

BH1790GLC-EVK-001

Software document

Feb/07/2017
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 Optical Sensor Data with LED ON/OFF and display them
- timer_isr function
 - Function to execute @ 32Hz interval

■ 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 Optical Sensor Data with LED ON/OFF
- write function
 - General write function for BH1790GLC
- read function
 - General read function for BH1790GLC

