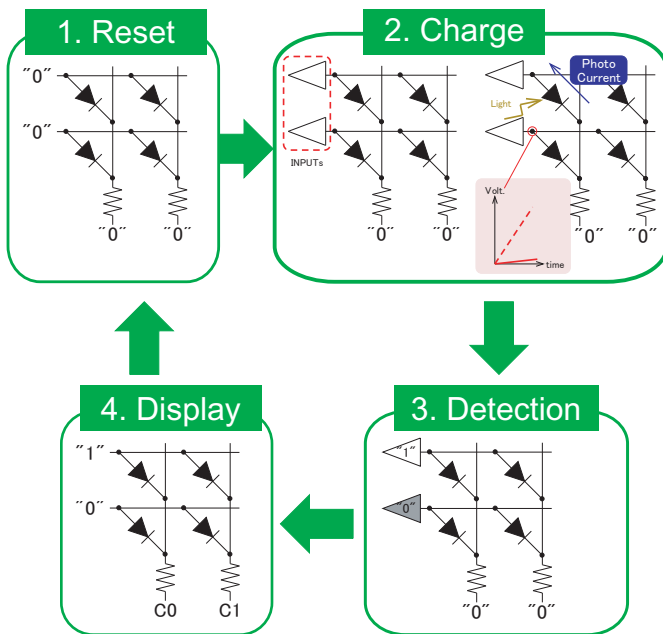E-mail: akita@merl.jp

LED Tile

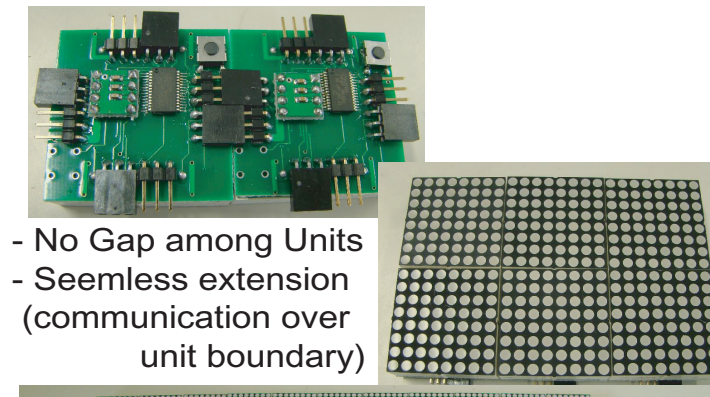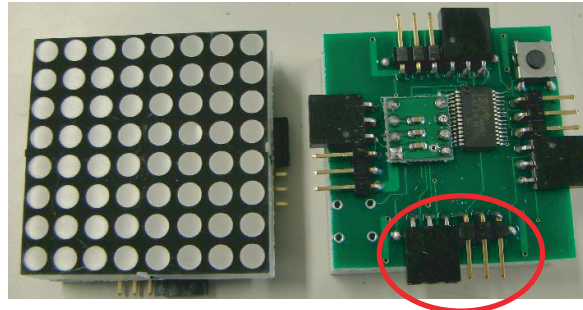by Junichi Akita @ Kanazawa Univ.
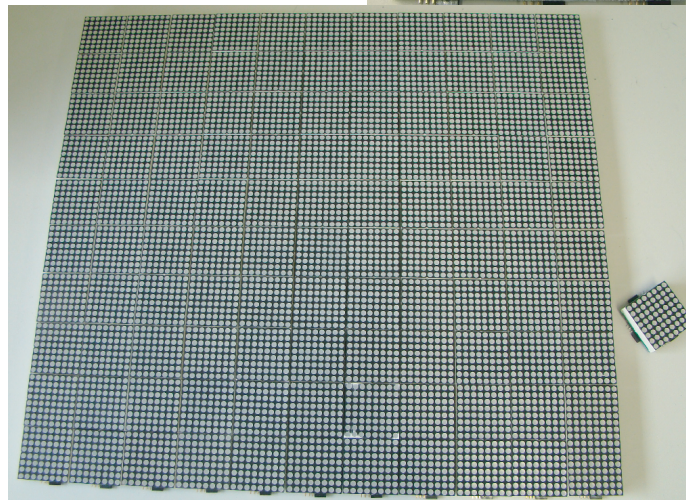
Draw

Direct Pattern Drawing by Light

- Light source : Laser Pointer / LED
- "Light" is sensed by LEDs
- Display Patterns on LEDs
- LEDs as Light Sensor & Display
  (alternate operation)

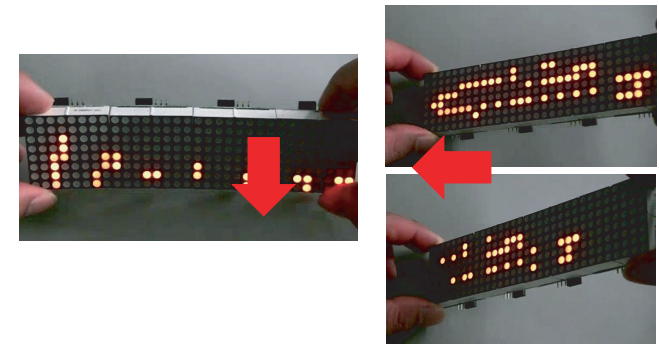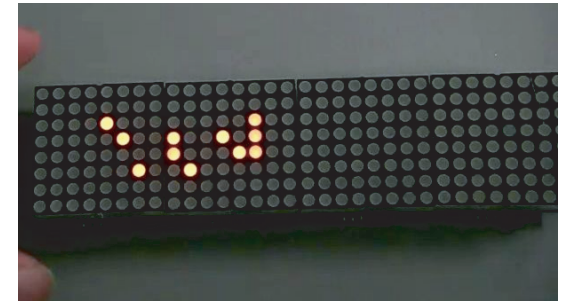1. Reset
2. Charge
3. Detection
4. Display

Extend

- No Gap among Units
- Seemless extension
  (communication over
  unit boundary)

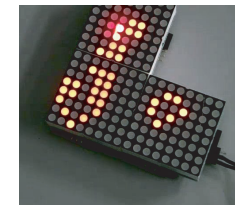10 x 10 units (80 x 80 pixel)

Interact

Tilt & Flow

Lifegame Transition

Scrolling