



CRITICAL COLOR, CRITICAL EXPOSURE

## KFM-1100

AUTO DIGI METER



## KFM-2100

FLASH METER



## KCM-3100

COLOR METER







# *Meter it, Shoot it right.*

## *Control white balance and dynamic range.*

Measuring light to predict its effect on the image is essential in professional photography. Light. Without it, there is no image. Regardless whether the camera uses a digital sensor or film light is required to create an image.

To assist photographers in this endeavor KENKO Co. has introduced a line of professional light meters. These precision instruments accurately and faithfully measure light and one measures color temperature. Thus providing information that is essential in creating an image the photographer expects.

All three meters are based on world-class patented technology encased in an ergonomic, easy-to-use form that feels good in your hand. The layout of the controls is simple, giving quick and easy access to all of their functions.

These meters are highly advanced, easy-to-use and accurate.





# KFM-1100 AUTO DIGI METER

**KFM-1100 AUTO DIGI METER**  
**For Both Flash and Ambient Light Readings**  
**Simple, Easy-to-Use, Accurate.**



## Ambient Light Readings

The KFM-1100 shutter speed can be selected in a range from as long as 30 minutes to as fast as 1/8000 of a second (This range is selectable in full stop,  $\frac{1}{2}$  stop or  $\frac{1}{3}$  stop increments). The light reading is displayed on the meter's LCD window as both digital and analog data. If you wish to select a different shutter speed after a reading is taken, the aperture reading will automatically change accordingly. The KFM-1100 can read a very wide range of light from the very low equivalent EV -2.0 to EV 19.9 (incident light based on ISO 100). The meter can also be set to a Cine mode to be used with Cine cameras and display light readings from 8 to 128 frames/sec.





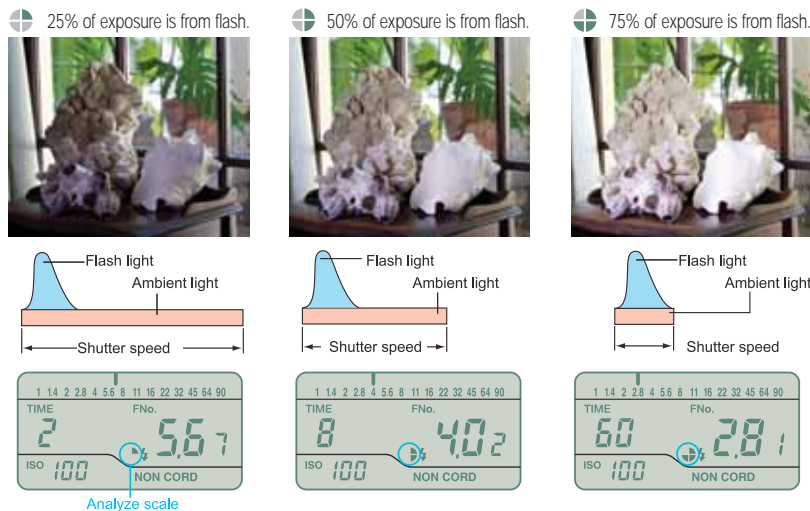
## Flash Light Reading

When using with flash, select Cord or Non-Cord depending on the shooting conditions. For Cord setting, connect the Flash sync-cord to the Sync Terminal in the front of the KFM-1100 then a light reading can be taken by simply pressing the Measurement button on the side of the meter. When using a non-cord set-up, pressing the measurement button sets the meter in stand-by mode. When the flash is fired manually, the meter takes a reading.



## Analyze Function

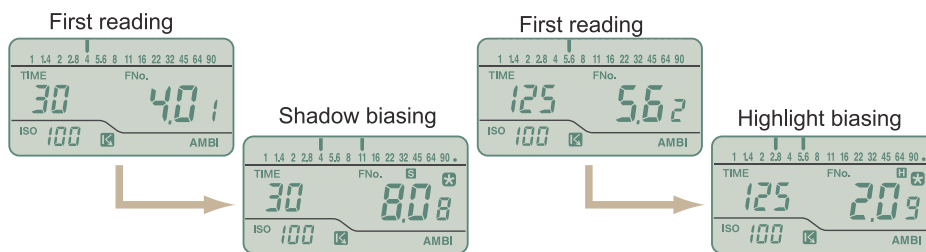
When taking readings in mixed flash and ambient lighting, the KFM-1100 can measure the flash and ambient light almost simultaneously. The percentage of flash light in the over-all exposure is then displayed in the analyze scale on the LCD. The analyze scale is divided into 4 sections, each section represents flash contribution of approximately 25% of the total lighting. For example, if 3 sections of the analyze scale are lit, the flash to ambient light ratio is approx. 75% flash to 25% ambient. After taking a reading, the shutter speed can be changed and the meter will recalculate the exposure. Setting a slower shutter speed would result in a greater ambient to flash ratio. Setting a faster shutter speed would result in a lesser ambient to flash ratio. The analyze scale helps you balance the 2 sources of lighting for more predictable results, so you can set the lighting and exposure to get the look you want.



