Subsea LED Indicator Light

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Introduction

The Subsea LED Indicator is a simple LED light with high pressure capability! It comes in a penetrator form factor for easy installation on any of our Watertight Enclosures and it comes in four colors: white, blue, green, and red! It operates on 3-20v and each light draws up to 30mA when used at 20v. A built in resistor makes it easy to use without any additional parts.

Quick Start

1. Connect the wires to a power source
   - White/Red/Green/Blue Wire: +3-20 volts (DC)
   - Black Wire: Ground

Specifications

Specification Table

Electrical		
Item	**Value**	
Supply Voltage (V_{in})	3 - 20 volts (DC)	
Max Current	TBD mA	
Light		
Maximum Brightness	TBD mcd	
Cable and Connectors		
Cable Length	180 mm	7 in
Connectors	Single 0.1" Male Header Pins	
Wires	Black - Ground	
	White/Red/Green/Blue - Power	

Electrical		
Physical		
Pressure Rating	TBD m	TBD ft
Mounting Hole Diameter	10 mm	0.40 in

2D Drawings
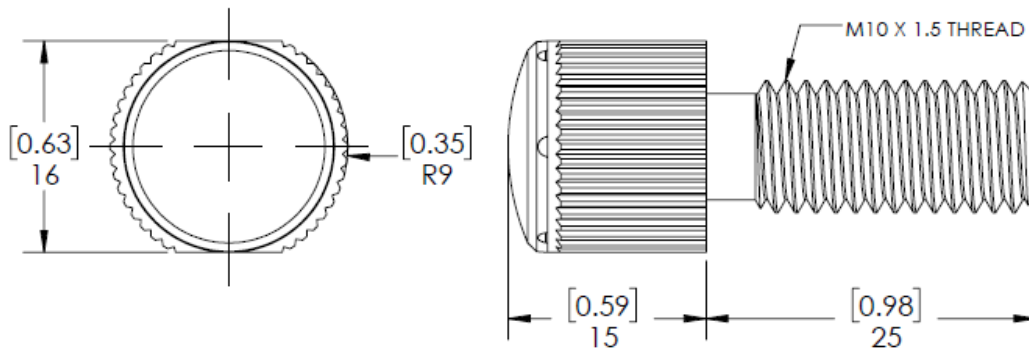
3D Model

All 3D models are provided in zip archives containing the follow file types:

- SolidWorks Part (.sldprt)
- IGES (.igs)
- STEP (.step)
- STL (.stl)

Lumen Light	
Indicator Assembly	INDICATOR10-ASM-R1.zip (/indicator/INDICATOR10-ASM-R1.zip)
Cable Penetrator Nut	PENETRATOR-NUT-10-A-R2.zip (/models/PENETRATOR-M-NUT-10-A-R2.zip)

Installation

To install the indicator, lightly grease the provided O-ring with silicone grease and install over the cable and bolt. Insert to a 10mm hole and tighten the nut to secure the indicator. We recommend using a penetrator wrench to ensure it's securely tightened.

Example Code

Arduino

This example uses the Arduino Servo library to control the light brightness. This can use any pin on the Arduino board as the "indicatorPin". Note that the dimming functionality will only work on a PWM pin.

If you've never used Arduino before, we suggest checking out some tutorials! (https://www.arduino.cc/en/Tutorial/HomePage)

```
byte indicatorPin = 9;

void setup() {
        // set up pin mode
  pinMode(indicatorPin,OUTPUT);
}

void loop() {
  // turn light on
  digitalWrite(indicatorPin,HIGH);

  // wait one second
  delay(1000);

  // turn light off
  digitalWrite(indicatorPin,LOW);

  // wait one second
  delay(1000);

  // turn light on, 50% power
  analogWrite(indicatorPin,127); // values from 0-255

  // wait one second
  delay(1000);
}
```