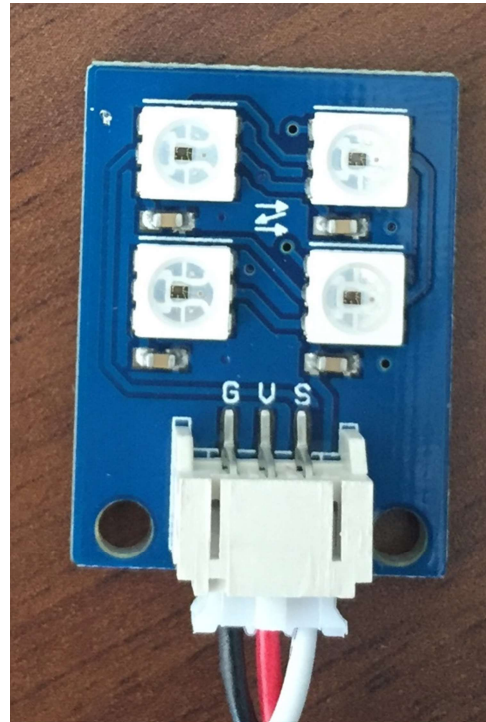


스마트시스템입문

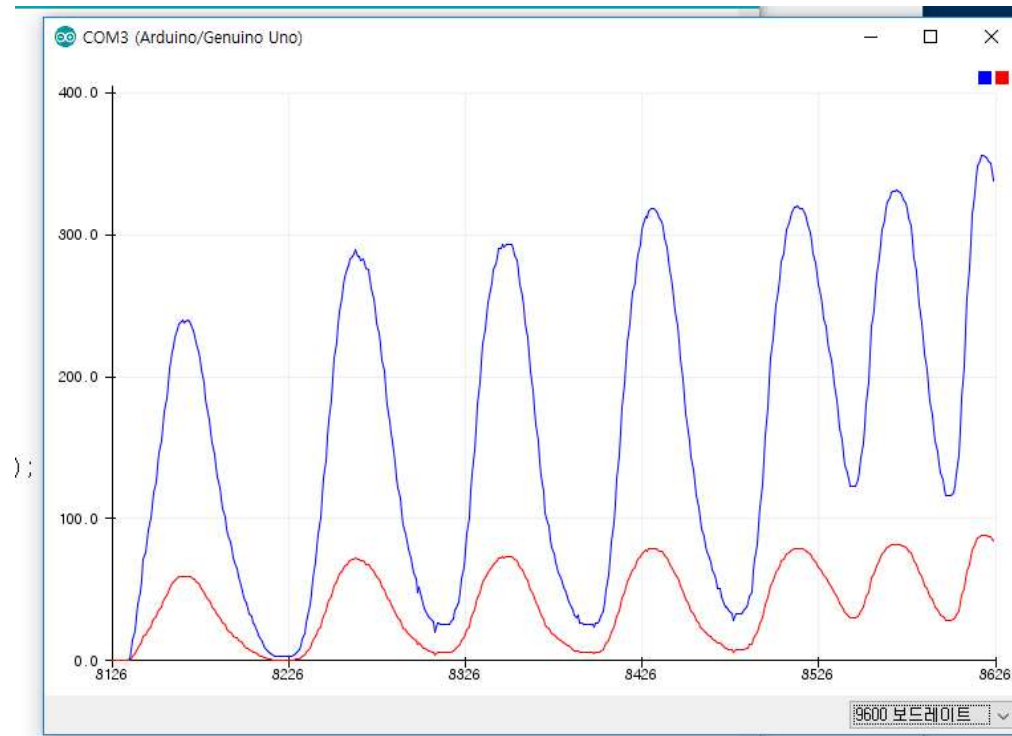
2018년 1학기

LED



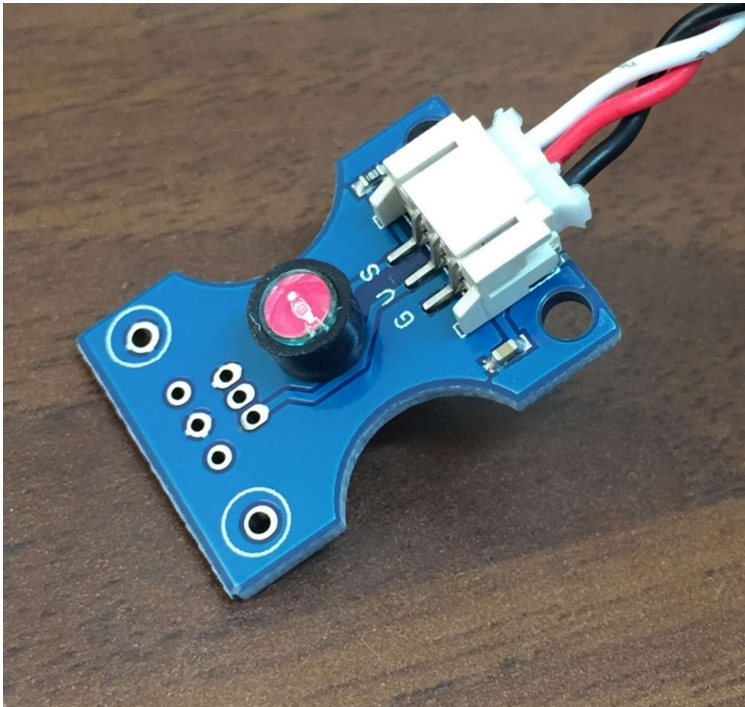
1 2
3 4

Serial plotter



- 시리얼 모니터와 플로터를 동시에 열 수 없다.
- 둘 중의 하나는 창을 닫아야 함

Light sensor

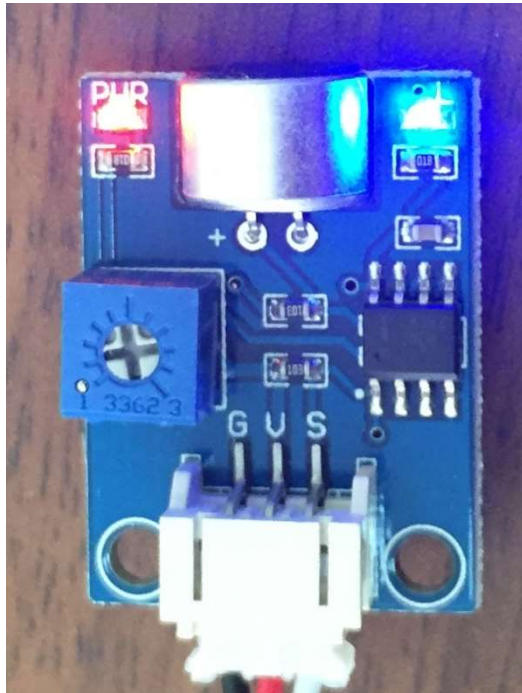


```
int light = 0;
```

```
void setup() {  
  pinMode(light,INPUT);  
  Serial.begin(9600);  
}
```

```
void loop() {  
  Serial.println(analogRead(light));  
}
```

Sound sensor



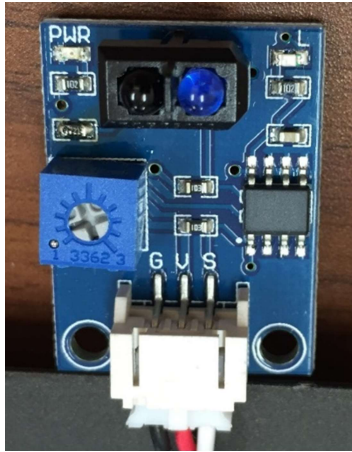
```
int sound_sensor = A2;
```

```
void setup() {  
  Serial.begin(9600);  
  pinMode(sound_sensor,INPUT);  
}
```

```
void loop() {  
  
  int volume = analogRead(sound_sensor);  
  Serial.println(volume);  
  
}
```

- 시리얼 플로터로 두개의 결과를 동시에 볼 수 있나?

IR sensor



TCRT 5000



```
int IR = 3;
```

```
void setup() {  
  pinMode(IR, INPUT);  
  Serial.begin(9600);  
}
```

```
void loop() {  