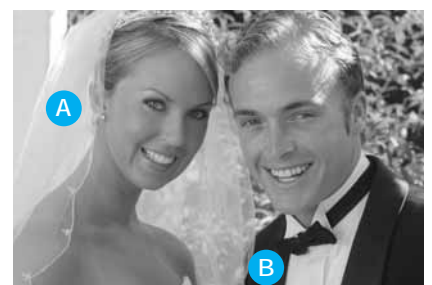
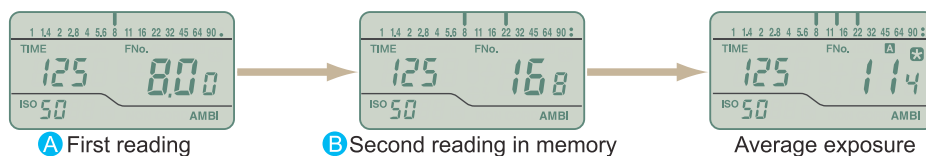
Analyze scale	Ratio between flash and ambient light		Results
	Flash light	Ambient light	
	Approx. 0%	Approx. 100%	Exposure is dominated by ambient light with virtually no influence from flash light
	Approx. 25%	Approx. 75%	Ambient light is dominant, but flash light also has some influence.
	Approx. 50%	Approx. 50%	Ambient light and flash light contribute the same amounts to the exposure.
	Approx. 75%	Approx. 25%	Flash light is dominant, but ambient light also has some influence.
	Approx. 100%	Approx. 0%	Exposure is dominated by flash light with virtually no influence from ambient light

## Calculation Function

The KFM-1100s calculation function can be used to average readings stored in memory or bias exposures toward shadow or highlights when taking reflected light readings. This allows for more accurate recording of shadow or highlight detail.



Note: Examples shown to the right require the 5 degree spot attachment in the ambient mode.





## Memory

The KFM-1100 has memory slots to store 2 separate readings. Both stored readings and the current reading are displayed simultaneously in the analog scale. Memory markers also show the number of stored readings. Having readings stored in memory makes it easier to analyze the contrast range of your subject, the lighting ratio or viewing several separate readings in relation to one another.

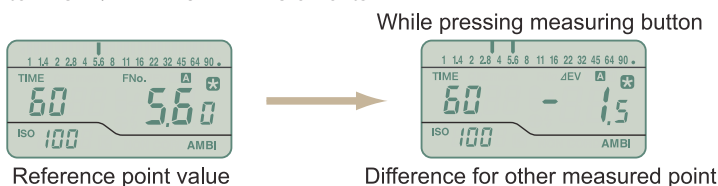


## Monitor Function

The KFM-1100 has a brightness difference function that can be used to adjust lighting ratios or check for background light uniformity, very useful for product photography, portraits, etc. Checking for lighting uniformity across the entire scene is a critical use for light meters. Simply take a reading on your main reference point, then press the S/A/H button and then take reading on the other areas of the scene. The meter will display the brightness differences in term of +/- EV in 0.1 EV increments.



Sphere Diffuser  
(Standard accessory)



## Custom Settings

At any time you can set the display readings to your liking for: Selecting the shutter speed stops (1, 1/3 stops) Selecting the F no. Display mode (F number + 0.1 increment intermediate value display, or just F number direct reading display) Selecting the exposure correction value (EV - 10 to 10)

## Names of parts



**1. Light Receptor Head**  
270 Degree swivel, accepts flat diffuser

**2. Power button**

**3. S/A/H (shadow / average / highlight) button**  
Sets the KFM-1100's calculation function; desired function is selected using the up/down dial. (Shadow / high-light available only for reflected-light measurements.)

