

Stroboscopes

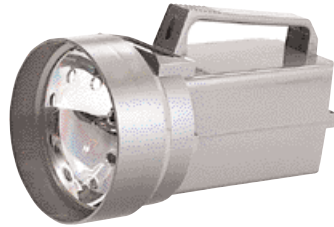
Why use a stroboscope?

Stroboscopes are ideal for quality control, motion analysis, maintenance procedures, production line checks, examination and speed measurement of motor rotors under various loads, gear movement and engagement, cams, propellers, fan blades, centrifuges, spindles, turbines and other machinery exhibiting repetitive motion.

These digital strobes freeze the motion and measure the speed of a rotating object, without contact, simply by aiming and synchronizing its flash rate (fpm) with the speed (rpm) of the object.

Either fixed via tripod or used as a hand-held portable, all models are high performance units used in OEM or user applications.

\$417
K4020



Model K4020

Ideal for quality control, motion analysis, maintenance procedures, and speed measurements of motors.

- Simply aim & synchronize the strobe's flash rate (fpm) with the speed (rpm) of the object
- Direct reading of RPMs
- Exclusive one-chip micro-computer LSI circuit & crystal control time-base assures accuracy of $\pm 1\%$
- Duty cycles from 5 to 30 minutes (depending on RPM range)
- Tripod mountable AC operated with 6-foot power cord

\$638
K4030



Model K4030

Freeze the motion and measure the speed of a rotating object, without contact!

- Push button selector for fpm (phase shift) in degrees or delay time in ms
- Double or divide in half the flashing & display rate with just one activation
- Fast Finder button quickly approximates desired rate
- Coarse & Fine adjustment buttons to synchronize flash
- Select high or low rpm resolution
- Push buttons increase or decrease phase shift by one degree from -360° to $+360^\circ$ or equivalent ms
- Duty cycles from 10 minutes to 2 hours depending on rpm range

\$525
K4040



Model K4040

A wide measurement range is ideal for motion analysis and speed measurement.

- Non-contact rpm measurement
- Highly visible LCD display gives accurate rpm readings over a wide measuring range
- Last value, max & min values can be stored in memory automatically & recalled at the touch of a button
- For motion analysis, simply locate the actual speed & then turn the dial slowly up or down; this will give a slow motion effect, allowing complete inspection

Specifications Model	K4020	K4030	K4040
Flash Range	100 to 100,000 fpm/rpm	10 to 12,000 fpm/rpm	100 to 100,000 fpm
Speed Range	-	-	5 to 99,999 rpm
Resolution	1 fpm/rpm	0.1 fpm < 1000 fpm; 1 fpm \geq 1000 fpm	0.1 fpm < 1000 fpm; 1 fpm \geq 1000 fpm
Accuracy	$\pm 1\%$: 100-5000 fpm; $\pm 0.05\%$: \geq 5000 fpm	$\pm 0.05\%$ rdg. ± 1 dgt. \geq 12 rpm	$\pm 0.1\%$ + 2 digits
Phase Range	-	$\pm 360^\circ$ and equivalent ms	-
Resolution	-	0.1 ms < 1000 rpm; 0.01 ms \geq 1000 rpm	-
Time Base	Quartz crystal	Quartz crystal	Quartz crystal
Sampling Time	1 second	1 second	-
Display	4-digit LED, 0.3" high	6-digit LED, 0.6" high	5-digit LCD, 0.4" high
Flash Tube	-	Xenon white lamp	High efficiency orange LED lamp
Flash Duration	-	60 to 1,000 μ sec	60 to 1,000 μ sec
Power Supply	110 VAC, 50/60Hz	110 VAC, 50/60Hz	4 x 1.5V "AA" batteries
Dimensions	8.3 x 4.8 x 4.8"/210 x 120 x 120 mm	8.3 x 4.8 x 4.8"/210 x 120 x 120 mm	8.5 x 2.6 x 1.5"/215 x 65 x 38 mm
Weight	2.2 lb/1 kg	2.2 lb/1 kg	0.66 lb/300 g
Price	\$417	\$638	\$525

Light Meters

Light measurement



Light measurement can be quantified in many ways, i.e. Lux, Footcandle, candle power, Lamberts, candelas ... The two most popular scales are Footcandles which is Imperial and Lux which is metric. Lumens or candelas are the basis for basic light energy measurement.

