

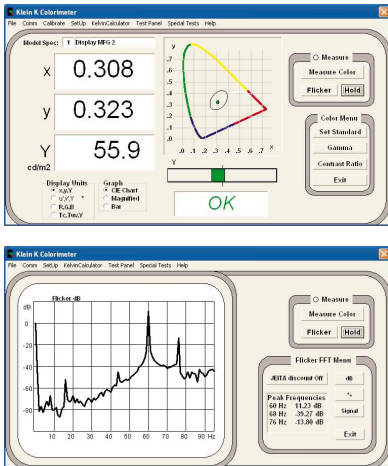
# Klein K-1 Colorimeter

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



## KLEIN INSTRUMENTS CORPORATION

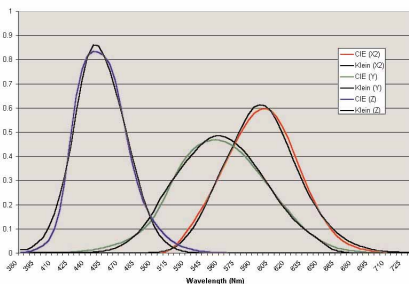
### Klein K-1 Features



The Klein K-1 tri-stimulus CIE Colorimeter Probe was designed specifically to be the best colorimeter in sensitivity, stability and speed. The K-1 probe attaches directly to a PC's serial port, and runs with the Klein measurement 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.
- Rugged Construction. The K-1'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 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:** .00003-1575 fL  
.0001-5400 cd/m<sup>2</sup> (candelas per square meter)

**Display Intervals:** .1 sec. auto ranging; 6 ranges, ea. channel independently

**Filtering:** 20Hz low pass 3 pole analog filter, 14 bit A/D Cnvtr.; digital averaging

**Accuracy (Illuminant A):** Chroma  $\pm 0.002$  x, y (displayed value  $> .05$  cd/m<sup>2</sup>)  
Luminance  $\pm 1\%$  Y,  $\pm 1$  LSB (displayed value  $> .0025$  cd/m<sup>2</sup>)

**Repeatability:** Chroma  $\pm 0.002$  x, y (displayed value  $> .05$  cd/m<sup>2</sup>)  
Luminance  $\pm 1\%$  Y,  $\pm 1$  LSB (displayed value  $> .0025$  cd/m<sup>2</sup>)

**Data Interface:** 9600 baud RS232 Communication to PC.

**Output Connectors:** Serial com 9 pin (DB9), USB plug for 5v power only

**Size:** 6.25" Long x 2.25" Diameter (159mm x 57mm)

**Power Supply:** 5 volts, 75mA max from a pc's USB port,  
or from included power supply

**Operating Requirements:** Temperature: 0-40 C;

Humidity: below 85% RH non-condensation

**Material:** Platinum colored high- impact plastic

**Weight/Shipping Weight:** net 7oz (198g.); gross 3 pounds