**4. MEMORY button**  
Stores the current reading in memory. 2 measurements can be stored.

**5. LCD Data panel**  
Large, Easy-to-read LCD to give you the information you need at a glance.

**6. ISO button**  
For setting the main ISO using the up/down dial on the side of the meter

**7. Display-selector button**  
Changes display units between an f-number and an EV readout.

**8. MODE button**  
Changes the measuring mode between Ambient, Cord and Non-Cord

**9. Measuring button**  
For taking light readings

**10. Up/Down control**  
For adjusting shutter-speed and ISO values: Shutter-speed range: 1/8000 sec. -30min. in 1/3-stop increments (ambient); 1/500-1 sec. in 1/3-stop increments (flash) Cine-speed range: 8-128 frames/sec.

**11. Battery cover**

**12. Sync terminal**  
For Corded flash readings

**13. Accessory-receptor jack**

## Specifications

Type:	Hand-held exposure meter for measuring ambient and flash light	
Reception Method:	Incident-light readings	
Receptors:	Incident: Spherical Diffuser - 270 rotating receptor head	
Receptor element:	Silicon photocell	
Measuring modes:	AMBI: Ambient light CORD: Flash light and flash bulb light using a sync cord NON.CORD: Flash light without a sync cord	
Measuring range (ISO 100):	Ambient light Incident	EV -2.0 to 19.9
	Flash light	Incident-light readings:
Repeatability:	±0.1 stop	
Calibration coefficient:	Incident: C = 330 (Spherical Diffuser)	
Display range:	ISO:	3 to 8000 (1/3 stop increments)
	Shutter speed (ambient):	30 min. to 1/8000 sec. (1, 1/2, 1/3 stop increments)
	Shutter speed (flash):	1 sec to 1/500 sec. (1, 1/2, 1/3 stop increments)
	Framing rate:	8 to 128 f/s
	Exposure:	F1.0 to 90+0.9 stop (0.1 stop increments)
	Ev:	-17 to 40.8 (0.1 stop increments)
	Exposure difference:	-10 to +10 (0.1 stop increments)
	Analog scale:	FNO. 1.0 to 90 (1/2 stop increments)
	Analyze scale:	Flash light proportion 0 to 100% (25% increments)
Other functions:	Memory, S/A/H calculation, brightness difference Analyze function for calculating ratio of flash light to ambient light	
Power:	One AA alkaline dry cell (LR-6/1.5 V)	
Battery life:	Approx. 50 hours: continuous reading in AMBI mode using alkaline dry cells	
Operation temperature and relative humidity range:	-10 C to 50 C (14 F to 122 F) Relative humidity 85% max. [at 35 C (95 F)], no condensation	
Storage temperature range:	-20 to 55°C (-4 F to 131 F) Relative humidity 85% max. [at 35°C (95 F)], no condensation)	
Others:	Accessory-receptor jack (with cap) Display correction function -10.0 to +10.0Ev Sync terminal	
Dimensions:	57 (W) x 157 (H) x 26 (D) mm	
Weight:	135 g (4.7 oz.) excluding battery	
Standard accessories:	Spherical Diffuser, neck strap, case, a single alkaline dry cell (note)	

(Note) The single alkaline dry cell is only for products marketed in Japan.

Specifications and external appearances described herein are subject to change without notice.

## Optional Accessories



### Flat Diffuser

This diffuser is 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.



### Spot Finder 5°

Viewfinder 5° feature 5° angles of acceptance respectively, and enable spot metering of subjects from a distance. The meter can thus be used to accurately measure small areas of a scene.



### Reflected-Light Attachment II

The reflected-light attachment has 40° angle of acceptance, which corresponds to the angle of view seen with a 50mm lens on a 35mm SLR camera.





# KFM-2100 FLASH METER

## KFM-2100 FLASH METER

Flash Meter With Integrated Spot Meter



### Flash Meter With Integrated Spot Meter

The Kenko KFM-2100 is an exposure meter that incorporates both flash and spot metering functions into one compact unit.

The KFM-2100 can simultaneously display an exposure reading on the flash meter (for measuring incident light) and an exposure reading on the spot meter (for measuring reflected light).

But its more than one simple easy-to-use integrated system that fits comfortably in your hand. It also incorporates the Exposure Navigation System, which displays information on the LCD that helps you determine the proper exposure for a scene.

### Exposure Navigation System

The KFM-2100 allows you to confirm the exposure of each part of a scene being photographed. Conventionally, a photographer relies mainly on their experience and expertise when determining exposures. However, the KFM-2100 can emulate the decision making process on the LCD, guiding you to the exposure best suited to a particular photograph.

