

SEKONIC

EXPOSURE METERS



COPAL



Why are Sekonic Exposure Meters necessary?

If you watch a professional photographer shoot a picture, you'll probably first see him "take a reading" with a hand-held exposure meter.

Today the majority of cameras have built-in exposure meters, and yet many people who have such cameras feel the need separate exposure meters and actually use them.

Why? There's a good reason. Every body wants precise control over his pictures and the hand-held exposure meter gives this kind of accuracy, while the built-in meter doesn't.

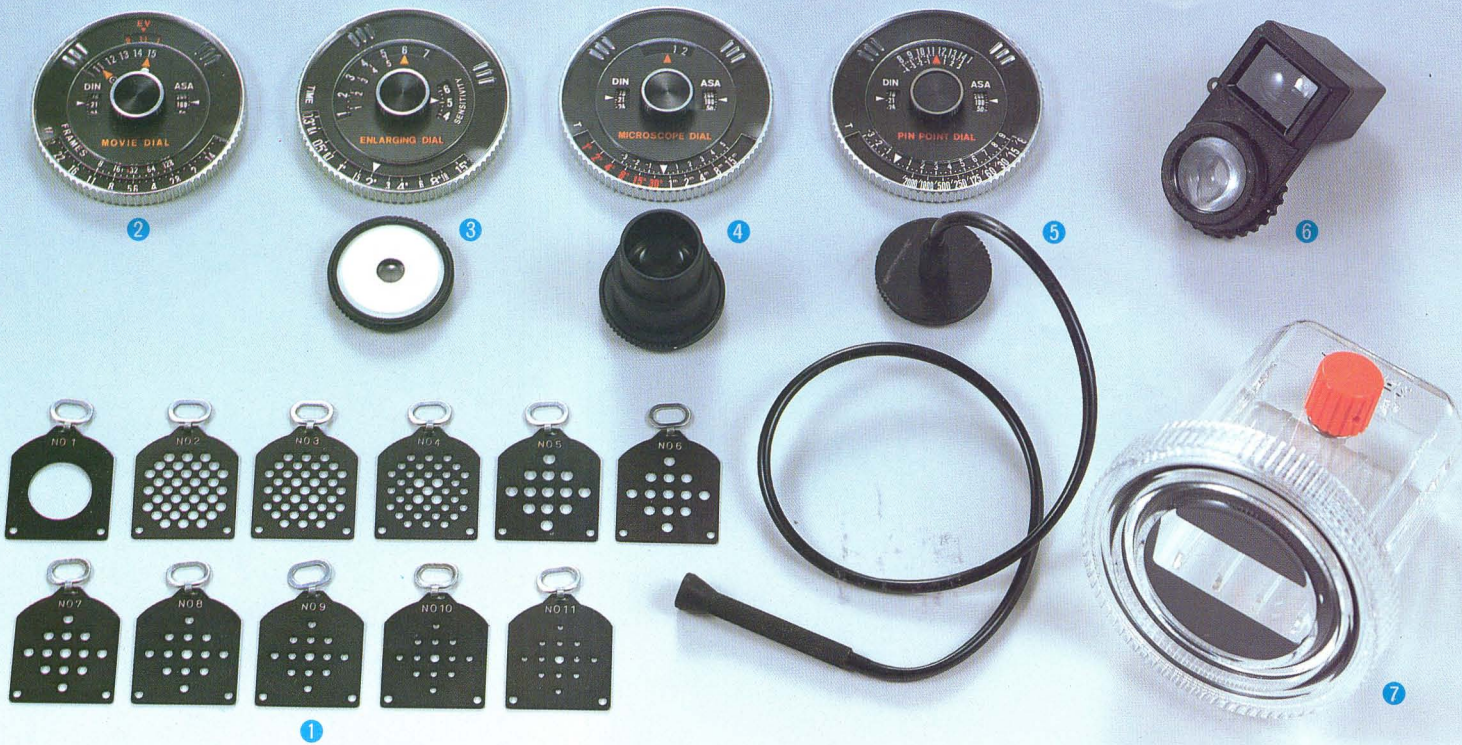
You're never really sure of a proper exposure with a built-in meter.

