

UNIVERSAL LIGHTPROBE™ S2 PENTA HIGH-SENSITIVITY SENSOR

The Universal Lightprobe S2 Penta High-Sensitivity Sensor features the same popular built-in color binning as the regular Penta Sensor, however, it is designed to test extremely dim LEDs.

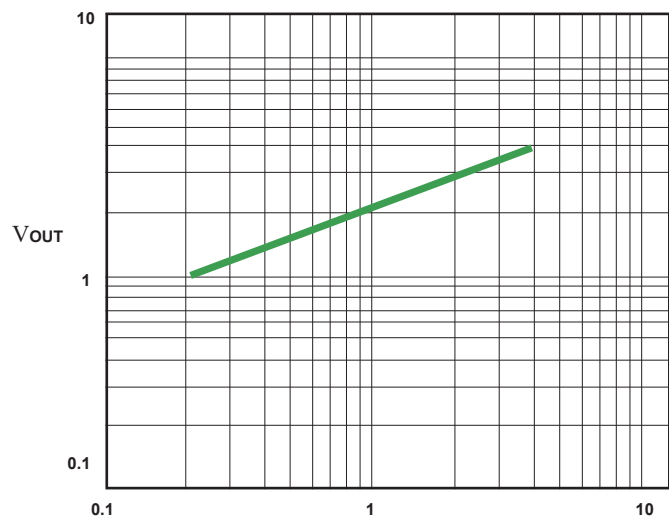


Part Number: ULP S2 PCI/V HS

INTENSITY RESPONSE:

The Universal LightProbe S2 Penta High Sensitivity Sensors provide an analog output ranging from 0 to 4 volts, corresponding to the LED's luminous intensity in millicandelas (C.I.E. photopic-curve-corrected). The mcd-related output is consistent with most LED manufacturer's specifications, eliminating the need for any conversion. A read-out of less than 50mV indicates under-ranging (LED too dim) and over 4.0 volts indicates over-ranging (LED too bright). The Sensor's intensity response depends on a variety of factors, including the size of the LED, the aperture of the fiber-optic probe, and the distance of the probe tip from the LED emitter. The Universal LightProbe Penta High Sensitivity Sensor will test finished-product LED displays (through-hole T-1 3/4 LEDs) in the range of 1 mcd to 15 mcd. For more information on sensitivity response in millicandelas, please see Application Note 35.

- Analog output ranging from 0 to 4 volts
- Corresponds to LED's luminous intensity in millicandelas
- C.I.E. photopic-curve-corrected
- Tests PLCC surface-mount LEDs from 1mcd to 15mcd
- Read-out < 50mV indicates under-ranging - the LED is too dim
- Read-out > 4 volts indicates over-ranging - the LED is too bright
- Note: Intensity response depends on size of LED, the aperture of the fiber-optic probe and the distance between the probe tip and the LED emitter; for more information on Sensor Sensitivity Responses in millicandelas, please see Application Note 35



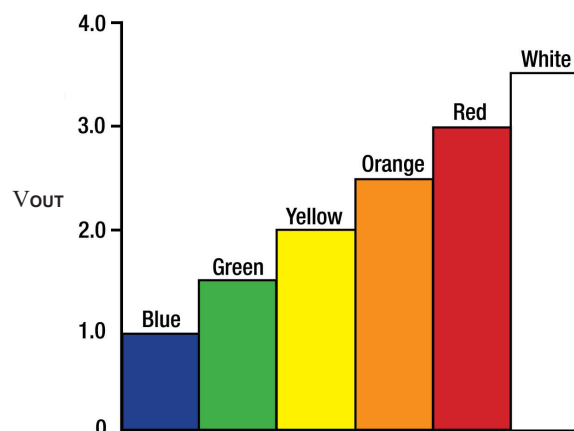
Typical response for PLCC green LED tested with Universal LightProbe Penta S2 High-Sensitivity Sensor and Small-Aperture Fiber-Optic Probe

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COLOR RESPONSE:

- Test for the five main LED colors, plus white
- Unambiguous and stable analog voltage output
- Color output is independent of LED intensity

Blue:	1.0 volts
Green:	1.5 volts
Yellow/Amber:	2.0 volts
Orange:	2.5 volts
Red:	3.0 volts
White:	3.5 volts



All Universal LightProbe Sensors share the same form, and are pre-programmed to suit specific LED test requirements. The small size and non conductive housing is specifically designed to accommodate today's high-density test fixtures.

PENTA HIGH-SENSITIVITY SENSOR CHARACTERISTICS:

Operating temperature range: 0°C to 70°C

Power consumption: Operates between +5 and 28 volts D.C., at 6mA max. Less than 4.75 volts is not recommended

Voltage protection: Withstands up to +40 volts, & reverse polarity to -18 volts

Output Pins: 4 gold-plated standard wire-wrap pins (0.025 in. sq.)

Sensor Size: 0.560 in. dia x 1.38 in. long

Typical response times: <1.2s color & intensity outputs simultaneously (the brighter the LED, the shorter the response time)

Fiber-Optic Probes: Wide Aperture Fiber-Optic Probe recommended

Four standard wire-wrap pins

G - Ground - common for analog output and power input

I - Intensity of LED under test (relative)

C - Color of LED under test

P - DC Power Input: Between +5 and 28 volts; less than 4.75 volts is not recommended