### Ergonomic and Stylish

The KFM-2100 flash meter is a professional instrument that feels good in your hand and has controls that are logical and well laid out for ease of use.

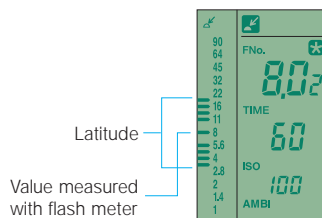
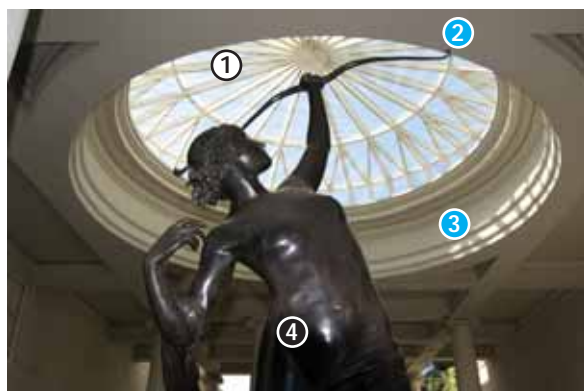


## Latitude Display Function

Latitude is the degree to which you can over or under expose an image and still have acceptable image quality from the exposure. This concept is as critical with digital photography as with film. (Hint: Use your Digital Camera's RAW setting for widest possible latitude also referred to as Dynamic Range, but a typical digital SLR's sensor has about a + or - 2 stop latitude range, making it similar to photographing with color negative film.)

The latitude or difference in exposure between the brightest highlight areas of a scene and the darkest shadow areas can be determined by the KFM-2100 to make better informed lighting and exposure choices with the latitude function and built-in 1° spot meter.

Note: Latitude and Dynamic Range can vary widely with different Digital SLR sensor types or different film types. Before using the KFM-2100 specify the correct latitude for the Digital camera or film being used.

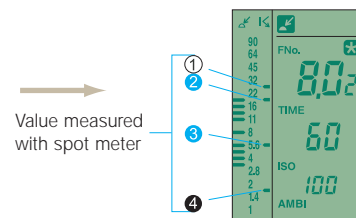


① can be saturated with white.  
④ can be saturated with black.

The measured values ② and ③ are to be within the specified latitude.

\*\*Latitude" represents a film's effective exposure range. Normally, when a target object with extremely bright and dark areas is printed as a photograph, the bright areas are saturated with white and the dark areas are saturated with black. This phenomenon occurs when the contrast between the bright and dark areas exceeds the latitude of the film.

Generally, color reversal films provide a latitude of about five stops. If the difference in brightness of the target object (difference in the spot meter's measured values) exceeds five stops, the bright and dark areas will be saturated white and black, respectively, when reproduced on film.



Check if the measured values ② and ③ are within the specified latitude.

## Viewfinder

The KFM-2100 can display digital readings, not just in the LCD on the front of the meter, but on in a LCD display in the viewfinder window as well. This allows light reading to be seen while still looking through the viewfinder. The meter also has dioptic adjustments for more comfortable viewing.



## Vertically Oriented LCD

The KFM-2100 flash meter has a large, easy-to-read vertical LCD that displays F No. as a large number value with a 1/10 intermediate stop as a smaller number next to the full stop aperture value. Or, the meter can be set to display the aperture in  $\frac{1}{3}$  stop increments. A vertical analog scale along the side of the display also provides the same aperture information when taking basic readings.

## Memory

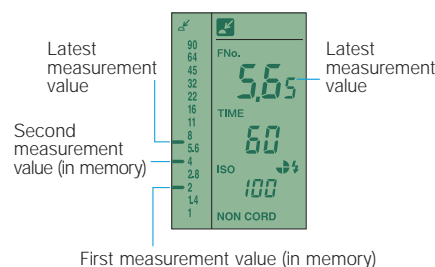
The KFM-2100 flash meter has memory slots to store 10 separate readings. Both stored readings and the current reading can be displayed simultaneously in the vertical analog scale. Memory markers also show the number of stored readings. Having readings stored in memory makes it easier to analyze the contrast range of your subject, the lighting ratio or viewing several separate readings in relation to one another.

## Ambient Light Reading

The KFM-2100 flash meter's shutter speed can be selected in a range from as long as 30 minutes to as fast as 1/16,000 of a second (This range is selectable in full stop,  $\frac{1}{2}$  stop or  $\frac{1}{3}$  stop increments). The light reading is displayed on the meter's LCD window as both a digital and analog data. Once a reading is taken if you wish to change the shutter speed the aperture reading will automatically change accordingly. The KFM-2100 can read a very wide range of light from the very low equivalent EV -2.0 to 19.9 (incident light based on ISO 100). The meter can also be set to a Cine mode to be used with Cine cameras and display light readings from 8 to 128 frames/sec.