Most built-in exposure meters read the average light reflected from a subject. When there is limited contrast of lights and darks in a scene, you can expect good results. But what happens when a scene has strong contrast of very dark and very light areas? Unlike the hand-held exposure meter, the built-in type often fails to compensate and gives you instead an overall reading, which can lead to under- or over-exposure negatives.

Now let's suppose you're taking pictures at a sunny beach or in bright snow, both intense light situations. The built-in reflected type meter will tend to be overly effected by the light reflected from the sand or snow, resulting in a "burned out" negative. In such a case, you can rely only on a hand-held incident light exposure meter which gives you the correct reading for beautiful pictures.

The incident light types which measure the light falling on the subject are suitable to photography work in studios, such as shooting models and commercial products and for copywork where precise illumination balance and color reproduction are necessary, while 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.

Sekonic boasts a wide selection of separate exposure meters including Zoom, Flash, and Underwater meters, thus meeting every need and budget for beautiful picture taking.



Direct Reading Slider for L-398 ①

A total of 11 slides are employed for reading directly the aperture values. It eliminates the need for rotating the dial.

Movie dial for L-428 ②

This is a special dial for use when taking movies. It allows at-a-glance readouts of aperture settings for speeds from 8 to 128 frames per second.

Enlarger attachment for L-428 ③

The Enlarger Attachment is employed for obtaining correct exposure times when performing photographic printing.

Microscope attachment for L-428 ④

An excellently responsive, highly sensitive microscope exposure meter can be composed by installing the Microscope Attachment to the Sekonic System Meter.

Pinpoint attachment for L-428 ⑤

The Pinpoint Attachment is employed to form highly sensitive and excellently responsive exposure meterings for viewfinder cameras. Portional light measurements at the viewfinder focusing glass and subject lighting distribution measurements can be performed.

Viewfinder for L-428, L-448, L-518 ⑥

The Viewfinder is employed when measuring reflected light (illumination) at the camera or close-up subject. Light receiving angle is 10° and since the actual measured portion can be confirmed by eye, accurate exposure measurements can be performed.

Sekonic marine capsule for WH 158, WH 188 ⑦

A hand waterproof capsule exclusively designed for using Sekonic Auto-Lumi Model L-158 and Model L-188 under water.

SEKONIC PHOTOELECTRIC ILLUMINATION METER model 246

- Lightweight and compact for carrying convenience.
- Employs swivel head type light sensor for easy measuring.
- Selenium photocell is employed, eliminating need for changing batteries.

SPECIFICATIONS

Measuring range
 Low range: 0—1000 lux (Red scale).
 Normal range: 0—5000 lux (Black scale).
 High range: Using the accessory 10x slide, meters to 50000 lux.

Accuracy (deviation):
 ±10% (tested with standard single-plane tungsten lamps of color temperature 2854°K).
 Angle deviation
 Angle: Deviation
 30°: -3% or less
 60°: -10% or less
 Spectral luminous efficacy compensation
 0—1000 lux: No compensation (uses light source constant)
 0—5000 lux: Compensated
 Power source: No batteries needed
 Conditions of use
 Temperature: 5—35°C
 Humidity: 45—85%
 Size, Weight: 112 x 58 x 27 (mm), 135 g
 4-7/16" x 2-1/4" x 1-1/16" 5 ozs.

Complete with Lumidisc, High slide, leather case and neck cord.





SEKONIC STUDIO DELUXE model L-398

- Highly accurate incident light type for advanced amateurs and professional photographers.
- Employs swivel head type light sensor for easy measuring.
- Selenium photocell is employed, eliminating need for changing batteries.
- Needle stopper facilitates easy reading (stopper can be released).
- Comes with Lumidisc for adjusting illumination contrast and measuring illumination intensity, and Lumigrad for measuring reflected light.

