GOSSEN

Digipro F

Lightmeter for Flash and Ambient Light **15175** **1/9-04**

Battery compartment and cover

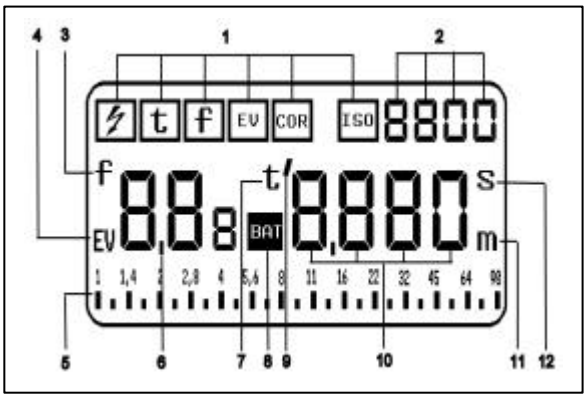
Contents **Page**

Your Digipro F is an exposure meter with digital display from GOSSEN. It measures ambient light and flash and it covers a wide measuring range with great accuracy.
A wealth of knowledge in the area of light metering, based on many decades of experience in the manufacture of exposure meters, is now being made available to the user, in the simplest manner possible, due to microprocessor technology.
As a result of its precise calibration, the Digipro F measures with high accuracy and operation is exceptionally simple and convenient.
Features characterising the Digipro F:

- Swivel head
- Measurement modes: incident and reflected light
- Measuring flash (with cord or noncord) with indication of the level of ambient light
- Microprocessor controlled
- Digital LCD display in tenths of stops
- Analog contrast display in half stops
- Storage of settings and readings
- Programmable exposure correction combinations of a given reading
- Recall of all possible shutter speed/aperture combinations of a given reading
- Aperture or shutter priority preselection
- Extremely convenient to measure flash
- Covers the entire CINE scale (frames per second), including the TV standard 25 and 30 f.p.s.
- Warning when range is exceeded
- Automatic battery check
- Auto off
- Suitable for analog and digital photgraphy

1 Display

1.1 The display and its elements



1 Functions
- Flash measurement
- Ambient light measurement with shutter priority
- Ambient light measurement with aperture priority
- Ambient light measurement with read-out of exposure values (EV)
- Entering the correction values
- Setting the film speed

2 Digital display of film speed DIN / ISO
3 Display identification **f** for aperture
4 Display identification **EV** for exposure value
5 Analog aperture scale
6 Left-hand digital display
- Aperture **f**
- Exposure value **EV**
- Correction values
- Multiple flash
- Film speed in DIN

7 Display identification **t** for exposure time
8 Warning sign **BAT** for battery check
9 Display identification **„/“** for fractions of a second
10 Right-hand digital display
- Exposure time **t**
- Exposure extension factor
- CINE (frames per second); symbol ⌐
- Film speed in ISO

11 Unit symbol **m** = minutes
12 Unit symbol **s** = seconds

1.2 Duration of display

If for approx. 2 minutes none of the buttons of the Digipro F is pressed, the meter will be switched off automatically. The measuring and setting values stored in the memory will be maintained.

- The stored values can be recalled by depressing the function or value buttons
- New measurement is instantly possible when the metering button is depressed.

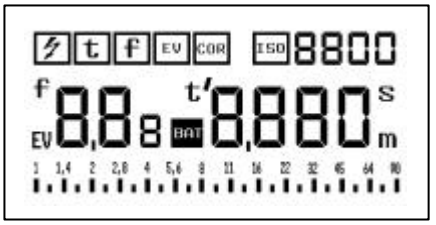
The values of the last meter reading are stored until a new meter reading is taken.
The Digipro F is fitted with separate memories for continuous light and flash measurement.

2 The Functioning of the Digipro F

2.1 Preparations

Battery

The Digipro F operates with a 1,5 V AA-type battery (alkaline-manganese battery). Since the meter's power consumption is minimal, the battery will last for a long time. When the battery's capacity becomes exhausted, the **BAT** symbol appears on the display as a warning that the battery has to be replaced at the earliest possible opportunity. Measurements cease to be possible if the display only indicates **BAT**. The battery must be immediately replaced. To change the battery open the battery compartment of the Digipro F. Remove the exhausted battery and insert the new one. Ensure correct polarity **„+"** and **„–"**! Push back the battery compartment cover. Battery changing deletes all stored values.



