Information about luxmeter

Information about luxmeters

For all works, a sufficient brightness is required which is being achieved by good illumination. An insufficient illumination generally leads to symptoms of fatigue and may lead directly or indirectly to occupational accidents. According to the assignments, different illuminations are recommended by the boards of standards. For simple works, illuminations from 100 to 250 lux are sufficient, for precision works more than 1000 lux are required.

Type of Room	Nominal illumination in Lux
Stores with large storage goods	50
Stores with searching assignment	100
Stores with reading assignments	200
Canteens	200
Toilettes	100
Sanitary rooms	500
Rooms with machines	100
Offices	500
Technical design office	750
Conference rooms	300
Rooms for color testing	1000
Rooms for assembly, test benches	1000
Rooms for the assembly of small parts	1500
Rooms for data processing	500
Routes in buildings for persons	50
Routes in buildings for vehicles	100
Routes in buildings (stairs)	100
Routes in buildings (conveyor belts)	100

It is the task of planers, architects and electrical engineering technicians not only to calculate and to install the lighting installation, but also to prove by measurements that there is sufficient illumination. But also within the maintenance of buildings or servicing of industrial plants, the supplier for the building, the caretaker or the occupational safety specialist have to prove by measurements that there is sufficient illumination.

Operators

The measurement of the illumination is very important for lots of operators:
- Planers of illumination installations
- Architects
- Installation companies
- Occupational safety specialists
- Estimators
- Caretakers, facility management
- Safety illumination
- Producers of lamps

Sizes and units of the lighting engineering

Luminous flux Φ

Luminous flux is the measuring unit for the luminous power emitted by a source of light. The unit of the luminous power is indicated in lumen (lm).

Illumination E

The illumination E is the luminous flux which impinges on a certain surface. The measuring unit of the illumination E with the unit lux (lx) is the luminous flux (lm) divided by the surface (sqm).

Luminosity I

The luminosity is the measuring unit for the intensity of the light emission of a source of light depending on the direction of the radiation. The measuring unit is Candela (cd).

Light density L

The light density L stands for the effect of brightness of a bright or reflecting surface. The unit is Candela per square meter (L = cd/sqm)

Measurement error in case of illumination measurement

Due to the formation of shades and reflections of items and bodies, measurement errors may occur. If the sensor is always positioned horizontally and as far as possible from the body, the possible errors will be reduced to a minimum.

Dig. Lux Meter 7001

Easy light measurement with internal Sensor

Digital Luxmeter for Measurement of light intensity

- Measurement Range up to 200.000 Lux
- Integrated Data Hold
- Max Hold Function
- Internal Sensor with protection cover
- Handy Construction
- Carrying Case included

Technical Data

Display	LCD, 3½ digit, 1999 Digit
Measurement Range	0...200.000 lx 0...20.000 Fc
Resolution	0,1 lx / 1 lx / 10 lx / 100 lx 0,01 Fc / 0,1 Fc / 1 Fc / 10 Fc
Accuracy	± (3 % rdg.+ 3 Digits)
Power Supply	9 V, IEC 6LR61
Dimension	approx. 130 x 55 x 38 mm
Weight	approx. 250 g

Scope of supply

1 pc HDT Digital Lux Meter 7001
1 pc Battery 9 V, IEC 6LR61
1 pc Carrying Case
1 pc Instruction manual

Order Information

Description	Cat. No.
HDT Digital Lux Meter	7001

Dig. Lux Meter 7002

Digital Luxmeter with external Sensor

Digital Luxmeter for Measurement of light intensity

- Large measurement range with resolution 0.01 lux
- Measurement of safety lights
- Integrated Data Hold
- Min/Max Hold Function
- External Sensor with protection cover
- Ergonomic Construction
- Carrying Case included

Technical Data

Display	LCD, 3½ digit, 1999 Digit
Measurement Range	0...20.000 lx 0...20.000 Fc
Resolution	0,01 lx / 0,1 lx / 1 lx / 10 lx 0,01 Fc / 0,1 Fc / 1 Fc / 10 Fc
Accuracy	± (3 % rdg.+ 0,5% end of range)
Power Supply	6 x 1,5 V, IEC LR03/AAA
Dimensions of Instrument	approx. 150 x 72 x 35 mm
Sensor	approx. 92 x 60 x 29 mm
Weight	approx. 320 g

Scope of supply

1 pc HDT Digital Lux Meter 7002
6 pc Batteries 1,5 V, IEC LR03 / AAA
1 pc Carrying Case
1 pc Instruction manual

Order Information

Description	Cat. No.
HDT Digital Lux Meter	7002