## Flash Light Reading

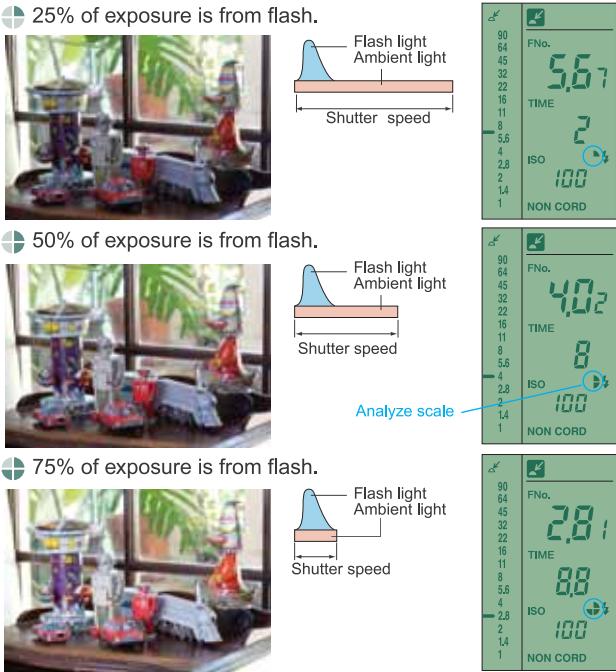
When using with flash, select Cord or Non-Cord depending on the shooting conditions. For Cord setting, connect the Flash sync-cord to the Sync Terminal in the front of the FKM-2100 flash meter then a light reading can be taken by simply pressing the Measurement button on the side of the meter. When using a non-cord set-up, pressing the measurement button sets the meter in stand-by mode. When the flash is fired manually, the meter takes a reading.



Analyze Function

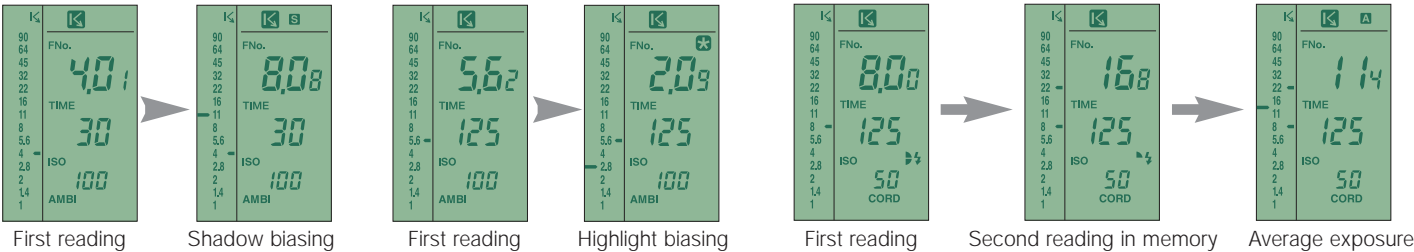
When taking readings in mixed flash and ambient lighting, the KFM-2100 can measure the flash and ambient light almost simultaneously. The percentage of flash in the over-all exposure is then displayed in the analyze scale on the LCD. The analyze scale is divided into 4 sections, each section represents flash contribution of approximately 25% of the total lighting. For example, if 3 sections of the analyze scale are lit, the flash to ambient light ratio is approx. 75% flash to 25% ambient. After taking a reading, the shutter speed can be changed and the meter will recalculate the exposure. Setting a slower shutter speed would result in a greater ambient to flash ratio. Setting a faster shutter speed would result in a lesser ambient to flash ratio. The analyze scale helps you balance the 2 sources of lighting for more predictable results, so you can set the lighting and exposure to get the look you want.

Analyze scale	Ratio between flash and ambient light		Results
	Flash light	Ambient light	
	Approx. 0%	Approx. 100%	Exposure is dominated by ambient light with virtually no influence from flash light
	Approx. 25%	Approx. 75%	Ambient light is dominant, but flash light also has some influence.
	Approx. 50%	Approx. 50%	Ambient light and flash light contribute the same amounts to the exposure.
	Approx. 75%	Approx. 25%	Flash light is dominant, but ambient light also has some influence.
	Approx. 100%	Approx. 0%	Exposure is dominated by flash light with virtually no influence from ambient light



Calculation Function

The KFM-2100 flash meter has a calculation function that can be used to average readings stored in memory or bias exposures toward shadow or highlights when taking recordings. This allows for more accurate recording of shadow or highlight detail.