Self-Checking routine

The microcomputer performs a self-checking routine as soon as the battery has been inserted. Every possible display segment appears in the display during this routine. The duration of the self-checking routine is approx. 10 seconds, but it can be interrupted by pressing any button. The factory programmed basic settings are automatically displayed as soon as the self-checking routine has been completed.

Basic values

ISO: 100/21 ° f: 5.6 COR: 0/ 1.0 EV: 12 t: 1/125 Flash: f 5.6 1/60

2.2 Incident and reflected light measurement

The features and measuring capabilities provided by the Digipro F are ideally suited for the dedicated amateur and the professional photographer. The swivel head will rotate through 180 degrees. This feature allows the photographer to read the values measured in the display, while the measuring head is directed towards the subject or light source. When you remove the diffuser dome, reflected light and contrast measurements can easily be taken.

Measurement by the incident method is far more accurate and reliable to establish the correct exposure setting than the calculating of a mean value obtained with the reflected light measurement in your camera. In the latter case, the reading depends upon the range of contrasts of the subject. However, there is not always a uniform distribution of bright and dark areas of equal importance within the subject. Incident light measurement is also imperative with inaccessible subjects.
For this purpose it is necessary to select a point that has the same lighting level as the subject. And then a meter reading is taken that lies parallel with the projected connecting line between the actual subject and the camera. This very convenient method of light metering at a point with the same lighting level is highly recommended for outdoor shots. The measurement is performed with a complete „180°" turn in front of the camera so that the reading is taken with the meter pointing towards the camera, i.e. opposite the actual picture shooting direction.
Incident light measurement, i.e. with diffuser, also gives a precise reading of the brightness range of the lighting. Both kinds of lighting – flash and ambient light – are measured with great accuracy by the incident light method with diffuser.
In addition to this, the Digipro F also offers the reflected light measuring method. In this mode the diffuser dome must be taken off and the meter is pointed from the camera towards the subject. The meter now only measures with angle of 25 degrees the light reflected by the subject. Consequently, the reading always depends upon the inherent brightness of the subject!! This means that inherently brighter subjects are not precisely measured and therefore rendered darker. If readings are to be taken exclusively by the reflected light measuring method, then it is advantageous for the professional to use a grey card (18 % reflection) in this mode. The reflected light method is used to measure the subject contrast which is displayed by the Digipro F on its analog scale (see Section 3.2.4 Contrast measurement, page 4).

3 The individual functions

3.1 Setting the film speed

Select **ISO** with the function buttons
Set the required ISO value with the value buttons
(display left: DIN value, right: ISO value)
Once the film speed has been set, it is transferred to the memory of the Digipro F and maintained when the meter is set to any operation function. It remains visible on the top right-hand side in the digital display.
Any change of the film speed directly influences the stored paired aperture and shutter speed values. The selected film speed is retained in the memory until it is changed in the described manner.

3.2 Measuring functions – Ambient light measurement

Select the required ambient light function with the corresponding function buttons.

- **Shutter priority** in function **t**: a reading is taken for the corresponding aperture
  (see Section 3.2.3 Shutter priority mode – Ambient light measurement, page 4)
- **Contrast measurement** in function **t**: (see Section 3.2.4 Contrast measurement, page 4)
- **Aperture priority** in function **f**: a reading is taken for the corresponding shutter speed
  (see Section 3.2.5 Aperture priority mode, page 5)
- **Exposure value measurement** in function **EV**: preselect the shutter speed and the aperture is given as an analog value (see Section 3.2.6 Exposure value EV, page 5)
- **CINE** (frames per second) in function **t**:
  (see Section 3.2.7 CINE scale (frames per second), page 5)

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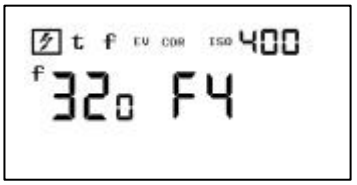
3.2.1 Flash readings

Readings can be taken with or without synchronizing cable. When used in conjunction with a synchronizing cable the flash is triggered by pressing the **M** button–the flash is automatically triggered and measured.