SPECIFICATIONS

Measuring system: Incident light type (reflected light measurement is also possible)

Measuring range (ASA/ISO 100):
Incident: EV 4 to 17
Reflected: EV 9 to 17
ASA/ISO 6 to 12,000,
9 to 42 DIN

Film speeds:

Apertures: f/1 to f/90
Shutter speeds: 1/2000 sec. to 60 sec.
Movie film speeds: 8 to 128 fps

Complete with Lumisphere, Lumidisc, Lumigrad, High slide, leather case and neck cord.

SEKONIC STUDIO AUTO II model L-448

- Highly accurate direct reading type with automatically rotating shutter scale.
- Silicon photo diode with superior light response characteristics is employed in the light sensor.
- Wide measuring range of EV -4 to 17, at ASA/ISO 100 (incident light) is possible.
- Employs swivel head type light sensor for easy measuring and shutter scale stopper for easy reading.
- Comes with Lumidisc for adjusting illumination contrast and measuring illumination intensity, and Lumigrad for measuring reflected light.

SPECIFICATIONS

Measuring system: Incident and reflected light type

Measuring range (ASA/ISO 100):
Incident: EV -4 to 17
Reflected: EV 0 to 21

Power source:

One 1.5 V manganese dry battery (R6, AA, SUM-3)

Film speeds: ASA/ISO 3 to 25,000,
6 to 45 DIN

Apertures: f/1 to f/90
Shutter speeds: 1/2000 sec. to 60 min.
Movie film speeds: 18 or 24 fps

Complete with Lumisphere, Lumidisc, Lumigrad, battery, leather case and neck cord.

SEKONIC SYSTEM METER model L-428

- Highly accurate exposure meter usable for diversified measuring systems by interchanging attachments and exclusive dials.
- Silicon photo diode with superior light response characteristics is employed in the light sensor.
- Wide measuring range of EV -3 to 18, at ASA/ISO 100 (incident light) is possible.
- Employs swivel head type light sensor for easy measuring and needle stopper for easy reading.
- Comes with Lumidisc for adjusting illumination contrast and measuring illumination intensity, and Lumigrad for measuring reflected light.

SPECIFICATIONS

Measuring system: Incident and reflected light type

Measuring range (ASA/ISO 100):
Incident: EV -3 to 18
Reflected: EV 1 to 22

Power source:

Four 1.5V mercury batteries (SR44, S15, G13)

Film speeds: ASA/ISO 0.8 to 25,000,
0 to 45 DIN.

Apertures: f/1 to f/90
Shutter speeds: 1/4000 sec. to 60 min.

Complete with Lumisphere, Lumidisc, Lumigrad, batteries, leather case and neck cord.



SEKONIC FLASH METER model L-256D

- Revolutionary flash meter for measuring electronic flash, bright daylight and tungsten lights and can also be used as a slave unit for additional electronic flash lighting.
- Can be used for both wireless or sync-cord measurements.
- Superior durability is guaranteed with the employment of highly reliable electronic printed circuits.
- Stability and accuracy are improved by employing a silicon photo diode with superior light response characteristics in the light sensor.
- Meter needle holds about one minute until automatic switch-off.

SPECIFICATIONS

Measuring system:	Incident and reflected light type
Measuring range of electronic flash:	Incident: 13.9 to 28,500 lx. sec. Reflected: 1.24 to 2,540 cd. sec./m ²
Measuring range of daylight and tungsten light (ASA/ISO 100):	Incident: EV 9 to 20 Reflected: EV 10 to 21
Power source:	One 5.6 V mercury battery (Mallory TR-164, Eveready E 164, HM-4N)
Film speeds:	ASA/ISO 6 to 12,000, 9 to 42 DIN
Apertures:	f/1.4 to f/128
Shutter speeds:	1/2000 sec. to 1 sec. (used only for daylight and tungsten)

Complete with Lumisphere, Lumidisk, reflected light filter, sync. cord, polarization alternating cord, leather case and neck cord.