Names of parts

- 1 Receptor head  
Swivels 270° and accepts the Flat Diffuser
- 2 Power button
- 3 Viewfinder
- 4 Spot (reflected-light) measurement button
- 5 Incident-light measurement button
- 6 Data panel  
Easy-to-read to give you the information you need at a glance.
- 7 Up/down dial  
Used to set various values, such as ISO, shutter speed, calculation mode, etc.
- 8 ISO button  
For setting the main ISO using the up/down dial.
- 9 LATITUDE button  
Sets the Latitude display and monitor functions to standby.
- 10 MODE button  
Changes the measuring mode.
- 11 Instant-film ISO button  
For setting a secondary ISO (such as that of instant film for test shots) and displaying the exposure based on this ISO.
- 12 Clear button  
Clears all measurement data from memory and cancels the standby status of the latitude display and brightness difference functions.
- 13 S/A/H (shadow / average / highlight) button  
Sets the Flash Meter VI's calculation function; desired function is selected using the up/down dial. (Shadow / highlight available only for reflected-light measurements.)
- 14 MEMORY button  
Stores the present measurement in memory. Up to 10 measurements can be stored.
- 15 Sync terminal
- 16 Battery chamber cover



## Specifications

Type:	Hand-held exposure meter for measuring ambient and flash light		
Reception method:	Incident-light and spot reflected-light readings		
Receptors:	Incident-light readings: Spherical Diffuser, Swivels 270 Spot reflected-light: angle 1		
Receptor element:	Silicon photocell		
Measurement modes:	AMBI: Ambient light CORD: Flash light measurement with the sync cord NON.CORD: Flash light without using a sync cord (for incident-light reading only)		
Measuring range (ISO 100):	Ambient light	Incident-light readings:	EV -2.0 to 19.9
		Spot reflected-light:	EV 2.0 to 24.5
	Flash light	Incident-light readings:	FNO. 1.0 to 128 + 0.9 stop
		Spot reflected-light:	FNO. 2.8 to 128 + 0.9 stop
Measuring Distance:	1.3m to infinity ( $\infty$ ) (for spot measurement)		
Viewfinder:	Single-lens reflect type with fixed focal point Magnification: 1.2x Viewing angle: 12 (vertical) x 17 (horizontal) Dioptric adjustment range: -3.0 to +1.0		
Repeatability:	+/- 0.1 EV		
Calibration coefficient:	Incident-light readings:	C = 330 (Spherical Diffuser) C = 250 (Flat Diffuser)	
	Spot reflected-light:	K = 14	
Display range:	Exposure: F 1.0 to 128 + 0.9 stop (0.1 stop increments) EV: -17 to 40.9 (0.1 stop increments) Shutter speed (ambient): 30 min. to 1/16000 sec. (1, 1/2 or 1/3 stop increments) Shutter speed (flash): 30 min. to 1/1000 sec. (1, 1/2 or 1/3 stop increments) Frame rate (Opening angle of 180 ): 8,12,16,18,24,25,30,32,64,128 ISO: 3 to 8000 (1/3 increments) Exposure difference: -10 to +10 (0.1 stop increments) Analog scale: FNO. 1.0 to 90 (1/2 stop increments) Analyze scale: Flash light proportion 0 to 100%(25% increments )		
Other functions:	Latitude display function, Light Ratio Analyze function, Memory function (10 measure values), S/A/H calculation, Brightness difference function, Exposure correction function: -10 to +10 (0.1 stop increments)		
Others:	Sync terminal		
Power:	One AA alkaline dry cell (LR-6/1.5 V)		
Battery life:	Approx. 30 hours : Continuous operation for ambient light/incident light measurement, with alkaline dry cell)		
Operating temperature/humidity range:	-10 C to 50°C (14 F to 122 F) Relative humidity 85% max. [at 35°C (95 F)], no condensation		
Storage temperature/humidity range:	-20 C to 55°C (- 4 F to 131 F) Relative humidity 85% max. [at 35°C (95 F)], no condensation		
Dimensions:	66 (W) x 175 (H) x 31 (D) mm		
Weight:	185 g (6.5 oz) excluding battery		
Accessories:	strap, case, a single alkaline dry cell (note)		

(Note) The single alkaline dry cell is only for products marketed in Japan.