- Select ⚡ with the function buttons
- Adjust the desired synchronizing speed with the value buttons.
  Synch range from 1 s to 1/1000 s (including 1/90 s)
- Press the measuring button **M**.
  Digipro F is operable for metering for a period of 45 s (meter readiness prevails as long as **F** remains visible in the display)
- Trigger the flash
  The measured aperture (total of flash and ambient light) appears in the left digital display, and as a flashing mark on the analog aperture scale. The aperture for the share of ambient light is additionally indicated on the aperture scale (in our example f/8).

3.2.2 Multiple flash



Occasionally the light output from a single flash may not be sufficient to enable you to work at the aperture desired. In that case, simply push the top value button until the desired f/number appears in the display. The digital display of the time **t** disappears and the number of flashes required is indicated (e.g.: F4 = 4 flashes).
The Digipro F will calculate up to a maximum of 10 flash sequences.

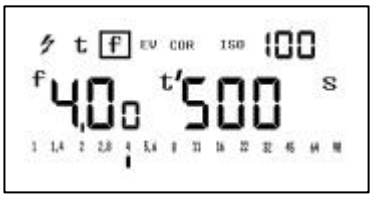
3.2.3 Shutter priority mode – Ambient light measurement

- Select with the function buttons (the last stored value appears on the display)
- Adjust the desired shutter speed with the value buttons
- Measure by pressing the meas. button **M**
  The measured aperture appears in the left-hand digital display (accuracy: 1/10 stops), also as a rounded mark in the analog aperture scale
- Select alternative aperture/shutter speed combinations with the value buttons.

3.2.4 Contrast measurement

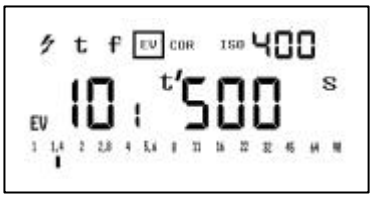
- Select **t** with the function buttons
- Keep the measuring button **M** pressed
  while aiming the meter at various areas of the subject. The analog aperture scale displays the f-stop series between the two extreme values and with the actual measured value flashing. The first measured f-stop is displayed in the left-hand side of the display. It remains displayed as a reference value (e.g. of a grey card)).
  After the measuring button is released, the entire measured contrast range is displayed on the analog aperture scale, and the last measured value will cease to flash.

3.2.5 Aperture priority mode



- Select **f** with the function buttons
- Set the desired aperture with the value buttons. The intermediate 1/10 stop values stored from the last measurement appear when the aperture is preset. These are not valid, because the valid and actual 1/10th stops will only appear after the next meter reading is taken.
- Measure by pressing the meas. button **M**
- The measured shutter speed appears in the right-hand digital display
  Automatic adaptation of the aperture in 1/10 stops to the measured shutter speed
- Select other paired aperture/shutter values with the value buttons.

3.2.6 Exposure value EV



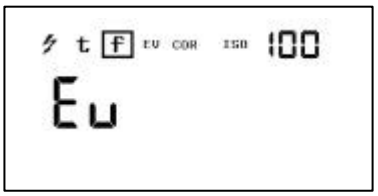
- Select **EV** with the function buttons
- Measure by pressing the meas. button **M**
  The measured exposure value appears in the left-hand digital display (accuracy: 1/10 stops) and the aperture as a rounded-off mark on the analog aperture scale
- Select with the value buttons other paired aperture/shutter speed values corresponding with this exposure value.

3.2.7 CINE scale (frames per second)

- Select **t** with the function buttons
- Select the desired Cine speed (f.p.s.) by increasing the shutter speed setting beyond 1/8000 sec. After approx. 1 second the meter switches over to CINE speeds. The symbol ⌐ appears in the display. The CINE speeds can be preset between 8 and 64 frames/second.
- Measure by pressing the meas. button
  The measured aperture appears in the lefthand digital display (accuracy: 1/10th stops) and additionally as a rounded-off mark on the analog aperture scale
  The displayed aperture applies to a 180 degrees shutter blade. Enter a COR value in the function for other shutter blades as an extension factor:
  V = 180 degrees / 0pen aperture angle.