Fc = Footcandles

Lux = Lux

1 Lux = 1 Lumen per Square meter

1 Fc = 1 Lumen per Square Foot

Conversion of Lux to Footcandles:

Lux X 0.0929 = Footcandles

\$85
ST-1300



Model ST-1300

A compact, simple to use, yet rugged tool for measuring light levels.

- Measures to 50,000 Lux
- Resolution of 0.1 Lux
- 3-1/2 digit LCD display
- Measuring rate of 1.5 times/second
- Over range & low battery indication
- Carrying case & 12V battery included
- Compact & lightweight

\$95
ST-1301



Model ST-1301

Accurately display light levels in terms of Fc or Lux over a wide range.

- Measures to 50,000 Lux; 5,000 Foot-candles
- Resolution of 0.1 Lux/Fc
- User selectable Lux / Footcandles
- Measuring rate of 1.5 times/second
- Max & Data hold function
- Auto shut off
- Over range & low battery indication
- Carrying case & 12V battery included

Specifications

Model

Measuring Range

Resolution

Accuracy

Sampling Rate

Power Supply

Dimensions

Weight

Price

ST-1300

50,000 Lux

0.1 Lux

±5% < 10,000 Lux

1.5 times/second

1 x 12V battery

7.4 x 2.5 x 1"/188 x 64 x 24.5 mm

5.65 oz/160 g

\$85

ST-1301

50,000 Lux, 5,000 Fc

0.1 Lux, 0.1 Fc

±5% < 10,000 Lux

1.5 times/second

1 x 12V battery

7.4 x 2.5 x 1"/188 x 64 x 24.5 mm

5.65 oz/160 g

\$95

Light Meters

\$125
LM-81LX



Model LM-81LX

Designed for one hand operation and to fit easily into a tool belt or pocket.

- Measures to 20,000Lux; 2,000 Fc
- Auto-ranging
- User selectable Lux / Footcandles
- Min/Max & Data hold function
- Auto shut off & zero adjustment button
- Over range & low battery indication
- Battery included

Optional Accessories:

Model CA-52A Soft Carrying Case Price \$15

\$145
YK-10LX



Model YK-10LX

Designed to measure a wide range of lighting types.

- Large LCD display provides clear readouts even in high ambient light levels
- Measures to 20,000 Lux
- Data hold function
- Zero adjustment screw
- Over range & low battery indication
- Battery included

Optional Accessories:

Model CA-52A Soft Carrying Case Price \$15

\$220
K7020



Model K7020

Easy to operate - simply switch unit to the desired range.

- Triple range in Lux or Foot Candles
- Measures to 50,000 Lux / 5,000Fc
- Data hold function
- Automatic zero adjust
- Over range & low battery indication
- LSI circuitry provides reliability & durability
- Analog output capability to 200mV max
- Separate light sensor allows user to take measurements from an optimum position
- Battery included

Optional Accessories:

Model CA-52A Soft Carrying Case Price \$15

LM-81LX	YK-10LX	K7020
0 to 20,000 Lux; 0 to 2,000 Fc	0 to 20,000 Lux	0 to 50,000 Lux; 0 to 5,000 Fc
1, 10 Lux; 0.1, 1 Fc	1, 10 Lux	1, 10, 100 Lux; 0.1, 1, 10 Fc
±5% of reading	±5% of reading	±5% of reading
1 time/second	2 times/second	0.4 second
1 x 9V battery	1 x 9V battery	1 x 9V battery
6.1 x 2.36 x 1.3"/156 x 60 x 33 mm	7.87 x 2.68 x 1.2"/200 x 68 x 30 mm	6.4 x 2.75 x 1.2"/163 x 70 x 30 mm
5.65 oz/160 g	9.88 oz/280 g	7.76 oz/220 g
\$125	\$145	\$220

Light Meters

\$220
LX-1102



Model LX-1102

Dual display light meter - large, easy-to-read LCD and 40-segment bargraph.

- Large, dual display, LCD w/ 40 segment bargraph
- High resolution & zero adjustment button
- Data Hold, Peak & Memory recall
- Min/Max function
- RS232 serial interface
- Auto shut off & low battery indication
- User selectable Lux/Fc
- Includes battery

Optional Accessories:

- Model SW-U801-WIN Software Price \$97**
- Model UPGB-02 RS232 Cable Price \$30**
- Model CA-05A Soft Carrying Case Price \$21**

\$269
LX-105



Model LX-105

Simultaneous display of Foot-candles or Lux, plus four lighting types.

