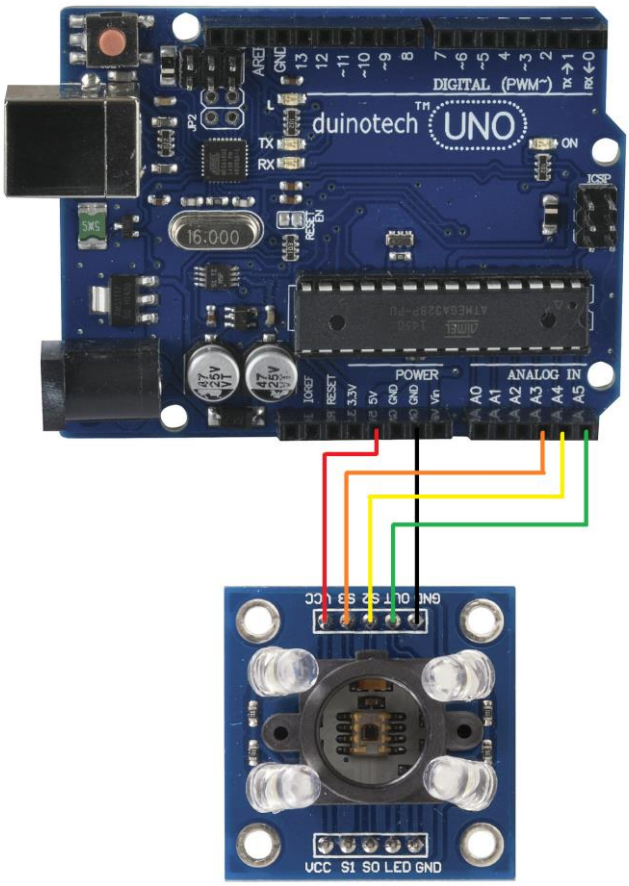
XC3708 Arduino Compatible Colour Sensor Module

The XC3708 Arduino Compatible Colour Sensor Module features a colour sensitive IC and four bright white LEDs for determining colour even in darkness. Basic full colour functionality can be achieved with just three IO pins. The LEDs can be deactivated by pulling the LED pin LOW. More detailed information can be found in the datasheet.

The sketch below is a basic demonstration, with connections as shown, although the IO pins can be reallocated as necessary:




```
#define COLOUROUT A5
#define COLOURS2 A4
#define COLOURS3 A3

void setup() {
  Serial.begin(115200);
  pinMode(COLOUROUT,INPUT);
  pinMode(COLOURS2,OUTPUT);
  pinMode(COLOURS3,OUTPUT);
}

void loop() {
  colourred();
  Serial.print("RED:");
  Serial.print(getintensity());
  colourgreen();
  Serial.print("GREEN:");
  Serial.print(getintensity());
  colourblue();
  Serial.print("BLUE:");
  Serial.println(getintensity());
  delay(200);
}

void colourred(){             //select red
  digitalWrite(COLOURS2,LOW);
  digitalWrite(COLOURS3,LOW);
}

void colourblue(){            //select blue
  digitalWrite(COLOURS2,LOW);
  digitalWrite(COLOURS3,HIGH);
}

void colourwhite(){           //select white
  digitalWrite(COLOURS2,HIGH);
  digitalWrite(COLOURS3,LOW);
}

void colourgreen(){           //select green
  digitalWrite(COLOURS2,HIGH);
  digitalWrite(COLOURS3,HIGH);
}

int getintensity(){           //measure intensity with oversampling
  int a=0;
  int b=255;
  for(int i=0;i<10;i++){a=a+pulseIn(COLOUROUT,LOW);}
  if(a>9){b=2550/a;}
  return b;
}
```