Specifications and external appearances described herein are subject to change without notice.

**Sphere Diffuser**  
(Standard accessory)



### Optional Accessories



#### Flat Diffuser

This diffuser is 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.



# KCM-3100 COLOR METER

## Because Color is Critical

Knowing the color temperature before taking a photograph saves you time and money

Even in the world of digital photography, it is critically important to know the color temperature of every light source present in a scene. Are all lights giving the same color temperature? Even the same model of flash tubes or continuous lights can shift color over time and use.



### Ambient Light Readings

First set the appropriate film type, choose the display mode and memory channel (if present). Set the Mode switch to "AMBI", then simply aim the meter's light receptor at the scene and press the measurement button. Measurement readings will be calculated and appear in the almost immediately and color temperature measurements will be taken as long as the measurement button is held down. The KCM-3100's measuring range for ambient light is EV 3 to 16.3 using ISO 100.



Tungsten light (Daylight film), 80A filter and 82B filter



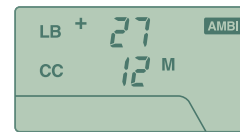
No filter



## Three Display Modes

### LB (Light Balancing) and CC (Color Compensating) Indexes

The LB index is used to select the right amber or blue LB filter needed to balance a light source. Its measurement is the mired difference between the photographic color temperature specified for the selected film type and the temperature of the light source. The CC index is the value of the required magenta or green colored CC filter.



### Filter number and CC index

The Kodak Wrattan light balancing filter number (or numbers) needed, display directly in the LCD to make easy selection of amber or blue LB filter (s). The CC index is the value of the required magenta or green colored CC filter.



### Photographic Color Temperature

The photographic color temperature of the light source is measured in degrees Kelvin and determined according to the spectral sensitivity of color films.



## Flash Light Readings

First set the appropriate film type and choose the display mode. Set flash range selector switch to Hi or Lo depending on the output of the flash unit (s), set the shutter speed to be used (from 1 sec. to 1/500 sec.). The total flash measurement range is from f/2.8 to f/180 at ISO 100.

### Flash Reading With Sync Cord

For Sync Cord setting, set the mode selector switch to "CORD" and connect the flash sync-cord to the Sync Terminal in the front of the KCM-3100, Then a temperature reading can be taken by simply pressing the Measurement button on the side of the meter. The flash will then fire, a measurement will be taken and the measurement reading will appear in the LCD display.

### Flash Reading Without Sync Cord

When using a non-cord flash set-up, set the mode selector switch to "NON.C." Pressing the measurement button sets the meter in stand-by mode. When the flash is fired manually, a measurement will be taken and the measurement reading will appear in the LCD display.

### Analyzer Mode for Flash Light Measurements Only

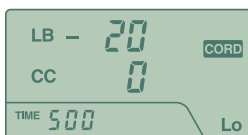
By setting the shutter speed to "F", the KCM-3100 will only display measurement readings for the light from a flash.



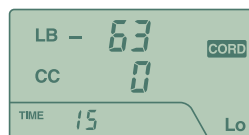
Flash and fluorescent light (Daylight film), 81C filter and 30M filter

## Useful Shutter Speed Range

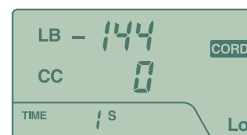
A selectable range of shutter speeds from 1 full second down to a fast 1/500 of a second set in full stops for flash measurement. Lighting for Flash photography usually is made up of a combination of flash and ambient light. The KCM-3100 measures the "mixed" lighting at the selected shutter speed. After measurement the shutter speed set in the meter can be changed which effectively changes the ratio of ambient light to flash. The meter will automatically recalculate the results and display the new reading for the new shutter speed.



1/500 sec.



1/15 sec.



1 sec.

Examples of changes in image color due to changes in shutter speed (Daylight film, no filter; meter displays show suggested filtration for "normal" color reproduction)

## Names of parts

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### 1. Receptor diffuser

270 degree swivel with built-in white flat diffuser

### 2. LCD Data display

### 3. Power Button

### 4. Memory Channel (M-CH) Button

Press and hold to access and select memory channels using the up/down control

### 5. M (Memory) Button

Press and hold to change Data in memory using the up/down control

### 6. DISPLAY Button

The button changes the display mode in the set following order.

...→LB/CC indexes → Filter Number/CC index →  
Photographic color temperature → LB/CC Index...

