



# The Professional Photo SourceBook

## Section 7

### Lightmeters

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# LIGHT METERS

## INTRODUCTION

### Lightmeters

The majority of cameras have built-in exposure meters, and yet many people who have such cameras feel the need for separate exposure meters.

Built-in exposure meters are almost exclusively limited to reading the light reflected. In some instances the resulting photograph may be satisfactory. But very frequently this "Average" light measurement is inappropriate. Unlike the handheld meter, built-in meters often fail to compensate for scenes with high or low contrasts. Proper exposure control is the key to accurate and creative photography. Suppose pictures are being taken at a sunny beach or in bright snow - both intense light situations. The built-in reflected meter will tend to be overly effected by the light reflected from the sand or snow, resulting in an overexposed photograph. In such a case, a hand-held incident light exposure meter can be relied upon to give you the correct reading for beautiful pictures. The incident meter which measures the light falling on the subject, is suitable for photography work in studios, such as shooting models and commercial products, as well as for copy-work where precise illumination balance and color reproduction are necessary. The reflected light types which measure the light reflected from all parts of a scene to the camera are more suitable where the subject is rather far away and unapproachable.

For a long time, handheld exposure meters were simple instruments that did simple chores, namely measure ambient light. Newer meters added a new dimension to light measuring capability - reading short pulses of light from electronic flash units. But the mechanism of the meter is still mechanical: An electrically charged coiled-galvanometer movement responds to light reaching a photocell, and this reading, in arbitrary light value units or EVs (Exposure Value), is transferred to a calculator dial to arrive at a combination of aperture and shutter speed. With flash-reading devices, the shutter speed is a fixed value, namely 1/60th second for X-sync. Other meters may have the galvanometer movement and calculator dial in one function.

### Microchip

The incorporation of microchip control into meter design effectively overcomes the meter's mechanical limitations to an appreciable degree, and, at the same time, broadens its capabilities. A microchip is nothing more than a miniaturized integrated-circuit board. It is up to the user to redefine those parameters in daily use. The photographer merely enters data that corresponds to the mode of operation or specific light-measurement needed.

Microminiaturization permits cosmetic as well as functional changes. It has made the meter sleek in design, smaller in size and lighter in weight. A typical microprocessor based meter features an LCD (liquid-crystal-display) panel situated below the rotating head, and buttons. There are slider controls that let you enter the operating mode/measurement function and buttons for selecting film speed, shutter speed, EV scale, and possibly more. The digital readout displays one set of data at any given time. With a calculator dial, on the other hand, you simply have to visually line up any combination you want, back and forth, from combination to combination, to your heart's content.

There is an advantage to digital. Having gotten the hang of it, the easier to read display allows for faster decisions. The numbers are more legible. And most important, the readings obtained are fast and direct — there is no need to transfer data from a needle reading to a calculator dial. And for those who require exposure readings made to the nearest 1/10 stop, the digital display provides that information.

### Spot Metering

Selective-area reflected light measurement with a spot meter is an approach favored by many photographers. Used with a neutral gray card, the spot meter simulates an incident lightmeter. With microprocessor technology, spot meters are available with electronic flash, as well as with ambient light.

# LIGHT METERS

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**Scout 3  
Ambient Lightmeter (4002)**  
A compact and lightweight meter that is simple to use. The selenium metering cell operates without a battery. Large dial with easy-to-read scales and match needle system.  
**Item # GOS3.....44.95**



**Pilot 2  
Ambient Lightmeter (4005)**  
The most compact meter made for accurate reflected and incident light measurement. An optional accessory enables you to mount the Pilot 2 on the hot shoe of your camera. It weighs under 1½ oz., yet it has everything needed for movie or still photography. Quick and convenient operation with its large computer dial and large, clear scales. The equivalent European model number is Sixtino-2.  
**Item # GOP2.....79.95**



Gossen Pilot 2  
Ambient Lightmeter (4005)

## SPECIFICATIONS OF SCOUT 3 AND PILOT 2 METERS

MODEL	SCOUT 3	PILOT 2
MEASURING SYSTEM	Ambient (Reflective)	Ambient
DISPLAY READOUT	Indicator Needle	Indicator Needle
FILM SPEED I.S.O.	6 to 6,400	6 to 3,200
F-STOP	F1 to F32	F1.4 to F22
SHUTTER SPEED	1/2000 sec. to 8 sec.	1/1000 sec. to 4 min.
ANGLE OF COVERAGE	50°	52° Reflective 180° Incident
SENSITIVITY AT I.S.O. 100	EV+6 to EV+16	EV+5 to EV+17
SENSITIVITY FOOTCANDLES	-	FC.32 to F.C.32,000
POWER SOURCE	No Battery	No Battery
DIMENSIONS	2½ x 3½ x 1½"	1.75 x 2.5 x 1½"
WEIGHT	1.75 oz. (50g)	1.5 oz. (43g)

*Subject to change without notice*

## Gossen Luna Pro

**Luna Pro Digital (4022)**  
The Gossen Luna-Pro Digital is a thin, lightweight meter that's easy to operate. The front panel features control buttons that are recognizable at a glance on a display with easy-to-read numerals. The narrow measuring angle allows you to meter important details of the subject with the greatest accuracy. The contrast range is precisely analyzed and clearly displayed. To conserve batteries, the Luna-Pro Digital has an automatic power off, yet settings and measurements are stored in memory and can be recalled, even after the unit has been shut down.  
**Item # GOLPD.....166.95**

**Luna Pro S (4020)**  
The Luna-Pro S is the choice of professional photographers. Experience-proven, it provides accurate reflected or incident light readings in all kinds of light, from a flickering candle to a bright summer's sun. As a system meter, it will provide correct exposures in any situation. More than just a superb hand-held meter, the Luna-Pro S has a wide range of optional accessories to further increase versatility.  
The Luna-Pro S can be adapted to calculate the correct exposure for photomicrography with the Microscope accessory. It can be turned into a dual angle "spot meter" with the Variable Angle accessory. It can also be used to take through-the-lens readings from a large format camera's groundglass with the optional Flexible Fiber Optics Probe accessory, or you can use it for copy work with the optional Copy accessory. And it comes in handy in the darkroom, as well; the enlarging accessory helps to find the right paper grade for black and white prints. European equivalent model # LUNASIX 3.5  
**Item # GOLPS.....199.95**



Gossen Luna Pro  
Digital (4022)

Gossen Luna  
Pro S (4020)



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## Gossen Luna Pro, *continued*

### Luna Pro F (4030)

A unique meter for measuring both continuous light and flash. A silicon blue sensor for instantaneous reading of high and low light levels. Incorporating a null meter readout, the Luna-Pro F is ideally suited for determining scene brightness range and lighting ratios, which can be read directly from the meter at any light level.

The Luna-Pro F delivers both incident and reflected light measurements without scale switching or accessories, and enables cordless readings of single or multiple flash. Other capabilities include direct measurement of zone system values; an electronic sample and hold circuit, which stores light measurement for reading in remote areas; readout of all applicable aperture/shutter speed combinations; programmable exposure-factor corrections for working with bellows, filters, etc. and automatic shutoff to extend battery life.

A full system of interchangeable accessories expand the measuring capabilities of this fine instrument into all areas of photography, exceeding even the most demanding requirements of professionals working on location, studio, dark-room and laboratory assignments. European Equivalent model # LUNASIX F.

Item # **GOLPF** ..... **289.95**

### Luna Pro SBC (4025)

Reads accurately down to -4 EV for extreme low light capability. It also provides  $\pm 3$  f-stop scale for direct read-out of brightness range, Zone System values and lighting ratios.

Dial settings are adjustable so that exposure factor corrections for bellows, filters, etc., can be automatically compensated for. An indicator reminds you when this feature is being used.

It accepts all existing optional Gossen Luna Pro accessories. Two of these, the Luna-Color and Profi-Select TTL, have specifically designated functions on the Luna-Pro SBC for optimum ease of use. With the addition of the Luna-Color, the Luna Pro SBC becomes a color temperature meter. The readout is in degrees Kelvin and indicates which correction filters are needed for color balance for the type of film being used.

With the optional Profi-Select TTL, Ambient light and flash measurements can be taken at the film plane of a view camera, automatically taking bellows factors and filters into account. An optional 4 x 5" cassette helps position the probe accurately. The equivalent European model number is Profi-Six.

Item # **GOLPBC** ..... **251.95**



Gossen Luna Pro F (4030)



Gossen Luna Pro SBC (4025)

## SPECIFICATIONS FOR LUNA PRO MODELS

MODEL	LUNA PRO DIGITAL	LUNA PRO S	LUNA PRO F	LUNA PRO SBC
PHOTO CELL	S.B.C.	C.D.S.	S.B.C.	S.B.C.
DISPLAY READOUT	Digital L.C.D. plus Analog L.C.D.	Indicator Needle	Indicator Needle	Indicator Needle
MEASURING SYSTEM	Ambient	Ambient	Ambient and Flash	Ambient plus optional attachment for color temperature metering
FILM SPEED I.S.O.	3 to 8,000	0.8 to 25,000	0.8 to 25,000	0.8 to 25,000
F-STOP	F1 to F90	F1 to F90	F0.7 to F128	F0.7 to F128
SHUTTER SPEED	1/8000 sec. to 60 min.	1/4000 sec. to 8 hrs.	1/4000 to 8 hrs.	1/4000 sec. to 8 hrs.
CINE	-	-	4.5 to 144 F.P.S.	4.5 to 144 F.P.S.
ANGLE OF COVERAGE REFLECTED LIGHT	25°	30°	30°	30°
SENSITIVITY at 100 I.S.O.	EV-25 to +18	EV-4 to +17	EV-1 to +17	EV-4 to +17
SENSITIVITY AT FOOTCANDLES	-	.016 to 32,000 F.C.	.125 to 32,000 F.C.	.016 to 32,000 F.C.
LUX RANGE	-	-	28.8 to 7360 LUX	-
POWER SOURCE	1.5v AA Battery	Two 1.35v 625a Batteries	9v Battery	9v Battery
DIMENSIONS	2.5 x 4.5 x .75"	2 5/8 x 1.25 x 4"	4.75 x 1.75 x 2.75"	4.75 x 1.75 x 2.75"
WEIGHT	3.35 oz. (95g)	7 oz. (198g)	8.5 oz. (240g)	8.25 oz. (233g)

*Subject to change without notice*

**14-Day Customer Satisfaction Guarantee**

# LIGHT METERS

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## Gossen Professional Meters

### Luna Star F2 (4032)

The microprocessor-controlled Luna-Star F2 automatically measures and analyzes both flash and continuous light in a single metering operation and displays the reading clearly, in large, easy-to-read numerals.

It also measures both incident and reflected light for particularly accurate exposures, especially with subjects that are either very bright or very dark.

It features a rotating head which points the light sensor in any direction. A series of flash synchronizing speeds from 1 sec. to 1/1000 sec. allow you to control the exposure of flash shots that utilize several different sources of light. The equivalent European model number is Vario-Six F.