  Serial.println(digitalRead(IR));  
}
```

Touch sensor



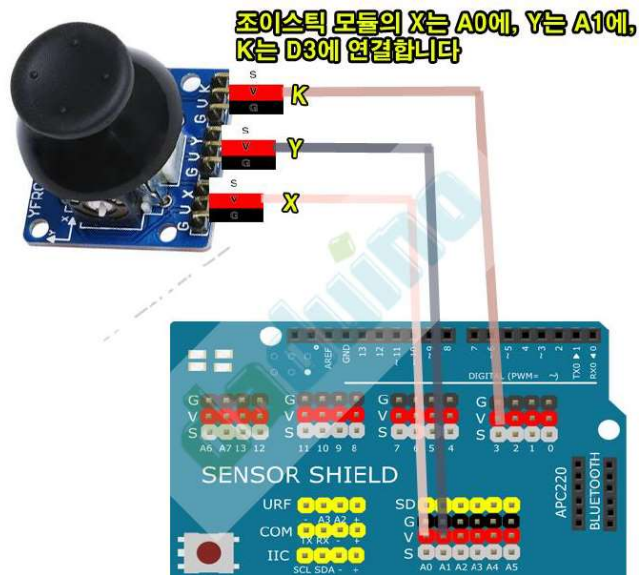
```
int Touch = 4;
```

```
void setup() {  
  pinMode(Touch, INPUT);  
  Serial.begin(9600);  
}
```

```
void loop() {  
  Serial.println(digitalRead(Touch));  
}
```

- 시리얼 플로터로 값의 변화를 관찰

Joystick



- 3개의 input pin이 필요함
- x, y 축에 대한 정보는 analog input으로
- z 축에 대한 정보는 digital input으로
- GVX → Ground, voltage, signal (흑색, 적색, 백색선)
- 왼쪽으로부터 x, y, z에 대한 핀임

Joystick

```
int X = A4;  
int Y = A5;  
int Z = 5;
```

```
void setup() {  
  pinMode(X, INPUT);  
  pinMode(Y, INPUT);  
  pinMode(Z, INPUT);  
  Serial.begin(9600);  
}  
void loop() {  
  int x,y,z;  
  x=analogRead(X);  
  y=analogRead(Y);  
  z=digitalRead(Z);  
  Serial.print(x);  
  Serial.print(",");  
  Serial.print(y);  
  Serial.print(",");  
  Serial.println(z*500);  
  delay(50);  
}
```

- Use plotter to see the result

