

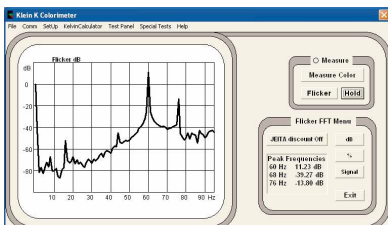
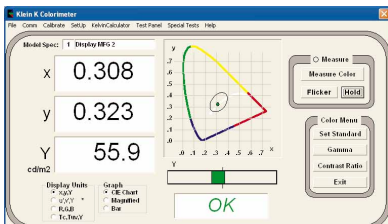
Klein K-10 Colorimeter

for use with the Klein
colorimetry pc program
over a DB9 serial port



KLEIN INSTRUMENTS CORPORATION

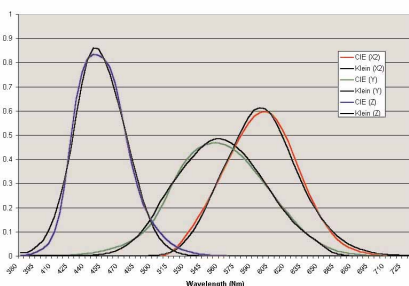
Klein K-10 Features



The Klein K-10 tri-stimulus CIE Colorimeter Probe was designed specifically for use on all display types. It is unmatched in sensitivity, stability and speed. It connects directly to a PC's serial port, and runs with the companion Klein PC application.

- Large Photodiodes. Diodes that are 5mm x 5mm each, along with thermally stable components, are combined to report the highest degree of accuracy.
- Exceptionally Accurate Filters. Not only is the f1' of Y critical, but the accuracy of X and Z as well. See the actual Klein vs. CIE graph, below, left.
- Quick Measurements over an RS-232 line. The head takes 256 measurements per second even at low light. For readability 8 measurements per second is displayed.
- FFT FlickerMeter. Probe measures & integrates Y data in the head, and streams in real time to the pc, and a Fast Fourier Transform is performed. JEITA approved method.
- Klein pc Program. Create calibration files & set measuring parameters. Then data log, graph and export. The pc program manages the data in an easy to use interface.
- 8 Bright LED's. LED's projecting through a 62mm focal length lens and focusing on a display, define the measurement area. Acceptance angle is ± 5 degrees.
- Rugged Construction. The K-10's auto ranging is solid state and the case is impact resistant to hold up to 24 hours a day, 7 days a week required usage.
- Included items are the Klein pc program and a certificate of calibration.

Product Specifications



(actual X, Y, Z, filter data)

Measuring Function: Colorimetric; x y Y, u v Y, RGB, Tc Tuv Y
Measuring Range: .00006-2919 fL; .0002-10,000 cd/m² (candelas/sq. meter)
Measurement Area/Distance: 22mm diameter / 110mm from display
Display Intervals: .1 sec. auto ranging; 6 ranges, ea. channel independently
Filtering: 20Hz low pass 3 pole analog filter, 14-bit A/D Cnvr.; digital averaging
Accuracy (Illuminant A): Chroma ± 0.002 x, y (displayed value > 1.00 cd/m²)
 Luminance $\pm 1\%$ Y, ± 1 LSB (displayed value > .01 cd/m²)
Repeatability: Chroma ± 0.002 x, y (displayed value > 1.00 cd/m²)
 Luminance $\pm 1\%$ Y, ± 1 LSB (displayed value > .01 cd/m²)
Data Interface: 9600 baud RS232 Communication to PC.
Output Connectors: Serial COM 9 pin (DB9), USB plug for 5v power only
Size: 10.5" Long x 2.375" Diameter (267mm x 60mm)
Power Supply: 5 volts, 75mA nominal (175mA max w/LED's On)
 from a pc's USB port, or from included power supply
Operating Requirements: Temperature: 0-40 C;
 Humidity: below 85% RH non-condensation
Materials: Platinum colored high-impact plastic & Black anodized aluminum
Weight/Shipping Weight: net 19oz (591g.); gross 3 pounds