



UNIVERSAL LIGHTPROBE™ S2 PENTA SENSOR

Optomistic Products' best-selling Sensor, the Universal LightProbe S2 Penta Sensor, provides analog voltage outputs for both color and intensity, and features built-in color binning, eliminating the need to convert LED wavelength to visual color in the ATE software, saving valuable processing time.

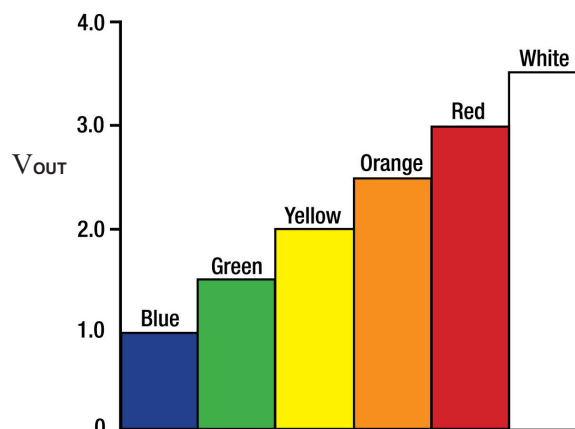
**Part Number: ULP-S2 PCI/V****CHARACTERISTICS**

- Typical response time: <10mS capture time; <100mS overall response time for color and intensity simultaneously
- Output Loads: 'Int.' & 'Color' - 2Kohms min., 100pF, max.
- Further details on Page 2

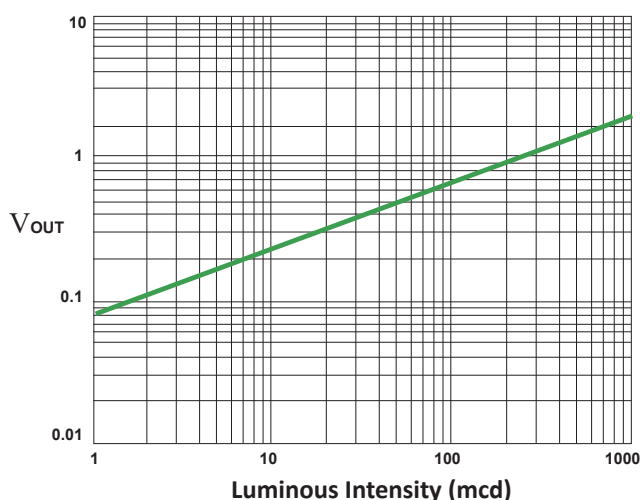
COLOR RESPONSE:

- 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

**INTENSITY RESPONSE:**

- Analog output ranging from 0 to 4 volts
- Corresponds to LED's luminous intensity in millicandelas
- C.I.E. photopic-curve-corrected
- Tests LEDs from 1 mcd to 20,000 mcd, and up to 315,000 mcd with the Penta Very-Low Sensitivity Sensor
- Read-out < 50mV indicates under-ranging - the LED is too dim
- Read-out > 4 volts indicates over-ranging - the LED is too bright; Penta Low-Sensitivity Sensors are available
- 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 please see AN 35
- Available in High-Sensitivity models for very dim LEDs
- Available in Low and Very-Low-Sensitivity models for extremely bright LEDs



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





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All Universal LightProbe S2 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 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 Loads: 'Int.' & 'Color'- 2Kohms min., 100pF max.

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: Typical response time: <10mS capture time; <100mS overall response time for color and intensity simultaneously

Fiber-Optic Probes: Can be paired with any Universal LightProbe Fiber-Optic Probe

PENTA SENSORS: 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