3.3 Measurements outside the measuring range

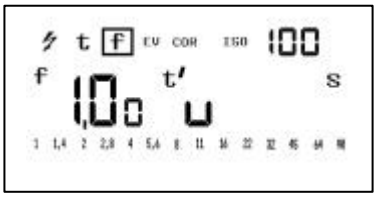
The Digipro F will not produce any useful readings outside its measuring range
If it is too dark or too bright, an E (= Error) appears in the left-hand digital display and alongside it ⊔ for too dark, or ⊓ for too bright.



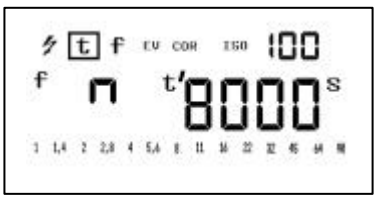
3.3.1 Display outside the display range

If the symbol ⊔ or ⊓ appears in the right or left digital display it indicates that the taken reading is outside the meter's display range.

When ⊔ actuate value button ▲ to enter the display range.

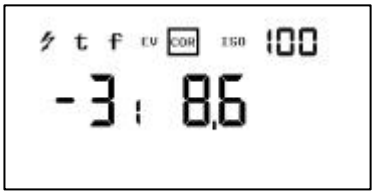


When ⊓ actuate value button ▼ to enter the display range.



3.4 Setting and measuring correction values

(see Section 3.4.4 Important remarks concerning correction values, page 6)



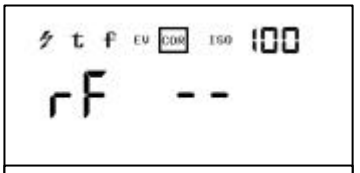
3.4.1 Setting correction values

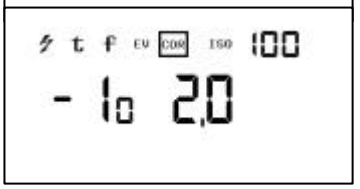
- Select **COR** with the function buttons (the last valid correction value appears in the display)
- Enter or change the correction value with the value buttons
  The extension factor is shown in the right-hand digital display, and the correction value in stops in the left-hand section.
  Enter in 1/10th stops (small figure) within a range of ±7.9 exposure values.
  A figure preceded by „**–**“ indicates an exposure extending correction.

Example: –3.1 stops equal factor 8.6.

In the event of an exposure shortening correction, only the left-hand display appears as an exposure value difference in stops.

3.4.2 Measuring correction values

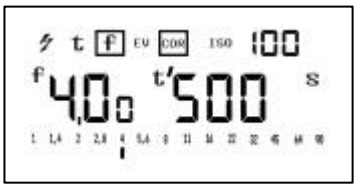




Correction values can also be directly measured. An evenly illuminated surface and constant light level are required. Measure in the reflected mode.

- Press measuring button **M** and get a reference reading: displayed as **rF--**
- Weaken light by holding e.g. a grey filter in front of the measuring aparture. Press meassuring button **M**

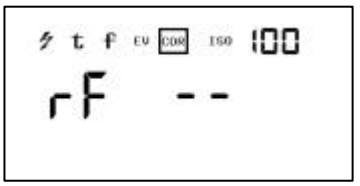
The light reducing factor will be diplayed automatically in stops at the right, as extension factor at the left.
Pressing one of the function buttons will transfer the correction value to the memory of the Digipro F. The COR value is now automatically taken into account in all subsequent measuring functions. The frame around **COR** is retained as a reminder that a correction value was entered.



3.4.3 Cancelling correction values

- Select **COR** with the function buttons
- Press measuring button (display rF --)

Select any other function with one of the function buttons.
Correction value is cancelled, and the frame around COR disappears.



3.4.4 Important remarks concerning correction values

The Digipro F is a precision meter calibrated with great accuracy to provide exact exposure data. Should you still not be satisfied with the results, then you should remember that there are independent variables that can influence the success of your exposures.

For instance:
the „true“ speed of your film can deviate from that on the pack
the „true“ shutter speeds and f-stops of your camera can differ slightly form the rated values
Deviations can arise when the film is processed.
Also there must be added purely subjective factors and matters of personal preference in the assessment of the finished photos. However, you can calibrate your Digipto F to characteristics of your camera, your brand of film, your processing methods, and to your projector.