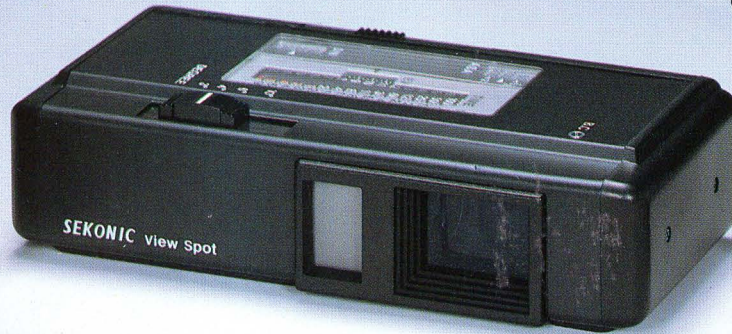
SEKONIC DIGIPRO X-1 model L-518

- World's first all-round exposure meter comprising five different functional modes and a built-in micro computer. It is a multifunctional exposure meter that incorporates
 - Mode 1: Flash light, via sync. cord,
 - Mode 2: Flash light, cordless measurement,
 - Mode 3: Flash light, cumulative measurement,
 - Mode 4: Ambient light measurement (T,F priority switch),
 - Mode 5: Countdown timer.
- Warning bell is employed for the first time in an exposure meter.
- Improper exposure is displayed by an E (error) symbol.
- Easy-to-read combination digital and analog displays.
- Set values such as, ASA (ISO) speed, F stops, shutter speeds, etc. are memorized even after the electric power source is cut off.
- Battery check mechanism gives instantaneous battery level readings.
- After measuring, calculation is possible by changing the ASA (ISO) speed or shutter speed.
- Swivel head turns to right and left and upwards.
- Volume adjustment that allows exposure compensation.

SPECIFICATIONS

Measuring system:	Incident and reflected light type
Measuring range: (ASA/ISO 100)	Flash light: F1.0 to F90 + 0.9 AV Ambient light: EV -1 to EV18
Measuring mode	Cord connected flash mode Cordless flash mode Cumulative flash mode
Flash:	Time priority mode Aperture priority mode
Ambient light:	One 1.5 V manganese dry battery (R6, AA, SUM-3)
Power source:	Memory display
ASA (ISO):	6 to 8,000 (1/3 SV step)
Time:	Flash light 1 to 1/500 sec. Ambient light 30 min. to 1/8,000 sec.
F value:	1.0 to 90 + 0.9 AV Dot display 1.0 to 90
EV:	-5 to 24.9
AV:	0 to 15
Other displays:	Under display of measuring range Over display of measuring range Battery check Bell (beep) coupled indication Countdown timer set display With power indication volume
Others:	

Complete with Lumisphere, Lumidisk, reflected-light filter, sync. cord, battery, leather case and neck cord.



SEKONIC ZOOM METER model L-228

- Reflected light type exposure meter with zoom finder for average metering and spot metering.
- Acceptance angle is changeable from 8.2° to 28° (equivalent to angles of view of 300mm to 85mm lenses on a 35mm camera.)
- Ideal for measuring the lighting of unapproachable stages in theaters and for sectional metering of subjects with strong contrasts.

SPECIFICATIONS

Measuring system: Reflected light type
 Measuring range (ASA/ISO 100): EV 3 to 17
 Power source: Two 1.3V mercury batteries (MR9, M20, H-D)
 Film speeds: ASA/ISO 0.1 to 16,000, 1 to 42 DIN
 Apertures: f/1 to f/32
 Shutter speeds: 1/1000 sec. to 64 sec.