**Item # GOLSF2.....312.95**



Gossen  
Luna Star  
(4032)

### SPECIFICATIONS FOR LUNA STAR F2

MEASURING SYSTEM	Ambient and Flash
FILM SPEED I.S.O.	3 to 8,000 I.S.O.
DISPLAY READOUT	Digital L.C.D. plus Analog L.C.D.
F-STOP	F1 to F90.9
SHUTTER SPEED	1/8000 to 60 min.
CINE SPEED	8 to 64 F.P.S.
FLASH SYNC.	1 to 1/1000 sec.
ANGLE OF COVERAGE	30° Reflected
SENSITIVITY AT I.S.O. 100	EV-2.5 to EV18
POWER SOURCE	9v Battery
DIMENSIONS	5 x 2 1/2 x 1"
WEIGHT	4.4 oz. (125g)

*Subject to change without notice*

### Luna Pro Digital F (4023)

Begin with the compact size, ease of operation and sensitivity of the Luna-Pro Digital exposure meter, add the ability to measure flash, and you have the Luna-Pro Digital F. Even with the addition of flash capability, this meter remains so thin and lightweight, that it slips easily into a shirt pocket or its new ever-ready case.

Control buttons on the front panel, plus a big, easy-to-read digital display, make it a joy to use. The oversize LCD panel provides direct readout of all critical information, including precise analysis of the contrast range. A built-in optical diffusion dome slides easily to switch between incident and reflected light measurement. In flash mode, it calculates multiple flash exposures and integrates light at sync speeds from 1 sec. to 1/1000th sec.

The Luna-Pro Digital F has a sensitivity range that is wide enough to give accurate measurements from bright sunlight to deep shadows, and features cord or cordless flash operation and auto power off with memory.

**Item # GOLPDF.....T.B.A.**

### Ultra Pro (4040)

The Ultra Pro reads flash as well as continuous light. It has a full range of photographic and photometric LCD readouts. Direct readouts of brightness range, contrast lighting and flash-to-daylight ratios. This simple, microprocessor-controlled meter, offers one-handed operation. Reads in tenths of a stop and has a built-in 5-stop flash range extender with automatic correction for high-intensity lighting. Also features a built-in timer, silicon-blue photo sensor and a full range of accessories that automatically adjust. The equivalent European model number is Master-Six.

**Item # GOUP.....659.95**

### SPECIFICATIONS FOR LUNA PRO DIGITAL F/ULTRA PRO

MODEL	LUNA PRO DIGITAL F	ULTRA PRO
PHOTO CELL	S.B.C.	S.B.C.
DISPLAY READOUT	Digital L.C.D.	Digital L.E.D.
MEASURING SYSTEM	Ambient/Flash	Ambient/Flash
FILM SPEED I.S.O.	3 to 8000	1 to 800,000
F-STOP	f/1 to f/90	f/0.7 to f/90.9
SHUTTER SPEED	1/800 sec. to 1 hr.	1/4000 sec. to 8 hrs.
FLASH SYNC	1/100 to 1 sec.	1/1000 to 1 sec.
CINE SCALE	8 to 64 f.p.s.	-
ANGLE OF COVERAGE REFLECTED LIGHT	30°	30°
SENSITIVITY AT 100 I.S.O.	EV-2.5 to +18	EV-4 to EV+18
SENSITIVITY AT FOOTCANDLES	-	.016 to 32,000 F.C.
LUX RANGE	-	0.75 to 350,000 Lux
POWER SOURCE	AA Battery	9v
DIMENSIONS	2 1/2 x 4 1/2 x 3/4"	5.5 x 2.75 x 1 3/8"
WEIGHT	3.75 oz. (106g)	8.2 oz. (232g)

*Subject to change without notice*



Gossen Pro Digital F (4123)



Gossen Ultra-Pro (4040)

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## Ultra Spot 2 (4050)

The Ultra Spot 2 provides all the information you need at a single glance. When looking through its viewfinder you can see the subject, a 1° measuring circle and a complete display of exposure information.

The combination of electronic accuracy and a high-quality optical lens means the Ultra-Spot 2 provides a vivid 15° view with a 1° circle in the middle to indicate the meter's measuring angle. The exposure information is displayed around the viewing field and includes: ambient light readings, f-stop, shutter speed, exposure value, zone or cine. In addition, you can average up to ten discrete readings. The Gossen Ultra Spot 2 is truly an all purpose spotmeter, equally adaptable to color or black & white film. Engineered for both ambient and flash lighting, it is also a natural for zone system photography. Comfortable design with a wealth of technically advanced features and fingertip operating ease, the Ultra Spot is the precise way to take all of your spot readings. The equivalent European model number is Spot-Master.



**Item # GOUS2 .....614.95**

## Color Pro 3F (4063)

The micro-processor Color Pro 3F is designed for color temperature light balancing in Kodak conversion and mired, CC filter values, lux and lux seconds. This color temperature meter analyzes the prevailing lighting situation with flash and continuous light, at the push of a single button. The color temperature is measured and the corresponding filters in Light Balancing and CC values are displayed. The Color Pro displays luminous intensity of flash and continuous light in lux and lux seconds readings. Adjusted functions are permanently indicated on the display. It also features an integrated triple sensor and a flash sync triggering button. The equivalent European model number is Color Master 3F.



**Item # GOCP3F .....824.95**

## Panalux Electronic 2 Footcandle Meter (4055)

Provides critical readings for the most extreme intensities, from blazing light to almost total darkness. With 9 measuring ranges, the Panalux can measure from .05 to 20,000fc. Indispensable for applications as diverse as cinematography, highway lighting, work-area illumination and greenhouses, this ultra sophisticated instrument is balanced to read daylight and any commonly used artificial light, except pulsed light. "Cosine factor" problems common to footcandle meters have been eliminated by the unique design of the probe. Controls include a nine-range selector and battery test switch. An accessory luminance attachment can be purchased separately.

**Item # GOPL .....499.95**

### SPECIFICATIONS FOR ULTRA SPOT 2

PHOTO CELL	S.B.C.
MEASURING SYSTEM	Spot Ambient/and Spot Flashmeter
DISPLAY READOUT	Green L.C.D. in Viewfinder
FILM SPEED I.S.O.	1 to 80,000
F-STOP	F1 to F90.9
SHUTTER SPEED	1/8000 sec. to 60 min.
FLASH SYNC	1/8 to 1/1000 sec.
ANGLE OF COVERAGE	1° with a 15° Field of View
SENSITIVITY AT 100 I.S.O.	EV1 to EV22
OTHER DATA	0 to X adapted to film development zone system 15 second duration of exposure reading 43mm Ø filter diameter
POWER SOURCE	9v Battery
DIMENSIONS	3.5 x 2.4 x 7.5" L.W.H. (90 x 57 x 190mm)
WEIGHT	14 oz. (400g)

*Subject to change without notice*

### SPECIFICATIONS FOR COLOR PRO 3F

PHOTO CELL	Triple Silicon Photodiode
MEASURING SYSTEM	Color Meter for Ambient or Flash
DISPLAY READOUT	Digital L.C.D.
COLOR TEMPERATURE	2,000 to 40,000k
LB FILTER VALUE	-399 to +475 mired, or change over to corresponding Kodak color compensating and color conversion filter values
FLASH INTENSITY	5 to 1,500lx
FLASH SYNC	1/500 sec. to 1/2 sec.
POWER SOURCE	9v Battery
DIMENSIONS	5 x 2 5/8 x 1"
WEIGHT	4.5 oz. (127g)

*Subject to change without notice*

### SPECIFICATIONS FOR FOOTCANDLE METER

FOOTCANDLES	0/2/6/20/60/200/600/2,000/6,000/20,000
PROBE CABLE	5 Feet
DISPLAY READOUT	Indicator Needle
POWER SOURCE	9v Battery
DIMENSIONS	4.4 x 3.2 x 1.4"
PROBE DIMENSIONS	4.2 x 0.8"
WEIGHT	12.3 oz. (348g)

*Subject to change without notice*

# LIGHT METERS

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## Gossen Accessories

### ACCESSORIES FOR THE ULTRA-PRO, MULTI-PRO, LUNA PRO-F, LUNA-PRO sbc, AND LUNA-PRO S

#### Variable Angle Attachment (4106)

For reflected light readings, the measuring angle of Gossen meters corresponds to a light acceptance angle of 30°. When using the Variable Angle Attachment, this angle can be reduced to either 15° or 7.5°. The small measuring area permits accurate measurements for exposures with telephoto lenses and selective readings of various parts of the scene or subject when normal lenses are used. When using the Variable Angle Attachment, the 7.5° and 15° areas being measured are visible through a marked reflex viewer with bright aerial imaging.

**Item # GOVAA.....69.95**

#### Enlarging Attachment (4100)

The Enlarging Attachment will help eliminate guesswork in darkroom printing. It determines contrast range and correct exposure time by measuring the projected image on your enlarger easel. After calibrations for paper speed, direct readings of aperture and exposure time are possible, resulting in savings of time and material.

**Item # GOEA.....58.95**

#### Microscope Attachment (4102)

The Microscope Attachment utilizes the meter's measuring sensitivity for convenience and reliable exposure measurement when taking photomicrographs. The Microscope Attachment fits the ocular tube of most microscopes for exact exposures determination and it is quite useful in measuring light intensity for fluorescent microscopy.

**Item # GOMSAQ.....29.95**

#### Fiber Optics Probe Attachment (4104)

With this attachment on the meter, measurements can be made in many areas which are usually inaccessible with an exposure meter. It is especially suitable for microphotography, groundglass measurements and for density measurements of negatives or transparencies.

**Item # GOFOP.....209.95**

#### Repro Attachment (4108)

Allows the meter to obtain exposure value of flat copy, such as paintings, documents and photographic prints. The illumination on the copy board can be measured for evenness across various points of the material to be copied. This attachment can also be reversed for measurements of light transmitted through slides or other translucent material being copied.

**Item # GORCA.....52.95**

### Miscellaneous Accessories

#### Luminance Attachment for Panalux 2 (4141)

**Item # GOLA.....142.50**

#### Camera Adapter Clip for Pilot 2 (4099)

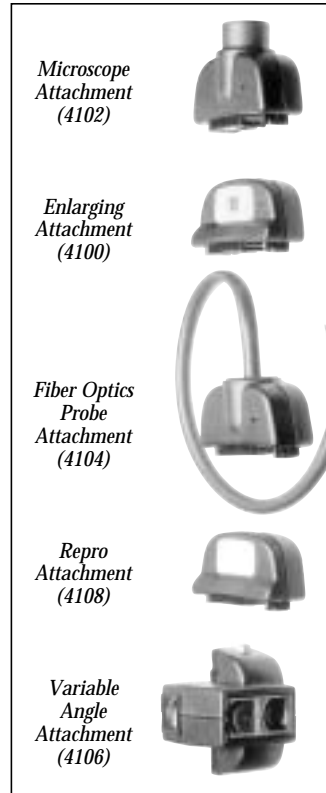
**Item # GOCAC.....6.95**

#### Calculator for Panalux 2 (4140)

**Item # GOC.....46.95**

#### Adapter Kit and Batteries for Luna-Pro and Luna-Pro S (4145)

To convert meters with mercury batteries to silver oxide  
**Item # GOBHP.....17.95**



### ACCESSORIES FOR THE ULTRA PRO AND LUNA-PRO sbc

#### Lune-Probe (4126)

The Lune-Probe extends the measuring application into hard-to-reach places. It is ideal for macrophotography, view camera groundglass measurements and even density measurements of negatives and transparencies using the meter's density function.

