# ILT70 Series
# Operators Manual

International Light
TECHNOLOGIES

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# Package Contents

Your new ILT70 Series™ System includes:

- 1 or 2 button ILT70 series radiometer
- Detachable photo-detector
- 9-volt alkaline battery
- Removable, protective rubber boot with built-in stand/hanger
- Hard Plastic Carrying case
- NIST traceable Calibration (certificate)


*Illustration 1:*

# Introduction

The ILT70 series was designed to be an easy to use, low maintenance hand held meter with direct reading in the appropriate optical units. The system comes complete with an application specific detector. Available configurations are described below:

***The ILT73 UVB Radiometer directly measures the UVB output from a multitude of conventional UVB sources (DC - 60Hz).***
ILT72-CE UVA with XP72CE. The detector has a spectral range of 315 to 390 nm and is calibrated at 360 nm, handling up to 19.99 mW/cm2, with true resolution of 0.01 mW/cm2

***The ILT73 UVB Radiometer directly measures the UVB output from a multitude of conventional UVB sources (DC - 60Hz).***
ILT73-CE UVB with XP73CE. The detector is filtered for a spectral range of 275-325 nm and comes with a calibration at 290 nm for broadband UVB sources (ILT73) with a measurement range of 1-19.99 mW/cm$^2$ .
ILT73NBCE with XP73NBCE is designed for measurement of TL-type UVB lamps and is calibrated for 313 nm for narrowband with a measurement range of 1-19.99 mW/cm$^2$ .

***The ILT74 Hyperbilirubinemia Light Meter / Radiometer was specifically designed to easily measure the exposure level of standard hyperbilirubinemia therapy systems directly in the patient plane.***
ILT74CE with XP74CE. The detector is filtered to accept the 425-475 nm action spectrum and the ILT74 instrument is capable of switching between reading out in µW/cm$^2$ or µW/cm$^2$/nm at the push of a button with a measurement range of 1 - 1999.9 µW/cm$^2$/nm and 1 - 199.99 µW/cm$^2$ .

***The use of germicidal low-pressure mercury lamps for UV disinfection has rapidly expanded into a wide array of industrial, commercial, and municipal applications such as HVAC, food processing and water treatment.***
ILT77CE with XP77CE. The detector measures a spectral range of 214 to 360 nm ("UVC") with a 254 nm NIST traceable calibration for measurement of low pressure mercury lamps only with a measurement range of up to 199.99 mW/cm2 .

## Protective Rubber Boot

The ILT70 includes a removable rubber boot to protect the instrument during accidental falls. The rubber boot also includes a built-in stand/hangar that can be folded flat against the instrument for hand-held use or pulled out to stand the instrument upright on a flat surface for better viewing during operation. The stand can also be used as a hangar to hang the instrument out of the way during operation in confined clinical settings. When placing the instrument into the rubber boot, please insert the instrument bottom first.

# Operation

Prior to operation, plug the detachable photo-detector connector into the receptacle at the top of the instrument. The connector is keyed to only allow proper connector alignment (see picture below). **Do**

**not force the detector connector into the instrument receptacle.** If the connector will not easily plug into the receptacle, please verify that the key marks on the connector match position with the key marks on the receptacle and try again.

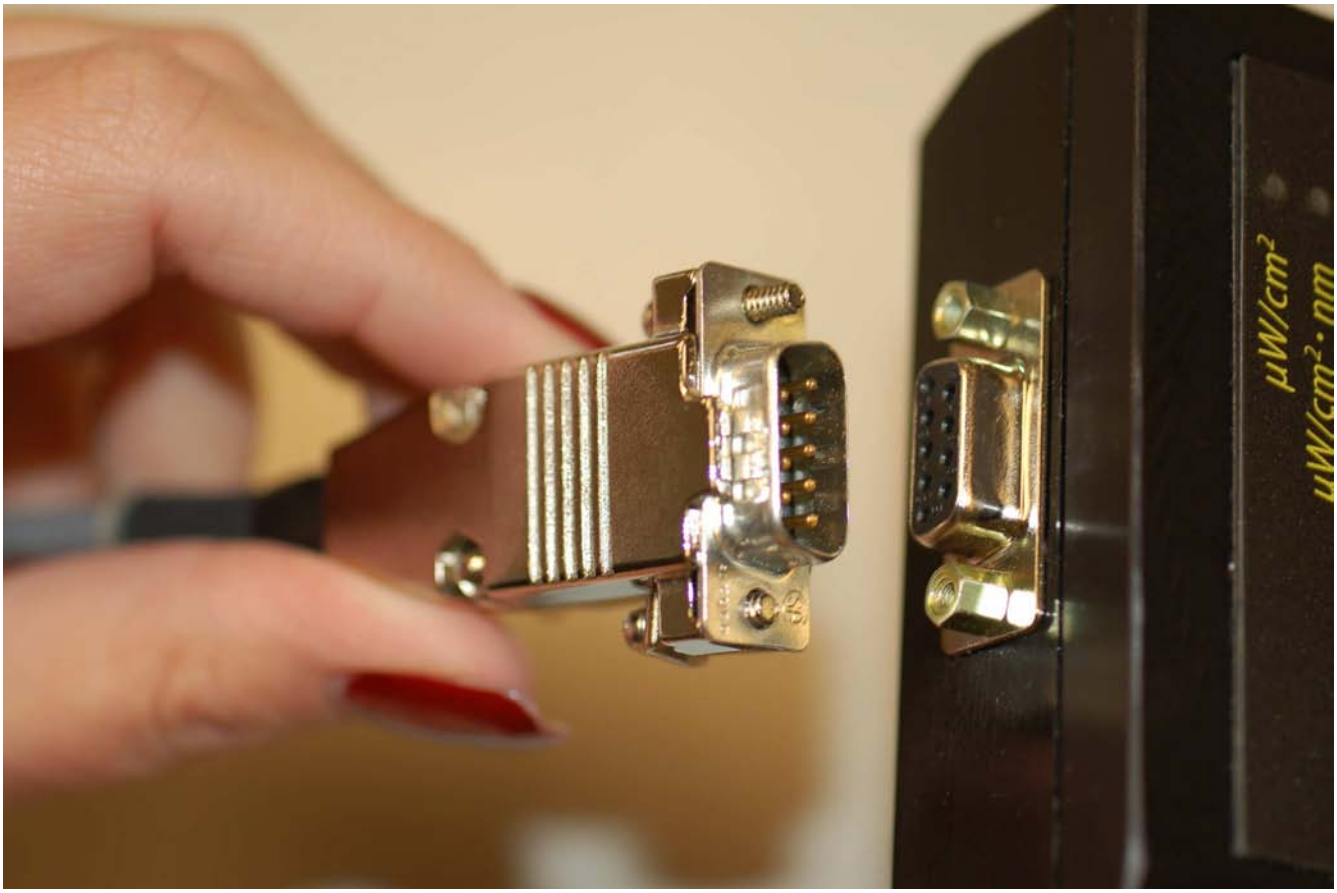
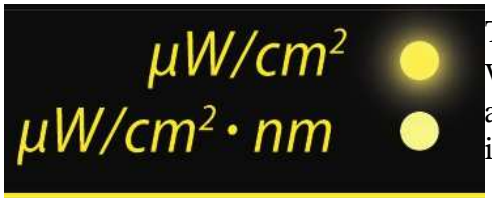
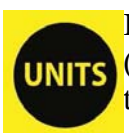



