# DIGITAL LUXMETER

Your purchase of this Digital Luxmeter marks a step forward for you into the field of precision measurements. Although this Luxmeter is a complex and delicate instrument, its ruggedness will allow many years. Of use if proper operating techniques are developed. Please read the following instructions carefully and always keep this manual within easy reach.

# USER'S MANUAL CONTENTS

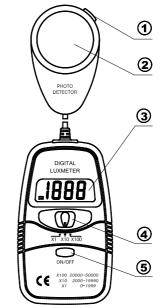
1. FEATURES 3	
2. FRONT PANEL DESCRIPTION4	
3.SPECIFICATIONS 5	
3-1 Technical Specifications 5	
3-2 General Specifications6	
3-3 Correction Factor 7	
4. SPECTRUM FOR PHOTO DETECTOR 7	
5. MEASURING PROCEDURE 8	
6. MAINTENANCE9	
6-1 General maintenance9	
6-2 Battery Replacement9	
7. RECOMMENDED ILLUMINATION1	C

1

### 1. FEATURES

- \* Precise and easy readout.
- \* High accuracy and wide measurement range.
- \* LSI-circuit use provides high reliability and durability.
- \* In build LOW BATTERY indicator.
- \* LCD display allows clear read out even at bright places.
- \* LCD display provides low power consumption.
- \* Compact, lightweight, and excellent operation.
- \* Separate PHOTO DETECTOR allows user take measurements at an optimum position.
- $\ast$  Data Hold function for holding measuring values.

#### 2. FRONT PANEL DESCRIPTION



4

- 1 HOLD key
- ② Photo Detector
- ③ LCD display
- 4 Function switch
- ⑤ POWER key

# 3. SPECIFICATIONS

### **3-1 General Specification**

 $\infty$  Environment Conditions:

### Operating Temperature:

 $0^\circ\!\mathrm{C}~$  to  $40^\circ\!\mathrm{C}\!\leqslant\!80\%$  RH, non-condensing

# Storage Temperature:

- -10  $^\circ\!\!\mathbb{C}$  to 60  $^\circ\!\!\mathbb{C}~\leqslant$  70% RH, battery removed
- $\infty$  Operating principle: dual slop integration
- $\infty$  Sample Rate: 2 times/sec for digital data

# $\infty$ Display:

3 1/2 digits LCD Display with max. Reading 1999,

- $\infty$  Over-range Display: "1" is displayed.
- $\infty$  Power Supply:

DC 9V battery (NEDA 1604 6F22 006P).

- The "E: is displayed when the battery is under the proper operation range.
- $\infty$  Photo Detector Lead Length: 150cm(approx.)
- $\infty$  Photo Detector Size: 83  $\times$  52  $\times$  20.5mm
- $\infty$  Dimension: 125.5(L) $\times$ 72(W) $\times$ 27(H)mm
- $\infty$  Weight: 140g approx. (battery removed)
- $\infty$  Accessories: Carrying case, battery, user's manual

# 3-2 Technical Specification

Accuracy:

6

 $\pm\,(\%$  of reading + number of digits) at 18 $^{o}C$  to 28 $^{o}C$  (64 $^{o}F$  to 82 $^{o}F)$  with relative humidity to 80%.

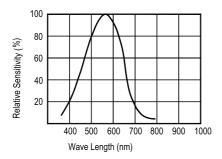
Range Resolution		accuracy
0-1,999 Lux	1 Lux	$\pm$ (5%+2d)
2,000-19,990 Lux	10 Lux	$\pm$ (5%+2d)
20,000-50,000 Lux	100 Lux	$\pm$ (5%+2d)

NOTE: Accuracy tested by a standard parallel light tungsten lamp of 2854 <sup>o</sup>K temperature

#### 3-3 Correction Factor

Mercury Lamp	х	1.1
Fluorescent Lamp	х	1.0
Incandescent Light	х	1.0
Daylight	х	1.0

### 4. SPECTRUM FOR PHOTO DETECTOR



#### 5. MEASURING PROCEDURE

- $\infty$  Power-up: Press the POWER key to turn the meter on.
- $\infty$  Selecting the LUX scale: Set the Function switch to desired LUX range.
- $\infty$  Face the photo detector to light source in a horizontal position.
- $\infty$  Read the illuminance value from the LCD display.
- ∞ Data-Hold mode: Press the HOLD key to select Hold mode. When HOLD mode is selected, the illuminance meter stops all further measurements. Press the HOLD key again to cancel HOLD mode. Then it resumes normal operation.
- $\infty$  When the measurement is completed, turn the power off.
- NOTE: If display indicates one or more leading zeros, user has to shift the Function switch to the next lower range scale to improve resolution and accuracy.

**Digital Luxmeter** 

7

8

#### 6. MAINTENANCE

#### 6-1 General maintenance

- $\infty$  To keep the instrument clean, wipe the case with a dry cloth and detergent, do not use abrasives or solvents.
- $\infty$  The white plastic disc on the top of the detector should be cleaned with a damp cloth when necessary.
- $\infty$  Any adjustment maintenance and repair shall be by a qualified person.

### 6-2 Battery Replacement

- $\infty$  Slide the battery cover away from the instrument and remove the battery.
- $\infty$  Replace with 9V battery and reinstall the cover

### 7. RECOMMENDED ILLUMINATION

LOCATIONS	Lux	
∞ OFFICE		
Conference, Reception room.	200	~ 750
Clerical work	700	~ 1500
Typing, drafting	1000	~ 2000
∞ FACTORY		
Packing work, Entrance passage	150	~ 300
Visual work at production line	300	~ 750
Inspection work	750	~ 1500
Electronic parts assembly line	1500	~ 3000
∞ HOTEL		
Public room, Cloakroom	100	~ 200
Reception, Cashier	200	~ 1000
∞ STORE		
Indoors, Stairs, Corridor	150	~ 200
Show windows, Packing table	750	~ 1500
Forefront of show windows	1500	~ 3000

LOCATIONS	Lux	
∞ HOSPITAL		
Sickroom, Warehouse	100	~ 200
Medical Examination room	200	~ 750
Operating room	750	~ 1500
Emergency Treatment	750	~ 1500
∞ SCHOOL		
Auditorium, Indoor Gymnasium	100	~ 300
Class room	300	~ 750
Laboratory, Library, Drafting room	750	~ 1500