We recommend the following procedure:
Take the readings of a few normal subjects with the utmost care by the reflected and incident light measuring methods, and take five shots of each subject on colour reversal film. The first picture should be exposed with the exposure settings supplied by the Digipro F. The exposure settings for the remaining shots are then increased and decreased, respectively, by half an f-stop and then a full
f-stop. Make a note of the shooting conditions. These must not change while the five shots are being taken. Now select from the processed pictures the one you consider to be optimal and compare its settings with the meter readings.
If you find that you prefer exposures taken with settings that differ from those supplied by the meter, then these settings can be programmed, as a correction, into your Digipro F. With your correction, the Digipro F will give precise readings to produce optimal exposure results.

4 Servicing and Repairs

No special maintenance is required, if the Digipro F is handled correctly.
Keep the outside surface clean. Use a slightly dampened cloth for cleaning. Do not use cleansers, abrasives or solvents.
Should the meter nevertheless not work to your satisfaction,please send the Digopro F to:

GOSSEN Foto- und Lichtmesstechnik GmbH
Thomas-Mann-Str.16-20
D-90471 Nürnberg
or to the GOSSEN Agency in your country
Phone : +49 911 8602-181
Fax: : +49 911 8602-142
e-mail: info@gossen-photo.de

5 Technical Data

Measuring methods	Incident light / Reflected light / Contrast measurement Flash (cord/noncord) Indication of ambient light share Calculation for multiple flash Programmable exposure correction
Sensor	Silicon blue cell photodiode
Measuring range	LW –2.5 to +18 (with ISO 100/21 °)
Repeatable accuracy	±0.1 EV
Exposure times	1/8000 s to 60 min
Aperture stops	f/1 to f/90 9/10
Measuring range flash	f/1 to f/90 (with ISO 100/21°)
Flash synch speeds	1 to 1 /1000 including 1/90 s (meas. time)
CINE values	8 to 64 including 25 and 30 TV)
Adjustable and measurable correction values	–7.9 to +7.9
Extension factors	1.0 to 240
Film speeds	ISO 3.2/6° to 8000/40°
Acceptance angle for reflected light	25°
Battery	1 x 1.5 V AA-type, battery condition indication
Accessories	Case, neck strap, battery and operating instructions
Dimensions	ca. 65 x 118 x 19 mm
Weight	ca. 95 g (without battery)

Electromagnetic Compatibility (EMC): The Digipro F meets the Specifications 89/336/EWG dt. 01.01.1996

CE

EG - KONFORMITÄTSERKLÄRUNG
DECLARATION OF CONFORMITY

GOSSEN

Dokument-Nr./ Document.No.:	**106/2004**
Hersteller/ Manufacturer:	**GOSSEN Foto- und Lichtmesstechnik GmbH**
Anschrift / Address:	Thomas-Mann-Str.16-20 90471 Nürnberg
Produktbezeichnung/ Product name:	**Belichtungsmesser / Lightmeter**
Typ / Type:	**Digipro F**
Bestell-Nr / Order No:	**H256A**

Das bezeichnete Produkt stimmt mit den Vorschriften folgender Europäischer Richtlinien überein, nachgewiesen durch die vollständige Einhaltung folgender Normen:
The above mentioned product has been manufactured according to the regulations of the following European directives proven through complete compliance with the following standards:

Nr. / No.	Richtlinie	Directive
73/23/EWG 73/23/EEC	Elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen - Niederspannungsrichtlinie –Anbringung der CE-Kennzeichnung : 2003	Electrical equipment for use within certain voltage limits - Low Voltage Directive - Attachment of CE mark : 2003
EN/Norm/Standard	**IEC/Deutsche Norm**	VDE-Klassifikation/Classification
EN 61010-1 : 1993 EN 61557-3 : 1997	IEC 61010-1 : 1992 IEC 61557-3 : 1997	VDE 0411-1 : 1994 VDE 0413-3 : 1997
Nr. / No.	Richtlinie	Directive
89/336/EWG 89/336/EEC	Elektromagnetische Verträglichkeit - EMV - Richtlinie	Electromagnetic compatibility -EMC directive

Fachgrundform / Generic Standard: EN 61326 : 2002

Nürnberg, den 24. September 2004

Ort, Datum / Place, date:

Vorsitzender der Geschäftsführung

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, beinhaltet jedoch keine Zusicherung von Eigenschaften. Die Sicherheitshinweise der mitgelieferten Produktdoktumentationen sind zu beachten

This declaration certifies compliance with the above mentioned directives but does not include a property assurance. The safety notes given in the product documentations which are part of the supply, must be observed.

