

# BH1790GLC-EVK-001

## Software document

Dec/09/2016  
Sensor Application G

## ■ Sketch file(BH1790GLC.ino)

- setup function
  - Setup serial function(115200bps) to output log data on Serial Monitor
  - Initialize I2C(Wire.begin function) and setup I2C clock(400kHz)
  - Initialize BH1790GLC
  - Setup 32Hz timer and start
- loop function
  - Check the flag about 32Hz period
  - Get the values LED ON/OFF(Pulse Wave/Ambient Light) data and display them
- timer\_isr function
  - Function to execute every 32Hz

## ■ Library files (BH1790GLC.h, BH1790GLC.cpp)

- constructor
  - do nothing
- init function
  1. Read and check PART\_ID, PID and MANUFACTURER\_ID register value
  2. Write to MEAS\_CONTROL1 register (RDY=1, LED\_LIGHTING\_FREQ=128Hz, RCYCLE=32Hz)
  3. Write to MEAS\_CONTROL2 register (LED\_EN[1:0] = 00, LED\_ON\_TIME=0.3ms, LED\_CURRENT=10mA)
  4. Write to MEAS\_START register (MEAS\_ST=1)
- get\_rawval function
  - Get the 4bytes raw value from register address 0x54
- get\_val function
  - Execute get\_rawval function
  - Create LED ON/OFF(Pulse Wave/Ambient Light) data
- write function
  - General write function for BH1790GLC
- read function
  - General read function for BH1790GLC