Complete with batteries, leather case and neck cord.

SEKONIC VIEW SPOT METER model L-438

- Highly accurate direct reading type with automatically sliding shutter speed scale.
- Spot metering is possible at variable acceptance angles of 3°, 4°, 6° and 10°.
- Field of view of finder is fixed while acceptance angle indicator ring is variable.
- Silicon photo diode with superior light response characteristics is employed in the light sensor.
- Contrast ratio can be measured inside the finder.
- With built-in highly reliable integrated circuit.

SPECIFICATIONS

Measuring system: Reflected light type with acceptance angle-change viewfinder
 Measuring range (ASA/ISO 100): EV 3 to 18
 Power source: One 1.5V manganese dry batter (R6, AA, SUM-3)
 Film speeds: ASA/ISO 6 to 6,400, 9 to 39 DIN
 Apertures: f/1 to f/90
 Shutter speeds: 1/4000 sec. to 60 sec.
 Movie film speeds: 8 to 128 fps

Complete with battery, leather case and neck cord.

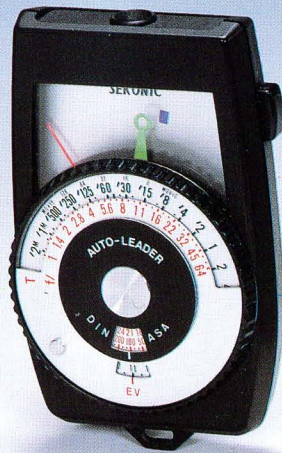
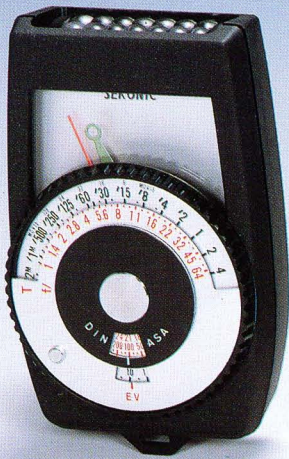
SEKONIC MULTI-LUMI model L-248

- Highly accurate reflected light type employing a sensitive CdS in the light sensor.
- With built-in slide diffuser for easy switchover to incident light measurements.
- Needle stopper mechanism facilitates easy reading.

SPECIFICATIONS

Measuring system: Reflected light type (incident light measurement is also possible)
 Measuring range (ASA/ISO 100): EV 2 to 18
 Power source: One 1.3V mercury battery (MR9, M20, H-D)
 Film speeds: ASA/ISO 6 to 12,000, 9 to 42 DIN
 Apertures: f/1 to f/64
 Shutter speeds: 1/4000 sec. to 30 min.
 Movie film speeds: 8 to 64 fps

Complete with battery, leather case and neck cord.



SEKONIC AUTO-LUMI model L-158

- Easy-to-use needle matching, reflected light type exposure meter.
- Lightweight and compact for carrying convenience.
- Selenium photocell is employed, eliminating need for changing batteries.

SPECIFICATIONS

Measuring system: Reflected light type
 Measuring range (ASA/ISO 100): EV 7 to 17
 Light sensor: Selenium photocell
 Film speeds: ASA/ISO 6 to 12,000,
 9 to 42 DIN
 Apertures: f/1 to f/64
 Shutter speeds: 1/2000 sec. to 8 sec.
 Movie film speeds: 8 to 128 fps

Complete with neck cord.

SEKONIC AUTO-LEADER model L-188

- Easy-to-use needle matching, reflected light type exposure meter.
- Lightweight and thin for carrying convenience.
- Highly sensitive CdS is employed in the light sensor.

SPECIFICATIONS

Measuring system: Reflected light type
 Measuring range (ASA/ISO 100): EV 3 to 18
 Power source: One 1.5V mercury
 battery (SR44, S15, G13)
 Film speeds: ASA/ISO 6 to 12,000,
 9 to 42 DIN
 Apertures: f/1 to f/64
 Shutter speeds: 1/2000 sec. to 8 sec.
 Movie film speeds: 8 to 128 fps

Complete with battery and neck cord.