*Illustration 2:*


Once the detector has been connected to the ILT70 instrument, press the PWR/HOLD button to turn on your ILT70. To hold the readings at any time simply press and hold the PWR/HOLD button. For as long as the button is depressed the current value will stay on the display. To return to signal mode, simply release the button and the meter will begin to take new readings. **The instrument will automatically shut off after approximately 100 seconds.** To continue taking measurements, just press the PWR/HOLD button again and continue measuring.




The ILT74CE has dual units and allows changing from W/cm$^2$/nm to µW/cm$^2$ with the press of a button. The unit will automatically come up in µW/cm$^2$ with the top LED units indicator illuminated.




Press the UNITS button to toggle between the two optional units of measurement (µW/cm$^2$/nm and µW/cm$^{2)}$. As you switch between units the appropriate LED will illuminate to confirm which units you are operating in.

## Battery Installation/Replacement

The ILT70 instrument is provided with and operates on a single 9-volt alkaline battery. Battery life can vary significantly with the amount of use and battery condition. The ILT70 has a built-in "low battery" indicator in the top-left corner of the display to signal the operator when to change the battery. To install or change the battery, first remove the protective rubber boot (if used) and then locate and remove the two Philips head screws that secure the battery compartment cover to the back panel of the instrument casing. Unplug the old batter and dispose of properly. and the new battery inserted. A fresh, heavy-duty, 9-volt alkaline battery is recommended. Please take care when connecting and disconnecting the battery to prevent damage to the battery clip leads. Replace the two Philips head screws to secure the battery cover. Replace the protective boot if desired. Once the battery change has been completed, the LCD will turn on and the instrument will actively begin taking measurements. This is normal and the instrument will turn off automatically in approximately 100 seconds.

## Preventative Maintenance

The ILT70 system is constructed to be simple and rugged and requires little preventative maintenance. Cleaning is not required but if desired, could be done with a non-abrasive cleaner and a lint-free cloth. Store the ILT70 system in the included carrying case at room temperature. Please remove the 9-volt alkaline battery if long-term storage is intended between measurements to prevent corrosion from potential battery leakage and to preserve the life of the battery.

## Calibration

Your ILT70 system comes with a NIST-traceable calibration and a calibration certificate. Annual recalibration is recommended to maintain the continued accuracy and traceability of your system. You may obtain an RMA on our website: intl-lighttech.com/rma or contact service.

Tel: (978) 818-6180 x 129 or 227
Email: **ilservice@intl-lighttech.com**

## Warranty and Liability

This ILT product is warranted against defects in material and workmanship for a period of one year from the date of shipment. During the warranty period, ILT will, without charge, repair or replace, at its discretion, the defective product or component parts. For warranty service or repair, this product must be returned to International Light Technologies. For products returned under warranty, the Buyer shall prepay shipping charges (including shipping charges, duties, and taxes for products returned to ILT from another country), and ILT will pay for shipping charges to return the product to the Buyer. This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations, modifications or repairs, if the serial number is altered, defaced or removed, the improper or inadequate maintenance by the Buyer, Buyer-supplied software or interfacing, or improper site preparation or maintenance. No other warranty is expressed or implied. ILT shall not be liable for any consequential damages, including without limitation, damages resulting from loss of use, as permitted by law.

NOTE: Removal of the calibration label from the ILT70 voids warranty.