**Item # GOLPA.....272.95**

#### Multibeam (4122)

The Multibeam is a reflex-viewing spotmeter attachment with 1°, 5° and 10° angles of acceptance. The single-lens reflex design permits measuring and viewing through the same lens - eliminating parallax problems. A built-in diopter correction allows adaptation of the unit to the individual's eyes.

**Item # GOMSA.....359.95**

### ACCESSORIES FOR THE LUNA-STAR F AND LUNA-STAR F2

#### 5° Spot Attachment (4112)

**Item # GOSALSF.....84.95**

#### Case for Luna-Star F and F2 with 5° Spot Attachment (4113)

**Item # GOCLSF.....29.95**

#### +5 f-Stop Range Extender for Luna-Star F (4114)

**Item # GORELSF.....9.95**

### QUICK-GLANCE ACCESSORY COMPATIBILITY CHART

	ULTRA PRO	LUNA PRO SBC	LUNA PRO F	LUNA PRO LUNA PRO S	MULTI PRO
Variable Angle Attachment	✓	✓	✓	✓	✓
Enlarging Attachment	✓	✓	✓	✓	✓
Repro/Copy Attachment	✓	✓	✓	✓	✓
Microscope Attachment	✓	✓	✓	✓	✓
Fiber Optics Probe	✓	✓	✓	✓	✓
Luna-Probe	✓	✓			
Multibeam	✓	✓			

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# LIGHT METERS

## MINOLTA

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### Auto Meter III (804-4307)

The Minolta Auto Meter III combines a microcomputer, memory function, and a large LCD data panel to provide the accuracy of digital readout and the graphic indication of an analog meter. Plus, it gives continuous readings of f-stop and shutter speed combinations, as long as the measuring button is held down. In a single display, the user gets both digital and analog indications on the LCD data panel.

Minolta's Dot Array Display is convenient for visually checking the relative changes in the amount of light, while the digital readout offers the most accuracy. The microcomputer provides a memory for two measurements, either of which can be recalled at the touch of a button, one at a time, for comparison with a third, final measurement. Simultaneously, the Dot Array Display shows all three measurements in terms of the required f-number so that the lighting contrast on all three measured spots can be quickly compared. A wide variety of optional accessories are available, making the Minolta Auto Meter III an ideal choice.

**Item # MIAM3 .....189.95**



Minolta Auto Meter III (804-4307)

### Auto Meter IV F (805-4103)

A compact and lightweight digital exposure meter for measuring ambient light and flash, with or without a sync cord. It is designed to provide unparalleled repeatability and accuracy. In all measuring modes, with reflected or incident readings, it is a meter to be relied upon completely, leaving the photographer free to concentrate on the creative challenges at hand. Its memory stores two separate readings and displays them simultaneously, making it easy to determine subject contrast range or lighting ratio. This is useful when basing exposure on highlight and shadow reading. For cinematographers, the Auto Meter IV F has eight framing rate settings. Plus, the extended ISO range can be used to factor in filtration correction. A wide range of optional accessories is available for use with the Auto Meter IV F to further expand its applications and versatility.

**Item # MIAM4F.....274.95**

### Flashmeter V (805-6103)

The Minolta Flashmeter V's intelligent AUTO mode measures ambient, flash, or mixed ambient and flash light. In addition, it provides exposure analysis for flash measurements, showing the ratio of flash light to overall exposure. Other easy-to-use functions include: Brightness difference function for adjusting lighting balance; memory with analog scale for previsualizing results by measuring multiple points; calculation functions for averaging stored measurements or biasing exposure readings for shadows or highlights; instant-film ISO button for taking measurements for test exposures without resetting the ISO. Plus an easy-to-read data panel, positive-action up/down dial and a sliding cover that hides less often-used buttons.

**Item # MIFM5 .....549.95**



Minolta Auto Meter IV F (805-4103)

Minolta Flash Meter V (805-6103)

### SPECIFICATIONS FOR AUTO METER III, IV F, and FLASH METER V

MODEL	AUTOMETER III	AUTOMETER IVF	FLASHMETER V
PHOTO CELL	Silicon Photo Cell	Silicon Photo Cell	Silicon Photo Cell
MEASURING SYSTEM	Ambient	Ambient and Flash	Ambient and Flash
DISPLAY READOUT	Digital L.C.D. plus L.C.D. Analog	Digital L.C.D. plus L.C.D. Analog	Digital L.C.D. plus L.C.D. Analog
FILM SPEED I.S.O.	12 to 6,400	3 to 8,000	3 to 8,000
F-STOP	F0.7 to F64	F1 to F90	F0.7 to F90
SHUTTER SPEED - AMBIENT	1/2000 sec. to 30 min.	1/8000 to 30 min.	1/16000 sec. to 30 min.
SHUTTER SPEED - FLASH	-	1/500 to 1 sec.	1/10000 sec. to 30 min.
CINE SPEED	1/50 sec. with Conversion Table	8 to 128 F.P.S.	8 to 128 F.P.S.
FLASH SYNC TIMES	-	1/500 to 1 sec.	1/1000 sec. to 30 min.
ANGLE OF COVERAGE	40°	40°	40°
SENSITIVITY AT 100 I.S.O.	EV-2.4 to EV22.5	EV-2 to EV24.4	EV-2 to EV22.5
POWER SOURCE	6v (4SR44)	One AA	One AA
DIMENSIONS	1.2 x 2.7 x 5.2" (31 x 69 x 132mm)	2.3 x 1 x 5.8" (59 x 26 x 147mm)	2.7 x 6.2 x 1.1" (69 x 158 x 28mm)
WEIGHT	5.3 oz (150g)	4.4 oz. (125g)	5.8 oz. (165g)

Subject to change without notice

Overnight Shipping Available



# LIGHT METERS

MINOLTA

## Minolta Accessories for the Auto Meter III, Autometer IV, and Flashmeter V

**Spherical Diffuser** (1509-0584)  
For incident reading replacement  
**Item # MISD.....22.95**

**Reflected Light Attachment 40°** (8038-515)  
The Reflected Light Attachment has a 40° angle of acceptance which corresponds to the angle of view seen with 50mm lens on a 35mm SLR camera.  
**Item # MIRLA40.....17.95**

**Flat Diffuser** (8034-200)  
Used to measure the lighting ratio between main and auxiliary light sources, to determine illuminance values and to take exposure readings for flat surfaces such as paintings.  
**Item # MIFD .....17.95**



**Spot Mask** (8034-300)  
The Spot Mask is an enlarger attachment so that the meter can double up as an enlarging meter. First determine the aperture setting and exposure time for a standard negative, then measure the illumination using the spot mask. With subsequent negatives, the need for a test print can be eliminated by measuring an area on the negative of similar density to the metered area on the standard negative.  
**Item # MISME.....22.95**

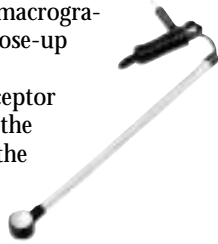
**Booster II Set** (8045)  
Consists of a Booster II, spot-probe, microscope, 35mm film-plane and SLR eyepiece attachments. The Booster II is a high-sensitivity receptor that takes measurements off the focusing screen of a large-format view camera when the spot-probe receptor is attached to it. Useful for close-ups and macrophotographs. Direct readings through the microscope's optics are possible. Flash exposures can be calculated with the Flashmeter. Highly accurate measurements of flash or ambient light at the camera's film plane are possible with the 35mm film-plane attachment. This method is more accurate than measurements taken through the SLR eyepiece, because the Booster II measures the light that actually passes through the camera lens and strikes the film. The SLR eyepiece attachment enables taking centered, circular TTL exposure readings through the camera's lens. This function is important if you own an SLR camera that does not have a built-in meter. Also useful for taking TTL flash measurements. Requires one 6v, four LR44 or equivalent battery.  
**Item # MIB2S.....234.95**



**4X Spherical ND Diffuser** (8034-600)  
A 4X Spherical ND Diffuser is used when the light level is too bright to be measured by the standard diffuser. The measurement range is extended by two f-stops.  
**Item # MISNDD4 .....22.95**

**8X Spherical ND Diffuser** (8034-650)  
For the Flashmeter V only. It is the same as the 4X Spherical ND Diffuser, with the measurement range extended by 3 f-stops.  
**Item # MISNDD8 .....22.95**

**Mini Receptor** (8034-500)  
For photomacrography and close-up work, this remote receptor plugs into the socket on the meter's receptor head. The Mini Receptor can be used to measure incident light in places that are otherwise inaccessible to the meter's receptor head.  
**Item # MIMR .....124.95**



**ViewFinder 5°** (8034-156)  
With case. The ViewFinder 5° features a 5° angle of acceptance and enables spot metering of subjects from a distance. Displayed exposure value must be adjusted when used with Autometer III.  
**Item # MIVF5.....89.95**

**ViewFinder 10° II with Case** (8034-116)  
Same as above, featuring a 10° angle of acceptance.  
**Item # MIVF10.....86.95**

**Sync Cord III** (8034-910)  
For use with the Flashmeter and Auto Meter IVF, the Sync Cord III is a 5-meter long cord that connects to the meter, flash unit, and camera's sync terminal simultaneously, making meter-flash and camera-flash synchronization possible without changing connections.  
**Item # MISC3.....29.95**

### Miscellaneous Accessories

**Meter Kit Case II** (8048-650)  
The sturdy Meter Kit Case II holds a Minolta meter and has space for a wide variety of accessories for easier portability. With the meter and accessories together, nothing is forgotten when going to a shoot. Please Note: The Sync Cord III will not fit in this case.  
**Item # MIMKC2 .....111.95**

**Strap for Flashmeter IV/V, Auto Meter III and IVF** (8044-1051)  
Replacement.  
**Item # MISNAM3 .....5.95**

**Case for Flashmeter IV and V** (8048-600)  
Replacement.  
**Item # MICFM4.....38.95**

**Case for Auto Meter III** (8044-600)  
Replacement.  
**Item # MICAM3 .....28.50**

**Case for Auto Meter IVF** (8054-600)  
Replacement.  
**Item # MICAM4F.....28.50**

**Infrared Receiver/Trigger** (805-0107)  
**Item # MIRTIR.....199.95**

**Data Receiver DR-1000** (805-0207)  
**Item # MIDR1000.....249.95**

# LIGHT METERS

MINOLTA

METERS

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## Spot Meter F (8053-107)

The Spot Meter F lets you take 1° spot measurements of ambient or flash light. Liquid-crystal displays on the meter's side panel and in the viewfinder show a full range of exposure information in both digital and analog form. Exposure calculations for highlights, shadows, or mid-tone areas can be made at the touch of a button. Plus, the lighting contrast can be quickly checked while looking through the viewfinder.

The Spot Meter F can automatically calculate the exposure for highlight or shadow areas. And, by using the memory function, the user can average two readings for a mid-tone exposure.

