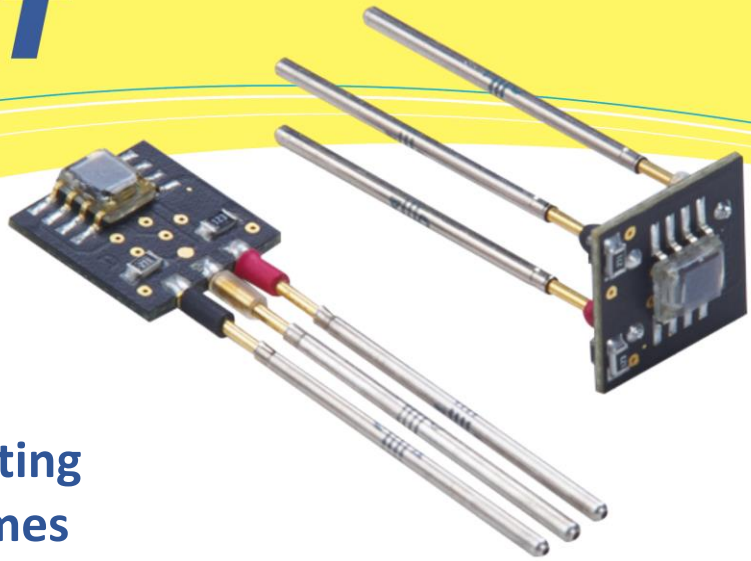


# SMART FINN™ BRIGHT



## Smart FINN™ Bright Your solution for testing LEDs that are 100 times brighter.

LED applications have evolved from simple status indications to extremely bright lighting for commercial, industrial and military applications. The intensities of these bright LEDs are beyond the capability of the human eye to with-stand, let alone be able to discriminate for color. Much like the human eye with sunglasses, we are able to shade our FINN sensors in order to provide accurate color and intensity measure-ments. The Smart FINN™ Bright is designed specifically for use with the bright LEDs currently used in the Auto-motive, Marine, Military and Industrial/-Commercial Lighting industries.

### BENEFITS

- Handles LEDs that are 100 times brighter
- Excellent solution for Automotive LED Headlights, Tail lights, Brake lights, etc.
- May be used with any assembly that has ultra bright LEDs
- Is suitable for any test environment including component, ICT, Functional or systems test

- Will accommodate the full spectrum of visible, bright LEDs
- Is an excellent solution whether you are testing single color LEDs or multi colored LEDs

### PRINCIPLE OF OPERATION

The Smart FINN™ Bright utilizes an allcolor sensor - four sensors combined into one. Each sensor is designed to detect a certain range of color - blue, red, green or clear. In order to manage the amount of light hitting the sensor when testing Bright LEDs, a 1/100 attenuator has been added, reducing the amount of light that hits the sensor to 1% of the initial reading. By comparing readings, the wavelength of the light hitting the sensor can be accurately measured. Other than a power and ground connection, the only connection to the sensor is the output. This output indicates both the color and the strength of the LED under test.

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## METHOD OF OPERATION

The output frequency in kHz is directly related to the wavelength (color) of the light. Taking a DC measurement of the signal provides a measurement of the light's intensity. The signal is pulse-width modulated to indicate the intensity of the light. The brighter the light, the longer the pulse width. The Frequency does not change with the LED brightness.

## FEATURES

- Test super bright LEDs up to 10,000 mcd.
- Custom "sunglass" neutral density filter
- Full color detection of the visible spectrum
- Wide operating voltage (2.7 Vdc - 5.5 Vdc)
- Low current - can be powered directly from a digital output
- Color identification determined by a Frequency output
- Brightness reading supplied by a Voltage output
- Totally automated; no operator action required
- Easy to mount and connect

## APPLICATIONS

- Automotive LEDs
- Lighting LEDs
- Marine LEDs
- Military LEDs

- Any test environment where a specific Ultra Bright LED color verification is required
- Quality control for most in-line manufacturing environments  
*DIMENSIONS .486 x .485" x .176"*  
(not including spring probes)

## PINS

Three pins are: Output (signal), Ground, and Power

## POWER SOURCE

The Smart FINN™ Bright requires a minimal power voltage source, which may vary from 2.7 volts to 5.5 volts. Current is typically 8mA /5V.

## READINGS FOR POPULAR COLORS\*

COLOR	nm WAVELENGTH	khz
Red	635	12.2
Amber	608	10.6
Yellow	585	9.3
Green	565	8.5
Blue	430	6.8

\*Provides a range of 256 different color readings.

## ORDERING INFORMATION

DESCRIPTION	PART NUMBER
Smart FINN™ Bright Right Angle	TC16SFBright-R
Smart FINN™ Bright Vertical	TC16SFBright-V



TC16SFBright-R



TC16SFBright-V