GOSSEN

Digipro F

Brief Instructions

CINE scale (frames per second)
Select **t** with the function buttons – increasing the shutter speed setting beyond 1/8000 and preset the CINE speeds with the value buttons

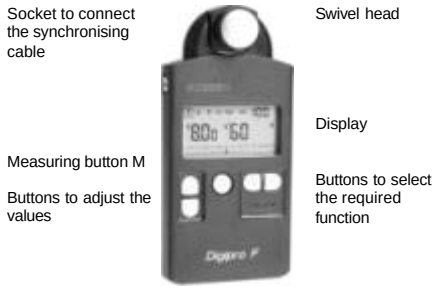
- Measure by pressing the **M** button
- The measured aperture appears in the left-hand digital display

Multiple flash
When the light output from a single flash is not sufficent for you to work at the aperture desired, the Digipro F is able to automatically calculate the necessary number of flashes:
(desired aperture e.g.: F4 = 4 flashes)

- Press value button ▲

Battery
1,5 V Mignon Typ AA (alkali-manganese)

- Attention to warning **BAT** – change battery



Setting the film speed
Select **ISO** with the function buttons and set the required ISO value with the value buttons

Measuring function

Flash readings

- Readings can be taken with or without synchronising cable
- Select with the function buttons
  Adjust the desired synchronising speed with the value buttons
  (1 s to 1/1000 s; including 1/90)
- Press the measuring button **M** and trigger the flash
- The measured aperture stop appears in the left digital display and as a flashing mark on the analog aperture scale. The aperture stop for the level of ambient light is additionally indicated on the analog aperture scale

Ambient light measurement

Shutter priority mode

- Select **t** with function buttons and set desired shutter speed with value buttons
- Measure by pressing the **M** button
- The measured aperture appears

Contrast measurement

- Select **t** with the function buttons
- Keep the **M** button depressed while aiming the meter at various areas of the subject
- After the measuring button is released, the entire measured contrast range is displayed on the analog aperture scale

Aperture priority mode

- Select **f** with the function buttons and set the desired aperture with the value buttons
- Measure by pressing the **M** button
  The measured shutter speed appears in the right-hand digital display

Exposure value

- Select **EV** with the function buttons
- Measure by pressing the **M** button
- The measured exposure value appears in the left-hand digital display

Gossen Foto- und Lichtmesstechnik GmbH is also a leading provider for other interesting light measuring instruments:

- **The Starlite:** is a multifunction lightmeter for flash and ambient light with a multitude of functions and capabilities, but remarkably easy to use. The Starlite - All-in-one – measures incident and reflected light, contrasts in the subject and of the lighting, in the Zone System, in CINE filming applications; also other interesting light values – such as Lux and footcandles. It is provided with a swivel head with optical viewfinder and adjustable measuring angles of 1 or 5 degrees, automatic display illumination at low light levels, splash water proof housing.
  The Starlite will meet and even exceed all the wishes and expectations the professional photographer, the CINE filmer and the enthusiast may have.

- **The Spot-Master 2:** is a true spotmeter with a measuring angle of 1 degree, for flash and ambient light; high quality viewfinder, especially suited for Zone System metering; correction values are considered in the measurement; necessary changes in the developing of the film are subsequently also indicated. Automatic averaging of upto 10 individual values measured is provided. Ideal for photgraphers enjoying and meeting the challenges of light and shadow, while viewing the precise measuring spots in the subject, also the values measured and preset in the optical system.
- **The Colormaster 3F:** is a digital 3-colour meter and filter indicator for measuring the photographic colour temperature of flash and also daylight, artificial light (incandescent and halogen lamps) as well as fluorescent tubes. Read-out in degrees Kelvin. Additional capabilities: Readings of the LB filters (can be selected in Mired or Kodak Wratten Filter types) and also
  CC Filters, both required for pictures, having true colour rendering, without colour casts.
  Additional useful functions: measuring and reading the illuminance (Lux) and flash power (Lux/seconds). Due to ist high functionality and simplicity of use, it is well suited for photgraphers working in industry, using colour conversal material, and above all digital photography.

Printed in Germany – Subject to change witout notice

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