SEKONIC MARINE II model L-164B

- Ideal exposure meter employing direct reading for easy manipulation and reading under water.
- All-weather type exposure meter usable also in rain and snow.
- Permissible water depth is 60 meters (200 feet).

SPECIFICATIONS

Measuring system: Reflected light type.
 Direct reading aperture system.
 Measuring range (ASA/ISO 100): EV5 to 17
 Power source: One 1.3V mercury
 battery (MR9, M20, H-D)
 Film speeds: ASA/ISO 6 to 12,000,
 9 to 42 DIN
 Apertures: f/1 to f/64
 Shutter speeds: 1/2000 sec. to 1 sec.

Complete with leather case and chain.

SEKONIC EXPOSURE METERS

	STUDIO DELUXE model L-398	STUDIO AUTO II model L-448	SYSTEM METER model L-428	FLASH METER model L-256D	DIGIPRO X-1 model L-518
Measuring system	Incident light type Reflected is also possible	Incident and reflected light type	Incident and reflected light type	Incident and reflected, Cordless and with cord, Flash and ambient light	Incident and reflected, Digital exposure meter, Flash and ambient light
Measuring range (at ASA/ISO 100)	Incident: EV 4 to 17 Reflected: EV 9 to 17	Incident: EV -4 to 17 Reflected: EV 0 to 21	Incident: EV -3 to 18 Reflected: EV 1 to 22	Flash: Incident: 13.9 to 28,500 lx. sec. Reflected: 1.24 to 2,540 cd. sec./m ²	Flash light: F1.0 to F90 + 0.9AV Ambient light: EV -1 to EV18
Light sensor	Selenium photocell	Silicon photo diode	Silicon photo diode	Silicon photo diode	Silicon photo diode
Acceptance angle	54° (reflected)	40° (reflected)	40° (reflected)	65° (reflected)	55° (reflected) 10° (viewfinder)
Power source	—	1.5V manganese batt. R6, AA, SUM-3 (x1)	1.5V mercury batt. SR44, S15, G13 (x4)	5.6V mercury batt. HM-4N (x1)	1.5 V manganese batt. R6, AA, SUM-3 (x1)
Film speeds	ASA (ISO) 6 to 12,000, 9 to 42 DIN	ASA (ISO) 3 to 25,000, 6 to 45 DIN	ASA (ISO) 0.8 to 25,000, 0 to 45 DIN	ASA (ISO) 6 to 12,000, 9 to 42 DIN	ASA (ISO) 6 to 8,000 9 to 40 DIN
Apertures	f/1 to f/90	f/1 to f/90	f/1 to f/90	f/1.4 to f/128	f/1.0 to f/90 + 0.9AV Dot display f/1.0 to f/90
Shutter speeds	1/2000 sec. to 60 sec.	1/2000 sec. to 60 min.	1/4000 sec. to 60 min.	1/2000 sec. to 1 sec.	Flash light: 1/500 to 1 sec. Ambient light: 30 min. to 1/8,000 sec.
Exposure values	1 to 20	-7 to 22	-7 to 24	—	-5 to 24.9
Movie film speeds	8 to 128 fps	18 or 24 fps	—	—	—
Size	58mmx107mmx30mm (2 ¹ / ₄ " x 4 ³ / ₁₆ " x 1 ³ / ₁₆ ")	67.5mmx130mmx34.5mm (2 ¹ / ₁₆ " x 5 ¹ / ₈ " x 1 ³ / ₈ ")	65mmx136mmx47mm (2 ⁹ / ₁₆ " x 5 ³ / ₈ " x 1 ⁷ / ₈ ")	65mmx136mmx45mm (2 ⁹ / ₁₆ " x 5 ³ / ₈ " x 1 ³ / ₄ ")	142mm (154 mm) x64mmx28mm 5 ⁹ / ₁₆ " (6 ¹ / ₁₆ ") x 2 ¹ / ₂ " x 1 ¹ / ₈ " () indicates length when slide is extended
Weight	250g (9 ozs.)	200g (7 ozs.)	280g (10 ozs.)	320g (11 ozs.)	Approx. 200g (7 ozs.)