Exposure readings are shown digitally in the meter's data panel and viewfinder displays. The data panel also has an analog f/number scale that can indicate up to four exposure readings. This full range of information makes it easy to determine the optimum exposure in nearly any situation. When the Spot Meter F is switched off, the ISO and shutter speed settings are stored in memory. When the meter is switched back on, the most recent digital exposure readout and any memorized data is displayed.

Item # **MISMF**.....**399.95**

### Spot Meter F Accessories

Neck Strap (8044-1051)  
Replacement.

Item # **MISNAM3**.....**5.95**

Lens Cap (8043-700)  
Replacement.

Item # **MILCSMF**.....**4.95**

Synchro Cord III (8034-910)  
Item # **MISC3**.....**29.95**

Case (8053-600)  
Replacement.  
Item # **MICSMF**.....**36.95**

## Color Meter IIIF (805-5103)

The Minolta Color Meter IIIF is a color compensation meter for ambient and flash with correction value memory. This makes it easier for photographers to maintain consistent color under various types of illumination. The meter measures the color of the light illuminating the subject and determines the filtration required to correct that illumination for the film in use. When measuring both ambient light and flash, selecting the Color Meter IIIF's analyzing function will subtract the ambient light and display only the measured results for flash light. Measurements can be taken for any of the three major film types: Daylight (balanced to 5500k), Type-A Tungsten (balanced to 3400k), or Type-B Tungsten (balanced to 3200k). Measurement results can be displayed as light-balancing and color-compensating indexes, Kodak Wratten filter number and CC index, or photographic color temperature (determined color temperature based on film sensitivity). Display of Kodak Wratten filter numbers makes selecting filters quick and convenient; if 2 Wratten filters are necessary, the Color Meter IIIF displays both numbers.

Color Meter IIIF users can store their own personal correction values for the recommended filtration. Correction values for LB and CC indexes can be stored in any of the meter's nine memory channels to custom-tune meter readings for the desired color reproduction. The correction values are added to the initial measured values to calculate the final displayed results.

Item # **MICM3F**.....**899.95**



Minolta Spot Meter F (8053-107)



Minolta Color Meter IIIF (805-5103)

### SPECIFICATIONS FOR COLORMETER IIIF

PHOTO CELL	Triple Silicon Photo Cells (filtered for R.G.B.)
MEASURING SYSTEM	Color Meter for Ambient and Flash
DISPLAY READOUT	Digital L.C.D.
SENSITIVITY AT I.S.O. 100 AMBIENT	EV3 to EV16.3
F-STOP AT I.S.O. 100 FLASH	F2.8 to F180
COLOR TEMPERATURE	1,600 to 40,000k
LB FILTER VALUE	-500 to +500 Mired
C INDEX	200m to 200g
LB FILTER NO.	85B + 81EF to 80A +80D
FLASH SYNC TIMES	1/500 to 1 sec.
POWER SOURCE	Two AA Battery
DIMENSIONS	6.3 x 2.7 x 1.1" (160 x 68 x 28mm)
WEIGHT	7 oz. (200g)

Subject to change without notice

### SPECIFICATIONS FOR SPOTMETER F

PHOTO CELL	Silicone Photo Cell
MEASURING SYSTEM	Spot Ambient and Flashmeter
DISPLAY READOUT	Digital L.C.D. in Viewfinder plus L.C.D. Side Panel and L.C.D. Analog
FILM SPEED I.S.O.	12 to 6,400
F-STOP	F0.7 to F90
SHUTTER SPEED	1/8000 sec. to 30 min.
FLASH SYNC TIMES	1 to 1/1000 sec.
ANGLE OF COVERAGE	1° with 12 x 17° View Field
SENSITIVITY AT 100 I.S.O.	EV1 to EV22.5
OTHER DATA	Optical System: Through-the-lens reflex type utilizing semi-silvered mirror and pentaprism; focus-fixed for readings 4¼ ft. to infinity; Magnification 1.4x; Diopter adjustment -2.5 to 1.2
POWER SOURCE	One AA Battery
DIMENSIONS	1.9 x 5.9 x 3.5" (48 x 150 x 89mm)
WEIGHT	8.5 oz. (240g)

Subject to change without notice

We Ship Worldwide

# M E T E R S

## P E N T A X

### Spotmeter V (36130)

Incorporates a single lens reflex optical system, constituting the ideal in precision exposure metering. The subject area covered by the metering angle of 1° (equivalent to the angle used by an ultra-telephoto 2000mm lens) is indicated by a small circle in the pentaprism viewfinder. The photosensitive silicon photo diode offers exceptional performance, even in low levels of light. The single linear meter scale in the viewfinder makes needle deflections easy to read, and an IRE index scale can be read directly from EV values on the side dial. The push button meter switch ensures that the batteries are not consumed unnecessarily.

**Item # PESM5.....359.95**

### Hand Strap (32940)

Replacement.

**Item # PESHSM5.....16.50**

### Lens Cap for Digital Spotmeter (31020)

Replacement.

**Item # PELCDSM.....7.50**

### Case (33630)

Replacement.

**Item # PECDSM.....49.95**

### Lens Cap for Spotmeter V (31480)

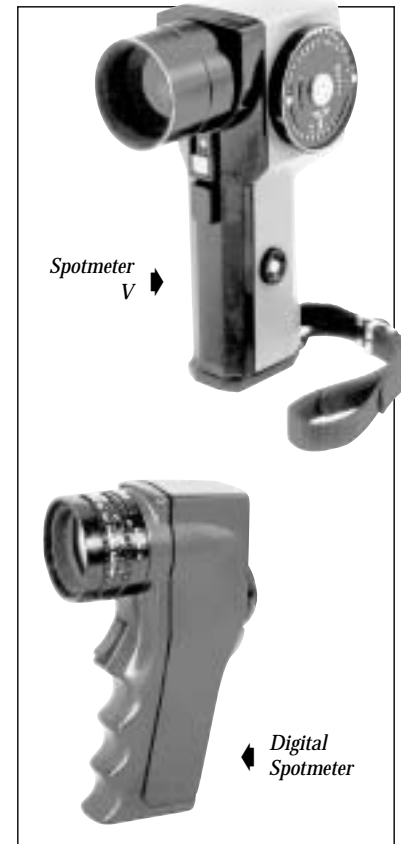
Replacement.

**Item # PELCSM5.....8.95**

### Digital Spotmeter (36141)

Selectively pinpoints with extreme accuracy the correct exposures in the deepest shadows and the brightest highlights. Measures contrast ratios and serves as a brightness meter in TV or motion picture studios. Its 1° pinpoint metering angle is comparable to the field of view of a 2,000mm lens for a 35mm camera. It has a measuring range of EV 1-20. Measures exposures by four different methods: general measuring, averaging, highlight reading and shadow reading. Ideally suited to the most exacting needs of any photographer. Weighing only 9.1 oz., its bright fixed focus, through-the-lens viewfinder presents a slightly enlarged (1.15x life size) image. The silver-coated pentaprism, seven-layer multi-coating of its lens and eyepiece and fine-grooved fresnel lens all combine to create an extraordinarily brilliant viewfinder, effective even in the dimmest light. A 1° circle engraved in the center of the viewfinder outlines the image-area being measured. When the trigger-like metering button in the pistol-grip handle is squeezed, the appropriate EV number lights up in the LED panel.

**Item # PESMD.....439.95**



METERS

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### SPECIFICATIONS FOR PENTAX SPOTMETERS

MODEL	SPOTMETER V	DIGITAL SPOTMETER
PHOTO CELL	Silicon Photo Diode	Silicon Photo Diode
DISPLAY READOUT	Indicator needle in viewfinder	L.E.D. in viewfinder
MEASURING SYSTEM	Spot Ambient	Spot Ambient
FILM SPEED I.S.O.	6 to 6,400	6 to 6,400
F-STOP	F1 to F128	F1 to F128
SHUTTER SPEED	1/4000 sec. to 4 min.	1/4000 sec. to 4 min.
CINE SCALE	24 F.P.S. (1/50 sec.)	24 F.P.S. (1/50 sec.)
ANGLE OF COVERAGE	1°	1°
SENSITIVITY AT 100 I.S.O.	EV1-19 plus I.R.E. Scale	EV1-20 plus I.R.E. Scale
VIEWFINDER	Single lens reflex pentaprism type, giving erect projected image. Fresnel lens, field of view 17' horizontal and 12' vertical, 21' diagonal. Magnification 1.5x. Eyepiece correction 0 to -1 diopter. Scale illumination button provided.	Single lens reflex pentaprism type with unreversed, laterally correct image. Objective and eyepiece lenses Super-Multi-Coated and pentaprism specially silvered for brilliant viewfinder image. Even illumination achieved with finely grooved fresnel lens. 1° spot indicated in center of viewfinder, and large L.E.D. panel at bottom. Total viewfinder coverage similar in shape to that of a 35mm SLR viewfinder with a diagonal field of view of 26°, horizontal field of 22° and vertical field of 14°. Adjustable eyepiece correction from -2 to +1 diopter.
OTHER	I.R.E. Scale 1-10 lens accepts 46mm filter unit, includes tripod socket	I.R.E. Scale 1-10 lens accepts 40.5mm filter unit, includes tripod socket
POWER SOURCE	Three 1.5v #76 Batteries	One 6v PX28 Battery
DIMENSIONS	2.4 x 6.4 x 5" (62 x 163 x 127mm)	1.7 x 5.7 x 3.3" (44 x 144 x 83mm)
WEIGHT	15.9 oz (450g)	9.1 oz. (258g)

Subject to change without notice



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# LIGHT METERS

## QUANTUM - CALCULITE / PENTAX

METERS

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### Quantum Digital Meter



Calcu-Lite XP (CLXP)

#### Calcu-Lite XP (CLXP)

Gives fast, accurate measurement of both reflected and incident light, with an unusually wide measuring range of EV -7 to EV +21. By rotating the meter's calculator dial to the light reading, every usable shutter speed and aperture combination can be seen at a glance. This is invaluable when determining depth-of-field. With hi-low incident dome, strap, case and batteries.

Item # **CACLXP** .....**118.00**

### SPECIFICATIONS FOR DIGITAL FLASH METERS

MODEL	CALCULITE XP
PHOTO CELL	Blue Enhanced Silicon Photo Diode
MEASURING SYSTEM	Ambient
DISPLAY READOUT	Digital L.E.D.
FILM SPEED I.S.O.	0.5 to 50,000
F-STOP	F0.7 to F181
SHUTTER SPEED	1/4000 sec. to 60 min.
CINE SPEED	8 to 128 F.P.S.
ANGLE OF COVERAGE REFLECTED LIGHT	30°
SENSITIVITY AT 100 I.S.O.	EV-7 to EV21
POWER SOURCE	Four # 76 Batteries
DIMENSIONS	3.9 x 2.8 x 1.2" (100 x 70 x 30mm)
WEIGHT	4 oz. (112g)

Subject to change without notice

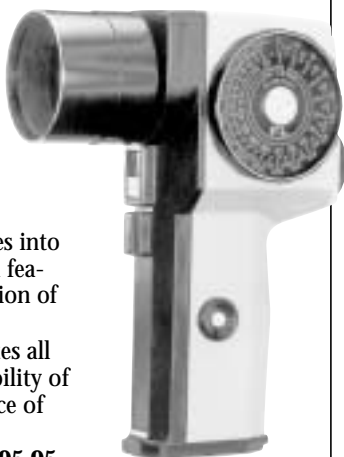
### PENTAX SPOTMETER V-FL

#### Spotmeter V-FL (36127)

The Spotmeter V-FL offers 1° spot exposure readings directly in footlamberts. Both the viewfinder scale and the calculator dial are calibrated directly in footlamberts (ft/L), eliminating the time required for converting EV values into footlamberts. The calculator dial features two scales for easy calculation of luminance ratio variations.