- Displays % differential from reference point
- "ZERO" re-calibration
- Cosine & colour corrected measurements
- 4% f.s. accuracy is enhanced by selecting lighting type (Tungsten/Daylight, Fluorescent, Sodium, Mercury)
- Record/Recall Min, Max & Avg readings
- Data Hold plus Auto shut-off
- Built-in RS-232 serial interface
- Optional Windows® 95/98 compatible software & serial cable
- Optional battery powered datalogger

Optional Accessories:

- Model DL-9601 Datalogger Price \$420**
- Model SW-U801-WIN Software Price \$97**
- Model UPGB-02 RS232 Cable Price \$30**
- Model CA-05A Soft Carrying Case Price \$21**

Specifications

Model	LX-1102	LX-105
Measuring Range	0 to 400,000 Lux; 0 to 40,000 Fc	0 to 50,000 Lux, 0 to 5,000 Fc
Resolution	0.1 to 100 Lux; 0.01 to 10 Fc	1, 10, 100 Lux, 0.1, 1, 10 Fc
Accuracy	±3% of reading	±4% of reading
Sampling Rate	-	0.4 second
Power Supply	1 x 9V battery	1 x 9V battery
Dimensions	7.87 x 2.68 x 1.2"/200 x 68 x 30 mm	7.1 x 2.83 x 1.3"/180 x 72 x 32 mm
Weight	7.76 oz/220 g	11.82 oz/335 g
Price	\$220	\$269

Light Meters

\$225
LM-8000



Model LM-8000

4-in-1 multi-function meter - anemometer, humidity meter, light meter and type K thermometer in one compact unit.

- Light: 0 to 20,000 Lux / 0 to 2,000 Fc, auto ranging
- User selectable Lux/Foot-candles
- Anemometer: 0.4 to 30.0 m/s
- Velocity Units: m/s, km/h, mph, knots, ft/min
- Type K Thermometer: -148 to 2350°F/-100 to 1300°C
- °F/°C switchable
- Humidity: 10 to 95%RH
- Data Hold, Record (Max/Min)
- Designed for one-hand operation
- Includes battery

Optional Accessories:

Model CA-52A Soft Carrying Case Price \$15

\$115
ST-22



Model ST-22

Combines the functions of a sound level meter, light meter, humidity meter and thermometer into one compact unit.

- 4-in-1 high performance multi-tester
- Light to 20,000 Lux
- Sound to 100 dB
- Humidity to 95%RH
- Temperature Range to 2350°F/1300°C
- 2000-count LCD display
- Auto shut off & low battery indication
- Included accessories: Rubber holster, 9V battery & K-type temperature probe

\$295
ST-8820



Model ST-8820

A single unit that combines the measurement of four key functions: sound, light, humidity and temperature.

- Sound level function can be used to measure noise levels in factories, schools, offices, studios & auditoriums
- Sound Level Range: 35 to 135 dB, A low/high & C low/high
- Light function is used to measure luminance in the field
- Light Range: 0.01 to 20,000 Lux
- Fully cosine corrected for the angular incidence of light
- Very stable, long life silicon diode light sensor
- Humidity Range: 25 to 95% RH
- Semiconductor humidity sensor
- Temperature Range: -4 to 1400°F / -20 to 750°C
- Type K thermocouple input for temperature measurements
- Data Hold & Max Hold
- Auto shut off & low battery indication
- Included accessories: carrying case, K-Type temperature probe & 9V battery

LM-8000	ST-22	ST-8820
0 to 20,000 Lux; 0 to 2,000 Fc	0 to 20,000 Lux	0 to 20,000 Lux
1, 10 Lux; 0.1, 1 Fc	0.1 Lux	0.1, 1, 10 Lux
±5% of reading	±5% of reading	±5% of reading
1 time/second	-	-
1 x 9V battery	1 x 9V battery	1 x 9V battery
6.1 x 2.36 x 1.3"/156 x 60 x 33 mm	4.76 x 2.36 x 1.57"/121 x 60 x 40 mm	4.76 x 2.36 x 1.57"/121 x 61 x 40 mm
5.65 oz/160 g	9.88 oz/280 g	9.88 oz/280 g
\$225	\$115	\$295