	ZOOM METER model L-228	VIEW SPOT METER model L-438	MULTI-LUMI model L-248	AUTO-LUMI model L-158	AUTO-LEADER model L-188
Measuring system	Reflected light type	Reflected light type	Reflected light type Incident is also possible	Reflected light type	Reflected light type
Measuring range (at ASA/ISO 100)	EV 3 to 17	EV 3 to 18	EV 2 to 18	EV 7 to 17	EV 3 to 18
Light sensor	CdS	Silicon photo diode	CdS	Selenium photocell	CdS
Acceptance angle	8.2° to 28°	3°, 4°, 6°, 10° (4-step switching)	38° (high), 32° (low)	65°	60°
Power source	1.3V mercury batt. MR9, M20, H-D (x2)	1.5V manganese batt. R6, AA, SUM-3 (x1)	1.3V mercury batt. MR9, M20, H-D (x1)	—	1.5V mercury batt. SR44, S15, G13 (x1)
Film speeds	ASA (ISO) 0.1 to 16,000, 1 to 42 DIN	ASA (ISO) 6 to 6,400, 9 to 39 DIN	ASA (ISO) 6 to 12,000, 9 to 42 DIN	ASA (ISO) 6 to 12,000, 9 to 42 DIN	ASA (ISO) 6 to 12,000, 9 to 42 DIN
Apertures	f/1 to f/32	f/1 to f/90	f/1 to f/64	f/1 to f/64	f/1 to f/64
Shutter speeds	1/1000 sec. to 64 sec.	1/4000 sec. to 60 sec.	1/4000 sec. to 30 min.	1/2000 sec. to 8 sec.	1/2000 sec. to 8 sec.
Exposure values	1 to 18	1 to 22	-3 to 23	-2 to 19	-2 to 19
Movie film speeds	—	8 to 128 fps	8 to 64 fps	8 to 128 fps	8 to 128 fps
Size	78mmx117mmx35mm (3 ¹ / ₁₆ " x 4 ³ / ₁₆ " x 1 ³ / ₈ ")	130mmx62mmx32.5mm (5 ¹ / ₈ " x 2 ¹ / ₁₆ " x 1 ¹ / ₄ ")	60mmx100mmx33mm (2 ³ / ₈ " x 3 ¹⁵ / ₁₆ " x 1 ⁵ / ₁₆ ")	52mmx81mmx24.5mm (2 ¹ / ₁₆ " x 3 ¹ / ₁₆ " x 1 ⁵ / ₁₆ ")	52mmx81mmx19.3mm (2 ¹ / ₁₆ " x 3 ¹ / ₁₆ " x 3 ³ / ₄ ")
Weight	250g (9 ozs.)	280g (10 ozs.)	170g (6 ozs.)	50g (2 ozs.)	50g (2 ozs.)

	MARINE II model L-164B
Measuring system	Reflected light type, Direct reading system
Measuring range (at ASA/ISO 100)	EV 5 to 17
Light sensor	CdS
Acceptance angle	30°
Power source	1.3V mercury batt. MR9, M20, H-D (x1)
Film speeds	ASA (ISO) 6 to 12,000, 9 to 42 DIN
Apertures	f/1 to f/64
Shutter speeds	1/2000 sec. to 1 sec.
Exposure values	—
Movie film speeds	—
Size	86mm dia.x67mm (3 ³ / ₈ " dia. x 2 ⁵ / ₈ ")
Weight	240g (8 ozs.)



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