The Spotmeter V-FL incorporates all of the technology and dependability of the Spotmeter V - your assurance of fast, precise measurement.

Item # **PESM5FL** .....**395.95**



### SPECIFICATIONS FOR SPOTMETER V-FL

PHOTO CELL	Silicon Photo Diode
MEASURING SYSTEM	Spot Ambient Reading directly in Footlamberts
DISPLAY READOUT	Indicator Needle in Viewfinder
MEASURING RANGES	0.125 to 16,000 ft/L. Scene luminance 1.5:1 Luminance ratio 1:1 to 128000:1
VIEWFINDER	Single lens reflex pentaprism type with unreversed, laterally correct image. Even illumination achieved with finely grooved fresnel lens. 1° spot indicated in the center of viewfinder. Field-of-view 21° diagonal, 17° horizontal and 12° vertical. Magnification 1.5x. Adjustable eyepiece correction 0 to -1 diopter.
OTHER	Accepts 46mm filter and has a tripod socket
POWER SOURCE	Three 1.5v #76 Batteries
DIMENSIONS	2.5 x 6.4 x 5" (62 x 163 x 127mm)
WEIGHT	15.9 oz. (450g)

### Calcu-Lite Accessories

#### 10° Spot Attachment (SX1)

Converts reflected light measuring angle from normal 30° to 10° area spot. This is accomplished without loss in sensitivity.

Item # **CASX1** .....**52.50**

#### Flat Diffuser (DX1)

Makes calibrated illuminance measurements and contrast measurements with studio lighting.

Item # **CADX1** .....**28.95**

#### 1" Rigid Fiber Optic Probe (FOX1)

1" rigid fiber optic probe; measures reflected light values of 1/8" (3mm) diameter areas on focusing screens, groundglass, light tables and other luminant objects. It serves as a densitometer for negatives and transparencies with a resolution of 0.1 density units.

Item # **CAFOX1** .....**54.95**

#### 12" Flexible Fiber Optic Probe (FOX2)

Takes all the measurements of 1" Rigid Fiber Optic Probe (FOX-1). Additionally, features flexibility for difficult measurements.

Item # **CAFOX2** .....**66.50**

#### Swivel Studio Dome (SDX)

Takes incident light readings at 90° as opposed to 180° with the standard turret.

Item # **CASDX** .....**66.50**

#### Diffuser/Enlarging Attachment (DX2)

Can be used with a darkroom enlarger or as a lux or footcandle attachment similar to DX-1, except with a swivel head.

Item # **CADX2** .....**57.95**

#### Microscope Attachment (MX1)

Permits light readings through a microscope eyepiece.

Item # **CAMX1** .....**49.95**

#### Flash Trigger Switch (FTS)

Item # **CAFTS** .....**33.50**

#### Hard Case (HC1)

Item # **CACCF** .....**28.95**

#### Standard Turret (ST)

Incident and reflected turret. (Replacement.)

Item # **CATS** .....**12.95**

#### Hi-Low Turret (HLT)

Item # **CATHL** .....**11.95**

#### Neck Strap (NS)

Replacement.  
Item # **CASN** .....**11.95**



### Photo-Meter 1, Photo-Meter 2, Photo-Meter LX

The Photo-Meter 1, 2 and Lux Meter are precision digital meters for laboratory, scientific and industrial use, as well as for video and cinematographic applications wherever accurate footcandle, footlambert or lux measurements are called for. The hand-held Photo-Meters are used for lighting surveys by architects, designers, or industrial engineers to determine the efficiency of lighting design. For example, they can quickly compare ambient illumination to video screen brightness to determine suitability of the visual environment. The switch from

footcandle or footlambert calibration is accomplished in seconds. Cinema, video, and still photographers use Photo-Meter 2 for light readings that are more precise than those with conventional lightmeters. Scene lighting of sets can be measured and adjusted for uniform illumination. This is particularly important for critical, high contrast video work. Other applications suited to the pocket-sized Photometers are stage lighting design, greenhouse surveys, measurement of illuminated signs, lamp manufacturers' testing, and more.

#### Photo-Meter 1 (PM1)

With strap and case. Reads from 0.01 to 99,900 in footcandles or footlamberts. The measurement of either unit is selected by a precalibrated turret attached to the instrument. The turret can be removed for the addition of accessory attachments for special readings.

Item # CAPM1.....**383.50**

#### Photo-Meter 2 (PM2)

With strap and case. Provides the capabilities of Photo-Meter 1 but also has a calculator dial which provides camera f-stop, shutter speed, frames-per-second, and EV for all film speeds.

Item # CAPM2.....**383.50**

#### Photometer LX (PMLX)

Used for lighting surveys by architects, designers, or industrial engineers to determine lighting design efficiency. Quickly compares ambient illumination to, for example, video screen brightness to determine suitability of the visual environment. The switch is accomplished in seconds. Scene lighting of sets can be measured and adjusted for uniform illumination. Other applications suited to the pocket Photo-Meter LX are stage lighting design, greenhouse surveys, measurement of illuminated signs, lamp manufacturers' testing, and more.

Item # CAPMLX.....**383.50**



#### SPECIFICATIONS FOR PHOTO-METER 1 AND 2

PHOTO CELL	Silicon Photo Diode with Photometric Filter
MEASURING SYSTEM	Footcandles and Footlamberts
RANGE	0.01 to 99,900 in 5 Ranges
DISPLAY READOUT	Three Digit L.E.D.
ANGLE OF COVERAGE	Illuminance 180°, Luminance 25°
POWER SOURCE	Four # 76 Batteries
DIMENSIONS	3.9 x 2.8 x 1.2" (100 x 70 x 30mm)
WEIGHT	4 oz. (112g)

#### SPECIFICATIONS FOR PHOTO-METER 2 WITH CALCULATOR DIAL

FILM SPEED I.S.O.	0.8 to 50,000
F-STOP	F0.3 to F128
SHUTTER SPEED	1/1000 sec. to 15 min.
CINE SPEED	8 F.P.S. to 128 F.P.S.

#### SPECIFICATIONS FOR PHOTOMETER LX

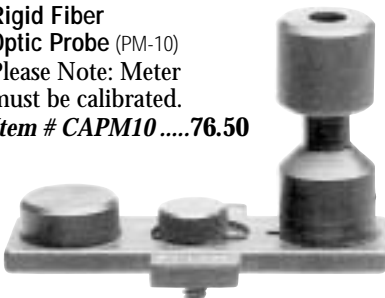
PHOTO CELL	Silicon Photodiode with Photometric Filter
MEASURING SYSTEM	Footcandles and Footlamberts
RANGE	0.01 to 999,000 in 5 Ranges
DISPLAY READOUT	Three digit L.E.D.
ANGLE OF COVERAGE	Illuminance 180°, Luminance 25°
POWER SOURCE	Four # 76 Batteries
DIMENSIONS	3.9 x 2.8 x 1.2" (100 x 70 x 30mm)
WEIGHT	4 oz. (112g)

Subject to change without notice

### Accessories for Photo-Meter 1, Photo-Meter 2, Photo-Meter LX

Rigid Fiber Optic Probe (PM-10)  
Please Note: Meter must be calibrated.

Item # CAPM10.....**76.50**



#### Rotating Illuminance Receptor (PM-11)

The receptor disc rotates to read footcandles from any direction. This type of receptor is used frequently by TV and film camera-men, and its operating position is preferred by some. When ordered, PM-11 replaces the standard turret supplied with photometers. PM-11 has an alternate position for footlambert readings. Meter must be calibrated.

Item # CAPM11.....**79.95**

#### Fiber Optic Probe (PM-12)

This flexible probe is approximately 12" (30cm) long by 3/8" (3mm) diameter. It reads luminance of video screens, light diffusers and other self-luminant objects. It may also read small areas of film transparencies when illuminated from behind. The meter must be calibrated.

Item # CAPM12.....**274.95**





# LIGHT METERS

## POLARIS / SOLIGOR

### Polaris Digital Exposure Meter

#### Digital Exposure Meter (SPD 100)

The Polaris Digital Exposure Meter is a compact flash and ambient lightmeter that has many features of the more expensive flashmeters. A custom Program Level Function lets you program your meter for slightly under or over exposure. A unique multi-flash feature makes it simple to calculate how many times the flash must be fired to achieve a desired f-stop. The Polaris' large LCD display shows both the shutter speed and f-stop in 1/10 stop increments. Reverse polarity adapter, strap and case included.

Item # SHP .....**219.95**



#### SPECIFICATIONS FOR POLARIS METER

PHOTO CELL	Silicon Photo Diode
MEASURING SYSTEM	Ambient and Flash
DISPLAY READOUT	Digital L.C.D. plus Analog L.C.D.
FILM SPEED I.S.O.	3 to 8,000
F-STOP	F0.5 to F90
SHUTTER SPEED	1/8000 sec. to 60 sec.
FLASH SYNC	1/500 sec. to 1 sec.
ANGLE OF COVERAGE REFLECTED LIGHT	35°
SENSITIVITY AT 100 I.S.O.	EV1 to 19.9
OTHER	Analog Display
POWER SOURCE	One AA Battery
DIMENSIONS	4.7 x 2.5 x 0.8" (119 x 63 x 21mm)
WEIGHT	3.3 oz. (94g)

*Subject to change without notice*

### Soligor Spot Sensor II and Digital Spot Sensor

#### Spot Sensor II

With strap, battery, rubber eye cup and case. Incorporates a single lens reflex optical system, constituting the ideal in precision exposure metering. The subject area covered by the very small metering angle of 1° (equivalent to the angle used by an ultra-telephoto 2000mm lens) is indicated by a small circle in the pentaprism viewfinder. The brightness of even minute detail in the subject field can be measured easily and quickly. The photosensitive element used in the Spot Sensor II is a silicon photo diode (SPD) with exceptional performance, even in low levels of light.

Item # SOSM .....**199.95**

#### Digital Spot Sensor

With strap, battery, rubber eye cup and case. Selectively pinpoints with extreme accuracy the correct exposures in the deepest shadows and the brightest highlights. Can also measure contrast ratios and serve as a brightness meter in T.V. or motion picture studios. It has a 1° pinpoint metering angle which is comparable to the field of view of a measuring range of EV 1-20. Measures exposures by four different methods: general measuring, averaging, highlight reading and shadow reading. Ideally suited to the most exacting needs of any photographer, professional or amateur.