### 7. Sync Terminal

### 8. Measuring Mode Switch

Selects Measuring Mode

"AMBI" – Ambient Light Measurement

"CORD" – Flash Measurement with Sync Cord

"NON.C" - Flash Measurement without Sync Cord

### 9. Measuring Button

### 10. Up/Down Control

Changes shutter speed in "CORD" and "NON.C" modes. Changes memory channel with used Memory Channel button. Changes data in Memory when used with memory button.

### 11. Flash Range Switch

Sets range for flash measurements

Lo: f/2.8 to f/22

Hi: f/22 (approx.) to f/180

### 12. Film-type Switch

Selects film type

D: Daylight film balanced for 5500K

B: Type B tungsten film balanced for 3200K

A: Type A tungsten film balanced for 3400K

### 13. Filter Tables

### 14. Battery chamber cover

The KCM-3100 uses 2 AA sized Alkaline or carbon zinc batteries

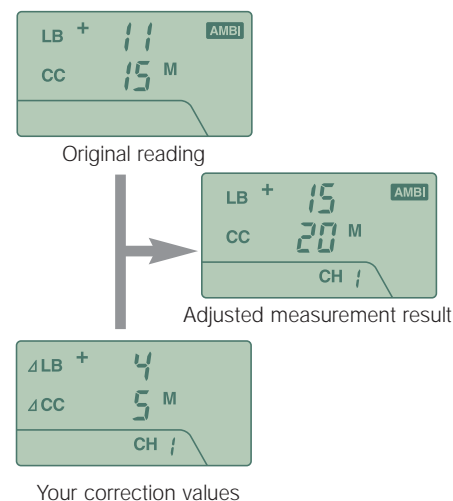




## Nine memory channels for customizing the meter to your working style

Film and lighting equipment manufacturers all claim that their products are balanced to “daylight” (5500K) or “tungsten” (3400K or 3200K). However, their testing is performed in laboratories under highly controlled conditions. We live and photograph in the real world. CCD and CMOS sensors from different manufactures read and interpret color differently. Film from different manufacturers render color differently. Different batches of the same film render color differently. Different lighting equipment renders color differently. The quality and age of that equipment is also a factor. The sun cannot even be relied upon, rarely shines at a perfect (5500K) and can vary widely depending on time of day, weather and pollution in the air.

The KCM-3100s nine memory channels make coping with these challenges much more simple. Once you determine the correct filter ration for the film or equipment being used you can simply enter the difference between your filter ration and the meter reading into the meter’s memory. The meter will adjust all future reading accordingly. There are enough channels to create and



## Specifications

Type:	Three-color digital color meter for color photography; determines filtration required and photographic color temperature of light sources
Receptor head:	Rotating (90° to right/180° to left) receptor head containing three silicon photocells (filtered to red, green, and blue sensitivities appropriate for color photography)
Measurement modes:	Ambient (AMBI); flash (CORD, NON.C)
Measuring range (ISO 100):	Ambient: EV 3 to 16.3; Flash: f/2.8 to 180 (in two ranges)
Shutter-speed setting range: (for flash measurements)	1 to 1/500 sec. in 1-stop increments
Display:	Liquid crystal (LCD)
Display modes:	LB index and CC index; LB filter number and CC index; photographic color temperature
Display range:	LB index: -500 to 500 mireds CC index: 200G to 200M LB filter number: 80A + 80D to 85B + 81EF Photographic color temperature: 1600 to 40,000K
Analyze function:	Determines measurement values for only flash light in mixed flash/ambient situations
Memory function:	9 memory channels for storing correction values to adjust calculated filtration (LB index and CC index); stored values automatically added to initially calculated values before display of results Correction-value range: ΔLB: -100 to + 100 mireds; ΔCC: 100G to 100M
Repeatability:	LB index: 2 mireds CC index: 2 digits Photographic color temperature: Corresponding to 2 mireds
Power source:	2 AA-size batteries
Operation temperature range:	-10 to 50°C (14 to 122°F) Relative humidity 85% or less. (at 35°C, no condensation)
Storage temperature range:	-20 to 55°C (-4 to 131°F) Relative humidity 85% or less. (at 35°C, no condensation)
Dimensions:	70 (W) x 170 (H) x 28 (D) mm
Weight:	185 g (6.5 oz) excluding battery
Standard Accessories:	Case, strap

(Note) The single alkaline dry cell is only for products marketed in Japan.  
Specifications and external appearances described herein are subject to change without notice.



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