Item # SOSMD .....**249.95**



Soligor Spot Sensor II

Soligor Digital Spot Sensor II

#### SPECIFICATIONS FOR SOLIGOR METERS

MODEL	SPOT SENSOR II	DIGITAL SPOT SENSOR
PHOTO CELL	Silicon Photo Diode	Silicon Photo Diode
DISPLAY READOUT	Indicator Needle in Viewfinder	L.E.D. in Viewfinder
MEASURING SYSTEM	Spot Ambient	Spot Ambient
FILM SPEED I.S.O.	6 to 12,1800	6 to 12,1800
F-STOP	F1 to F128	F1 to F128
SHUTTER SPEED	1/4000 sec to 30 min.	1/4000 sec to 30 min.
CINE SCALE	8 F.P.S. to 128 F.P.S.	8 F.P.S. to 128 F.P.S.
ANGLE OF COVERAGE	1°	1°
SENSITIVITY AT 100 I.S.O.	EV2 to EV18	EV1 to EV19.9 plus I.R.E. Scale
VIEWFINDER	Single lens reflex pentaprism type giving a right side image. 15° horizontal angle of view and diopter adjustment	Single lens reflex pentaprism type giving a right side image. 15° horizontal angle of view and diopter adjustment
OTHER	Accepts 43mm filters, Unit includes tripod socket.	Accepts 43mm filters, Unit includes tripod socket.
POWER SOURCE	9v Battery	9v Battery
DIMENSIONS	5.2x5.8x2" (132x147x52mm)	5.2x5.8x2" (132x147x52mm)
WEIGHT	11.7 oz. (330g)	11.3 oz. (320g)

*Subject to change without notice*

### Auto Lumi and Auto Leader Meters

#### Auto Lumi L-158 (401-158)

With strap and case. An easy-to-use, match needle reflected light exposure meter. Lightweight and thin, it fits in a shirt pocket. The L-158 meter is a selenium photocell meter that does not require the use of batteries.

**Item # SEL158.....59.00**

#### Auto Leader L-188 (401-188)

With strap, battery and case. An easy to use, match needle reflected light exposure meter. Lightweight and thin design - fits into shirt pocket. The Auto Leader L-188 has a high sensitive CDS cell that allows for lower light measurements. An optional underwater housing is also available.

**Item # SEL188.....79.00**

#### SPECIFICATIONS FOR AUTO LUMI/LEADER

MODEL	L-158	L-188
MEASURING SYSTEM	Ambient (Reflective)	Ambient (Reflective)
DISPLAY READOUT	Indicator Needle	Indicator Needle
FILM SPEED I.S.O.	6 to 12,000	6 to 12,000
F-STOP	F1 to F64	F1 to F64
SHUTTER SPEED	1/2000 sec. to 8 sec.	1/2000 sec. to 8 sec.
CINE	8 to 128 F.P.S.	8 to 128 F.P.S.
ANGLE OF COVERAGE	65°	65°
SENSITIVITY AT I.S.O. 100	EV7 to EV17	EV3 to EV18
POWER SOURCE	-	SR - 44 Battery
DIMENSIONS	2 x 3 x 1" (52 x 77 x 25mm)	3.2 x 2 x .75" (81 x 52 x 19mm)
WEIGHT	2 oz. (56g)	1.7 oz. (48g)

*Subject to change without notice*

### Footcandle and Lux Meters

The Sekonic Footcandle Meter L-246 and Lux Meter L-246LX are lightweight, compact direct measurement meters. They both have a swivel head, and the simplified scale facilitates easy readings. Both meters have a selenium photocell that eliminates the use of batteries. They include lumidisc, high slide and neck strap.

#### Footcandle Meter L-246 (401-246)

**Item # SEL246.....149.00**

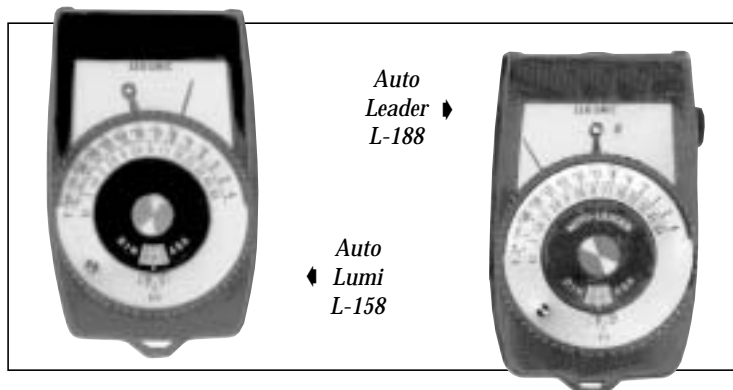
#### Lux Meter L-246LX (401-206)

**Item # SEL246LX.....149.00**

#### SPECIFICATIONS FOR FOOTCANDLE/LUX METERS

MODEL	L-246	L-246LX
DISPLAY READOUT	Indicator Needle	Indicator Needle
MEASURING SYSTEM	Incident Light Type	Incident Light Type
MEASURING RANGE:	Low Range Mid Range High Range	0 - 1,000 LUX 0 - 5,000 LUX 0 - 50,000 LUX
ACCURACY	±10% (tested with standard single-plane tungsten lamps of 2854°K color temperature)	±10% (tested with standard single-plane tungsten lamps of 2854°K color temperature)
ANGLE DEVIATION	30°: -3% or less; 60°: -10% or less	30°: -3% or less; 60°: -10% or less
DIMENSION	4.4 x 2.3 x 1" (112 x 58 x 27mm)	4.4 x 2.3 x 1" (112 x 58 x 27mm)
WEIGHT	4.5 oz. (126g)	4.5 oz. (126g)

*Subject to change without notice*



#### Accessories for the L-246 and L-246LX

Lumisphere Incident Light Replacement.  
**Item # SELSL246.....18.95**

Lumigrad Reflected Light Replacement.  
**Item # SELGL246.....18.95**

Slide (401-834)  
**Item # SELS246.....6.50**

Lumidisc Low Measure (401-833) Replacement.  
**Item # SELDLML246.....7.95**

Lumidisc High Measure (401-832) Replacement.  
**Item # SELDHML246.....9.95**

# LIGHT METERS

SEKONIC

METERS

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## Studio Deluxe II and Digilite Meters



Studio Deluxe II L-398M

**Studio Deluxe II L-398M (401-398)**  
The industry standard for incident and reflected light measurement. A swivel head and needle lock facilitate easy and accurate readings. Plus a memory pointer retains prior readings. The selenium photocell eliminates the need for batteries. Includes lumidisc for adjusting illumination contrast, measuring illumination intensity and lumigrad for measuring reflected light. With lumidisc, lumisphere, lumigrad, high-slide, case and strap.  
**Item # SEL398M.....169.00**

**Digilite L-318B (401-318)**  
Thin, light pocket size digital lightmeter for incident and reflected light. Convenient control knobs makes one hand operation possible. 270° swivel head facilitates easy and accurate readings. Complete with lumisphere, lumigrad reflected light attachment, lumidisc, cane, neck strap and battery. Optional 5° spot measurement attachment makes this the ideal choice for general as well as studio photography.  
**Item # SEL318B.....219.00**



Digilite L-318B

## Flashmate L-308 BII



Flashmate L-308 BII

**Flashmate L-308 B II**  
The Flashmate L-308 B II is a small, compact, sleek and professional flashmeter, with a design that makes it the choice of professional as well as amateur photographers. It offers a direct readout on LCD display. Ambient or flash measurement can be selected by a single mode selection button. Incident or reflected light reading is selected by sliding a light receptor. With case, strap and battery.  
**Item # SEL308B2.....249.00**

*Flashmate specifications on next page*

## Accessories for the L-318B

- Lumisphere Incident Light (401-824) Replacement.**  
**Item # SELSL318B.....9.95**
- Lumigrad Reflected Light (401-826) Replacement.**  
**Item # SELGL318B .....9.95**
- Lumidisc Contrast Light (401-825) Replacement.**  
**Item # SELDL318B .....9.95**

- Long Case (401-806)**  
**Item # SECLL318B .....22.95**
- Case (401-843)**  
**Item # SECL318B.....22.95**
- Strap (401-862) Replacement.**  
**Item # SELS318B .....2.95**

## Accessories for the L-398/M

- Lumisphere Incident Light (401-821) Replacement.**  
**Item # SELSL398.....9.95**
- Lumigrad Reflected Light (401-823) Replacement.**  
**Item # SELGL398.....9.95**
- Lumidisc Contrast Light (401-822) Replacement.**  
**Item # SELDL398.....9.95**
- Slide Set (401-805)**  
This slide set contains eleven slides altogether, with a case. You can obtain a direct readout of the required exposure values by using these slides together with the L-28C2 or Studio Deluxe II L-398.  
**Item # SESSL398.....55.95**

## SPECIFICATIONS FOR STUDIO DELUXE II and DIGILITE METERS

MODEL	L-398M	L-318 BII
PHOTO CELL	Selenium Cell	Silicon Photo Diode
MEASURING SYSTEM	Ambient (Incident and Reflective)	Ambient
DISPLAY READOUT	Indicator Needle	Digital LCD plus Analog LCD
FILM SPEED I.S.O.	6 to 12,000	3 to 8,000
F-STOP	F0.7 to F128	F1 to F90
SHUTTER SPEED	1/8000 sec. to 60 sec.	1/8000 sec. to 30 min.
CINE	8 to 128 F.P.S.	8 to 128 F.P.S.
SENSITIVITY AT 100 I.S.O.	EV4 to 17	EV1 to EV19.9
SENSITIVITY AT FOOTCANDLES	1 to 40,000	One AA Battery
DIMENSIONS	4.4 x 2.3 x 1.3" (112 x 58 x 34mm)	4.8 x 2.5 x 9" (121 x 64 x 23mm)
WEIGHT	6.7 oz. (188g)	3.9 oz. (110g) w/o Battery

*Subject to change without notice*

**14-Day Customer Satisfaction Guarantee**

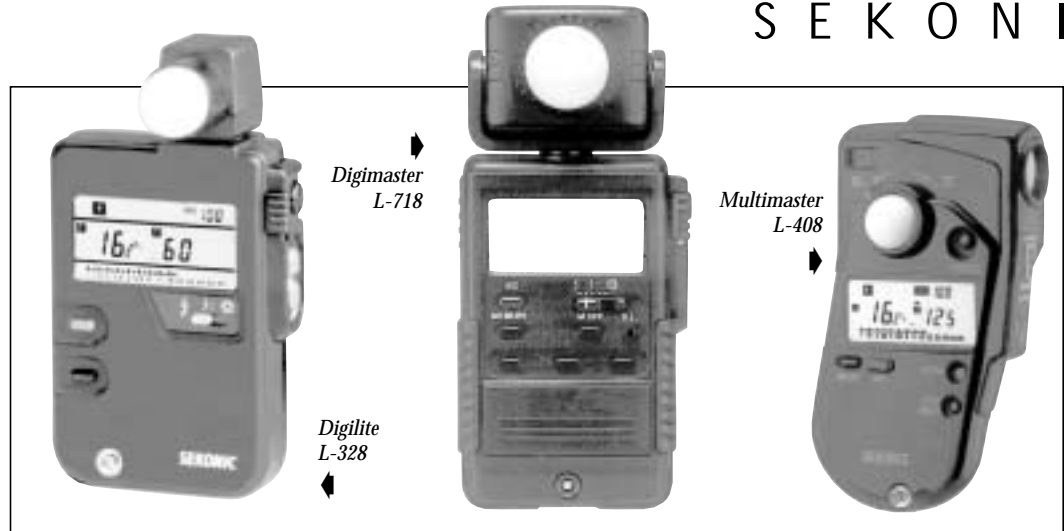
# M E T E R S

S E K O N I C

## Digilite L-328 (401-328)

The easy-to-use Digilite L-328 lightmeter has the same features as the Flashmate L-308. Plus the user gets the advantage of both digital and analog indications in a single display, as shown on the advanced LCD panel. The Digilite L-328 also features the Lumidisc for contrast control and the optional viewfinder 5° attachment. With Lumisphere, reflected light, Lumidisc, case, neck strap and battery.

**Item # SEL328.....269.00**



## Multimaster L-408 (401-408)

No more tricky light balancing problems! A 3-exposure reading memory allows for ideal contrast readings. Multiple pops can also be read. Switch easily from incident to contrast measurement mode without additional accessories. With the unique retractable sphere system, you can instantly change between incident and contrast mode measurements - the Lumisphere actually recesses into the body. Offers exclusive built-in spot metering. The built-in 5° spot attachment lets you move in close and get the shot quickly (even in flash mode). It is the ideal location meter, giving quick, easy, accurate readings on demand. Helps metering even the most difficult light situations. 1/10th f-stop accuracy in any of its flash cord, flash cordless or ambient modes, as well as 5° spot. Completely water resistant, the L-408 stands up to rain, sleet or snow (meets JIS Level 4 Standard for water resistance). With case, strap and battery.

**Item # SEL408.....329.00**

## Digimaster L-718 (401-718)

A state-of-the-art ambient and flashmeter with a built-in micro computer and seven different function modes. Offers different functions, such as cord or cordless measurement for cumulative flash readings, T-priority, F-priority and EV measurements for ambient light. It also has a memory display function for 2 measured F-stop values plus the current reading, and a display illumination by electro luminescence for taking readings under extremely low light conditions. Rugged, rubber covered body absorbs shocks and prevents slippage. With Lumisphere, Lumi-Disc, reflected light attachments (Lumigrid), batteries, case and strap. An optional 5° spot attachment is available for spot readings.

**Item # SEL718.....339.00**

### SPECIFICATIONS FOR FLASHMATE L-308, DIGILITE L-328, MULTIMASTER L-408, and DIGIMASTER L-718

MODEL	L-308 BII	L-328	L-408	L-718
PHOTO CELL	Silicon Photo Diode	Silicon Photo Diode	Silicon Photo Diode	Silicon Photo Diode
MEASURING SYSTEM	Ambient and Flash	Ambient and Flash	Ambient, Flash and 5° Spotmeter	Ambient and Flash
DISPLAY READOUT	Digital L.C.D.	Digital L.C.D. plus Analog L.C.D.	Digital L.C.D. plus Analog L.C.D.	Digital L.C.D. plus Analog L.C.D.
FILM SPEED I.S.O.	3 to 8,000	3 to 8,000	3 to 8,000	3 to 8,000
F-STOP	F0.5 to F90	F1 to F90	F1 to F90	F1 to F90.9
SHUTTER SPEED - AMBIENT	1/8000 sec. to 60 sec.	1/8000 sec. to 30 min.	1/8000 sec. to 30 min.	1/8000 sec. to 30 min.
SHUTTER SPEED - FLASH	1/500 sec. to 1 sec.	1/500 sec. to 1 sec.	1/500 sec. to 1 sec.	1/500 sec. to 1 sec.
CINE SPEED	8 to 128 F.P.S.	8 to 128 F.P.S.	8 to 128 F.P.S.	8 to 128 F.P.S.
SENSITIVITY AT 100 I.S.O.	EVO to EV19.9	EV-1 to EV19.9	EV-1 to 19.9	EV-1 to EV19.9
OTHER DATA	-	Analog display, memory for set value, auto power off	Built-in spotmeter analog display, up to 9 readings data memory, auto power off, water resistant	Analog display, rubberized grip, 2 reading data memory
POWER SOURCE	One AA Battery	One AA Battery	One AA Battery	Two AA Batteries
DIMENSIONS	4.3 x 2.5 x 0.9" (110 x 63 x 22mm)	4.7 x 2.5 x 0.9" (121 x 64 x 23mm)	3 x 5.7 x 1.6" (77 x 144 x 41mm)	6.2 x 2.7 x 1.1" (157 x 68 x 28mm)
WEIGHT W/O BATTERY	2.8 oz. (80g)	3.9 oz. (112g)	6.3 oz (178g)	6.7 oz. (190g)

*Subject to change without notice*

METERS

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THE PROFESSIONAL'S SOURCE (212) 444-6630 • FAX: (212) 239-7770

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# LIGHT METERS

SEKONIC

METERS

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## Zoom Master L-508 and Digital Spot F L-778

**Zoom Master L-508 (401-508)**  
The L-508 Zoom Master is the one lightmeter that fits every exposure challenge for the professional or dedicated enthusiast. With the turn of a switch, you can select the ideal reflective measuring angle - between 1° to 4° zoom. It is also an incident meter with a 270° swivel head. The L-508 Zoom Master spot and flashmeter, with its built-in retractable lumisphere, are all safely protected in a rugged, sealed all-weather housing.

Item # **SEL508**.....**429.00**



**Digital Spot F L-778 (401-778)**  
The Dual Spot F L-778 is a variable 1° to 3° spot flashmeter with a latitude zone setting for obtaining optimum exposure. Continuous ambient readings with a memory mode that retains up to 5 measured values. Ambient readings are changeable to flash reading with a single mode selection button. The meter can be mounted onto a tripod via a tripod screw. Can be mounted on a hot shoe for wireless remote triggering.

Item # **SEL778**.....**699.00**

## SPECIFICATIONS FOR L-508 and L-778

MODEL	L-508	L-778
PHOTO CELL	Silicon Photo Diode	Silicon Photo Diode
MEASURING SYSTEM	Ambient and Flash Zoom	Spot Ambient and Spot Flashmeter
DISPLAY READOUT	Cool Blue Display	Green L.E.D. in Viewfinder plus Side Panel Digital L.C.D. and Analog L.C.D.
FILM SPEED I.S.O.	1 to 8,000	1 to 12,500
F-STOP	f/1 to f/128.9	f/0.5 to f/128
SHUTTER SPEED	1/8000 sec. to 30 min.	1/8000 sec. to 30 min.
CINE SPEED	2 F.P.S. to 360 F.P.S.	8 F.P.S. to 128 F.P.S.
FLASH SYNC TIMES	1 to 1/1000 sec.	1 to 1/1000 sec.
ANGLE OF COVERAGE	Incident 270°/Reflected 1° to 4°	Interchangeable from 1° to 3°
SENSITIVITY AT 100 I.S.O.	EV-2 to EV19.9	EV1 to EV20.9
VIEWFINDER	Variable 1° to 4° parallax-free spot	Single-lens type with pentagonal prism of fixed focus, Magnification approximately 1.34 times. Viewing angle 14.6° (diagonal angle). Diopter correction 2.5 to 1.2 diopter. Viewing displays circles comprised of 1° and 3° acceptance angles, and digital display of angle of acceptance selected together with measured value.
POWER SOURCE	One AA Battery	Two AA Batteries
DIMENSIONS	3.3 x 6.1 x 1.6" (82 x 161 x 39mm)	6.8 x 3.8 x 2" (173 x 96 x 52mm)
WEIGHT	8.5 oz. (240g)	12.2 oz. (346g)

Subject to change without notice

## Accessories for Digital Meters

### 5° Optical Spot Viewfinder for L-318B and L-328 (401-802)

This optical spot viewfinder allows both direct flash and ambient 5° spot measurements when used with the Digilite L-328. Direct ambient 5° spot measurements are possible when used with the Digilite L-318B.

Item # **SESA5328**.....**109.95**

### 5° Optical Spot Viewfinder for L-718 (401-803)

The optional 5° Optical Spot Viewfinder allows both direct flash and ambient 5° spot readings when used with the Digimaster L-718 ambient and Flashmeter.

Item # **SEVF5L718**.....**133.95**



### Pinpoint Attachment for L-718 (401-804)

The Pinpoint Attachment L-718PP allows "Groundglass" measurements for medium and large format users when used with the Digimaster L-718.

Item # **SEFOAL718**.....**55.95**

### Synchro Cord for all Flashmeters (401-801)

Specially designed "T" style PC cord (3 leads) allowing for easy flash connections between the meter, camera and strobe. Extra long, 5m (15 foot) length is compatible with all Sekonic flashmeters.

Item # **SESCL718**...**29.50**

Technical Advice Available



### Accessories for Digital Meters, *continued*

**Lumidisc** (401-830)  
For L-308 BII. Replacement.  
**Item # SELDL308B2.....23.95**

**L-328 Lumidisc** (401-825)  
For L-328.  
**Item # SELDL328.....9.95**

**L-718 Lumidisc** (401-828)  
For L-718.  
**Item # SELDL718.....9.95**

**L-328 Lumisphere** (401-824)  
For L-328.  
**Item # SELSL328.....9.95**



**L-718 Lumisphere** (401-827)  
For L-718.  
**Item # SELSL718.....9.95**

**L-718 Lumigrid** (401-829)  
For L-718.  
**Item # SELGL718.....9.95**

**L-328 Case** (401-844)  
For L-328.  
**Item # SECL328.....26.95**

**L-718 Case** (401-847)  
For L-718.  
**Item # SECL718.....59.95**

**L-778 Case** (401-848)  
For L-778.  
**Item # SECL778.....59.95**

**L-328 Long Case** (401-806)  
For L-328.  
**Item # SECLL318B .....22.95**

**Strap** (401-862)  
For L-328, L-408, L-718, and L-778.  
**Item # SESL328.....2.95**

**L-408 Case** (401-846)  
For L-408.  
**Item # SESL408.....34.95**

**Synchro Cord** (401-801)  
Plugs between meter and flash. Allows triggering of the flash from the meter. For all Gossen flashmeters. 15 1/2" cord. (5m)  
**Item # SESCL718.....29.50**

### Marine Meter II



**Marine Meter II L-164C** (401-164)  
An analog reflected lightmeter for marine use with still or motion picture photography. The Marine Meter II can be used for measurement near the water surface, in shallow water (10 - 13 ft.), or at depths from 16-180 ft. It comes with a case, neck strap, spare "O" ring, grease and battery.  
**Item # SEL164C.....499.95**

### VISATEC Meters

**DFM Flash Meter** (561-000)  
An exceptionally large measuring range of 14 2/3 f-stops from f/1.0 to f/90 2/3. The large LCD display makes it easy to see the 1/3 f-stop increment measurements. Designed for speed, this meter does not have to be cleared (zeroed) between readings. It connects to a PC-cord which allows triggering of the flash from the meter. It can also be operated cord free. The DFM offers two metering ranges in two modes: LOW and HIGH setting for single shot readings, plus MULTI-LOW and MULTI-HIGH readings that allow the measurement to build in order to determine how many flashes it will take to provide the preselected amount of light. Manual on/off switch.  
**Item # VIDFM .....495.95**



#### SPECIFICATIONS FOR MARINE METER METER

MEASURING SYSTEM	Reflected Light
DISPLAY READOUT	Indicator Needle
FILM SPEED I.S.O.	6 to 12,000
F-STOP	f/1 to f/64
SHUTTER SPEED	1/2000 sec. to 1 sec.
ANGLE OF COVERAGE REFLECTED LIGHT	30°
SENSITIVITY AT 100 I.S.O.	EV5 to 17
MAXIMUM DEPTH LIMIT	180 ft. (60m)
WORKING TEMPERATURE	14° - 110° f (-10° - 45° C)
POWER SOURCE	625 Battery (or equivalent)
DIMENSIONS	3 1/2" (86mm) diameter
DEPTH	2 1/2" (67mm) diameter
WEIGHT	8 oz. (240g)

*Subject to change without notice*

#### SPECIFICATIONS FOR VISATEC DFM METER

PHOTO CELL	Silicon Blue Photo Diode
MEASURING SYSTEM	Ambient and Flashmeter
DISPLAY READOUT	Digital L.C.D.
FILM SPEED I.S.O.	25-800
F-STOP	f/1 to f/90 2/3
SHUTTER SPEED	1/60 sec.
FLASH SYNC	1 sec. to 1/500 sec.
ANGLE OF COVERAGE REFLECTED LIGHT	45°
SENSITIVITY AT 100 I.S.O.	EV1 to EV29
POWER SOURCE	9v
DIMENSIONS	5.8 x 3.1 x 1.4" (14.7 x 8 x 3.6cm)
WEIGHT	7.9 oz. (224g)

*Subject to change without notice*

# LIGHT METERS

## SHEPHERD

METERS

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Shepherd meters are full-featured, professional quality products costing substantially less than comparable meters. They offer a wide range of features and the ability to measure and evaluate complex lighting situations, as well as calculate multiple flash set-ups. Even though most cameras have built-in metering, the low cost and high reliability of Shepherd meters

make them an indispensable insurance policy for backup with any outfit. All have incident and reflected meter reading capability. Dependability and solid performance are found in the full line of Shepherd meters, which include an available lightmeter and three flashmeters. Shepherd meters are an excellent choice for both studio and on-location photography.

### Digital Exposure Meter (DM170)

With case and strap. A convenient and accurate light exposure meter for ambient light readings. Reads both incident and reflected light. Lightweight and dependable, this meter is a needed backup for any in-camera photo outfit. Sensitive silicon blue metering cell measures quickly and accurately, with no memory lag. Warning signals for power-on, low battery caution and situations beyond the meter's range. Extra large three digit LED display with readouts in precise 1/10th stop increments. Power saver circuitry with meter shut-off after 30 seconds.

Item # *SHDM170*.....**102.50**

### Flash and Ambient Meter FM990 (SFM-990)

With case and strap. Offers peak performance and great versatility. A blinking LCD measures in half-stop increments for the precise exposures needed, and incorporates all the features of the FM880 with additional capabilities. Functions as both a flash and ambient lightmeter; a choice of four shutter speeds simplifies the calculation of fill-flash exposures. They range from 1/60 to 1/500, to match sync speed.

Item # *SHFM990*.....**99.95**

### Flash and Ambient Meter FM-1000 (SFM-1000)

With case and strap. A very sensitive meter with expanded applications required by photographers who need more. With all of the capabilities found on the FM880 and FM990, plus many important extras, the FM1000 offers professional level features and performance. Expanded aperture range to f/128; warning signals, including alerts for ready light, low battery, battery polarity and light intensities beyond meter range; bright two-digit LED display with precise readings in 1/3 f-stop increments; advanced power saver circuitry turns off digital LED's after five seconds while the push of a button recalls the reading instantly; main power is turned off in 2 minutes automatically.

Item # *SHFM1000*.....**155.50**

### SPECIFICATIONS FOR SHEPHERD METERS

MODEL	DM170	FM990	FM1000
PHOTO CELL	Silicon Blue Photo Diode	Silicon Photo Transistor	Silicon Photo Transistor
MEASURING SYSTEM	Ambient	Ambient and Flashmeter	Ambient and Flashmeter
DISPLAY READOUT	L.E.D. Digital	L.E.D. Array	L.E.D. Digital
FILM SPEED I.S.O.	6 to 6,400	6 to 6,400	6 to 6,400
F-STOP	F1 to F128	F1 to F90	F1 to F128
SHUTTER SPEED	1/4000 sec. to 2 min.	1/60 to 1/500 sec.	1/60 to 1/500 sec.
FLASH SYNC	-	1/60 to 1/500 sec.	1/60 to 1/500 sec.
ANGLE OF COVERAGE REFLECTED LIGHT	45°	45°	45°
SENSITIVITY AT 100 I.S.O.	EV0.1 to EV19.9	L.E.D. Array does not measure in EV	EV1 to EV29
POWER SOURCE	9v	9v	9v
DIMENSIONS	2.4 x 5.1 x 1.3" (62 x 130 x 32mm)	2.6 x 5.1 x 1.3" (67 x 130 x 32mm)	2.6 x 5.1 x 1.3" (67 x 130 x 32mm)
WEIGHT	3.7 oz. (106g)	3.6 oz. (102g)	4.2 oz. (120g)

Subject to change without notice

### Accessories

15 Ft. Remote Cord

Item # *SHRC15*.....**14.95**

Polarity Adapter

Item # *SHPA*...**4.95**



# METERS

## NOVATRON / PORTAFLASH / WEIN

### Novatron Flashmeter

#### Novatron Flashmeter (FM-02)

The Novatron Flashmeter is small enough to fit in a shirt pocket. Its face plate lists the popular film speeds across the top row. To the left is a column of indicators. The meter is simple to use. Simply turn it on and fire a test flash. One of the indicators on the meter's face will illuminate. The illuminated indicator indicates the correct row of f/stops. To find which one is appropriate, match it to the proper film speeds noted on the top row. Because of its ease-of-use, this meter is excellent for the entry level photographer.

Item # **NOFM02** ..... **79.95**



#### SPECIFICATIONS FOR NOVATRON FLASHMETER

MEASURING SYSTEM	Incident Flashmeter
DISPLAY READOUT	LED Array
FILM SPEED I.S.O.	25 to 400
F-STOP	F2.8 to F32½
FLASH SYNC	1/125 sec.
ANGLE COVERAGE INCIDENT LIGHT	35-135°
POWER SOURCE	9v Battery
DIMENSIONS	3.7 x 2.4 x 1" (95 x 60 x 25mm)
WEIGHT	2.5 oz. (72g)

Subject to change without notice

### Wein Flashmeters

#### Flashmeter WP-500B (950-010)

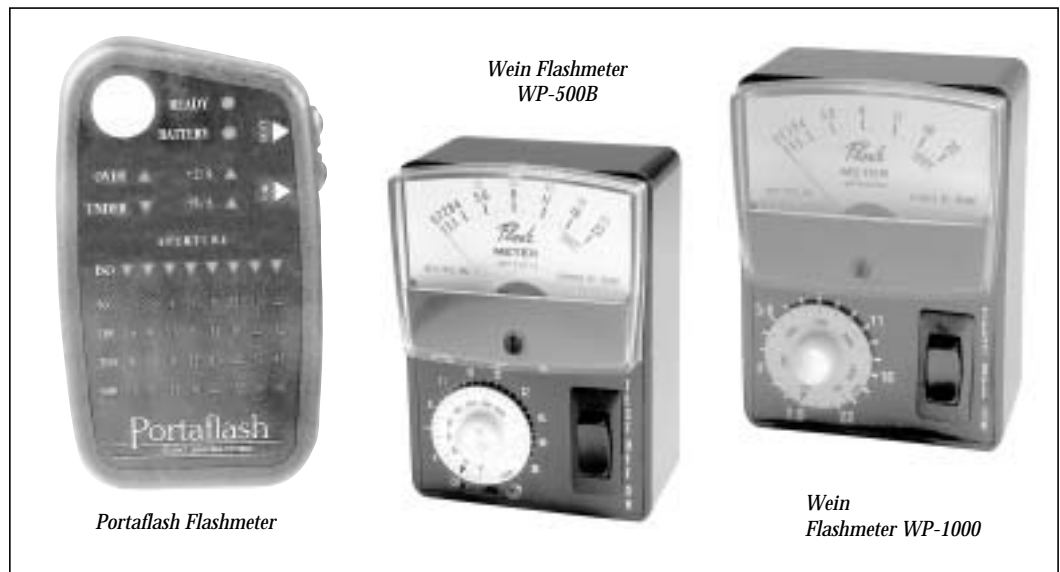
Reads the incident flash light from the electronic flash unit and integrates it with the ambient light to provide an accurate exposure light reading in direct f-stops up to F22. The reading is permanently recorded until the meter is manually reset.

Item # **WEWP500B** ..... **65.99**

#### Flashmeter WP-1000 (950-020)

The Wein Flashmeter WP-1000 utilizes all the features of the WP-500B. The f/stop range is increased to f/90, and the meter readings are accurate to 1/6 of an f/stop.

Item # **WEWP1000** ..... **98.99**



Portaflash Flashmeter

Wein Flashmeter  
WP-500B

Wein  
Flashmeter WP-1000

### Portaflash Flashmeter

#### Portaflash Flashmeter

An economic and simple to use flashmeter. Accurate to 1/3 of a stop with over and under range indicators, cord and cordless triggering. An 8-stop range of f/2.8 to f/32 at I.S.O. 100 makes this flashmeter a great buy even for those photographers with a tight budget.

Item # **SPFM** ..... **139.95**

#### SPECIFICATIONS FOR PORTAFLASH

MEASURING SYSTEM	Flashmeter
DISPLAY READOUT	L.E.D. Array
FILM SPEED I.S.O.	50 to 400
F-STOP	F2.8 to F32
FLASH SYNC	1/60 sec.
ANGLE OF COVERAGE INCIDENT LIGHT	35 - 135°
POWER SOURCE	9v Battery
DIMENSIONS	4.5x2.5x1" (11.4x6.4 x2.5cm)
WEIGHT	2.5 oz. (70g)

Subject to change without notice

#### SPECIFICATIONS FOR WEIN FLASHMETER

MODEL	WP-500B	WP-1000
MEASURING SYSTEM	Incident Flashmeter	Incident Flashmeter
DISPLAY READOUT	Indicator Needle	Indicator Needle
FILM SPEED I.S.O.	25 to 1,600	25 to 6,400
F-STOP	F2 to F22	F2 to F90
FLASH SYNC	1/250 sec.	1/250 sec.
POWER SOURCE	9v Battery	9v Battery
DIMENSIONS	4.3 x 2.8 x 1.9" (110 x 72 x 49mm)	4.3 x 2.8 x 1.9" (110 x 72 x 49mm)
WEIGHT	5 oz. (140g)	5.2 oz. (148g)

Subject to change without notice