ILT800 – CureRight belt radiometer
Technical information

Selecting the right light meter

Selecting the right meter for your application is critical to proper process control. You should ask the following questions before settling on a measurement system:

1. What type of process am I running?
2. What wavelength of light effects the cure?
3. What are the lamp properties?
   – What is the lamp intensity?
   – Is it a pulsed or steady-state light source?
4. Will the meter do what I need?

Why measure your curing source?

Monitor and control

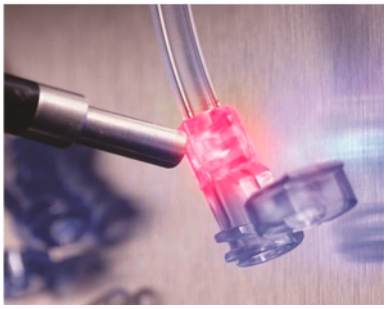
- Even proven production lines should be checked
- Get real-time data vs relying on depreciation formulas
- Many factors can impact system/process performance
- Identify and address problems early
- Minimize defects, reduce waste, shorten downtime
- Allows you to trouble-shoot with lamp/material vendors

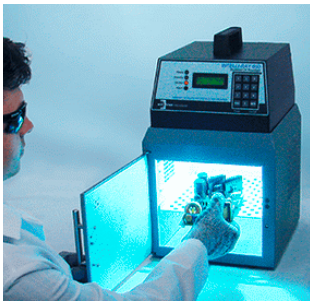
End-to-end supply chain validation

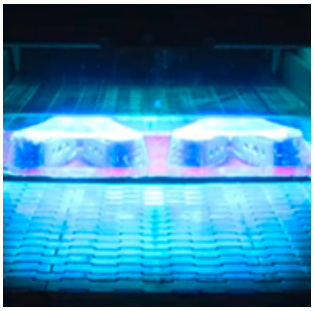
- Verify lamp specifications (e.g., W/cm^2)
- Validate ink/glue/resin/adhesive required dosages (e.g., J/cm^2)
- Root-cause analysis

Types of curing processes

- Spot curing/fiber optic light guide (e.g. adhesive curing)
- Large area/flood lights (e.g., wood curing process)
- Oven/chamber (e.g. 3D printing post-curing process)
- Belt/conveyor (e.g., small parts, electronic components







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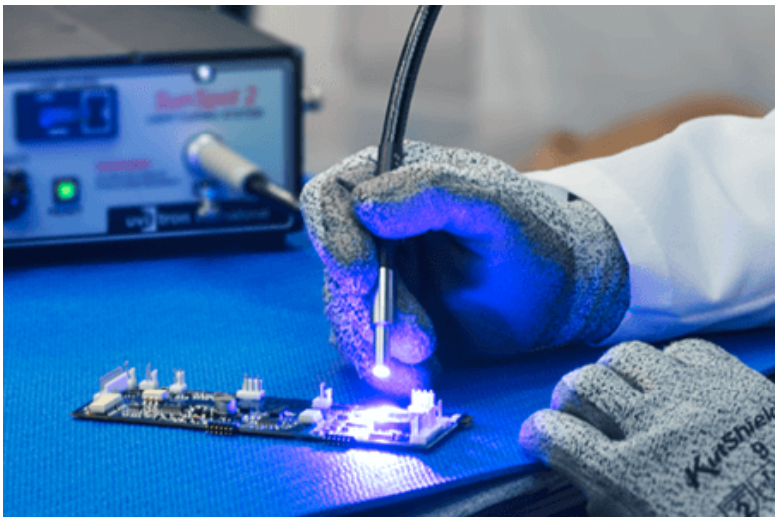
What wavelength is used?

- Different materials require different wavelengths of light to trigger the curing process
- This information is typically provided by the material manufacturer
- It's important to note that this may not be the full spectral ouptut of the lamp



What are the lamp properties?

What is the lamp intensity?

- (mW/cm^2) Dynamic range
- If unknown, ask the lamp supplier for estimates
- It is not the wattage rating of the lamp, but the irradiance (light reaching the product)

Is the lamp pulsed or steady-state?

- Check meter specs carefully – not all measure pulsed light too!

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What is the ILT800 CureRight?

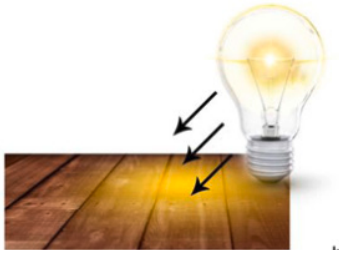
The ILT800 is a profiling light meter that provides absolute calibrated irradiance and dosage for testing all types of UV curing light sources from spot to flood, oven to chamber, LED to traditional lamp.

What is profiling?

- The ability to rapidly measure changes in intensity and provide a plot or graph of light output over time.

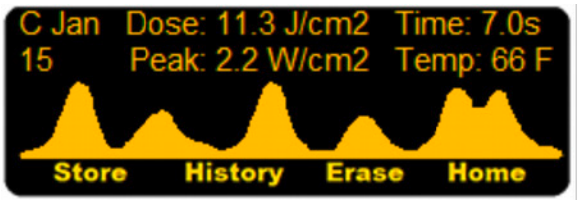
What is irradiance?

- The amount of light reaching the surface of an area
- Displayed as W/cm² (mW/cm²)



What is dose?

- The total amount of light received by the product. Dose = Irradiance x Time in seconds and is displayed in J/cm² (mJ/ cm²)



What does the ILT800 measure?

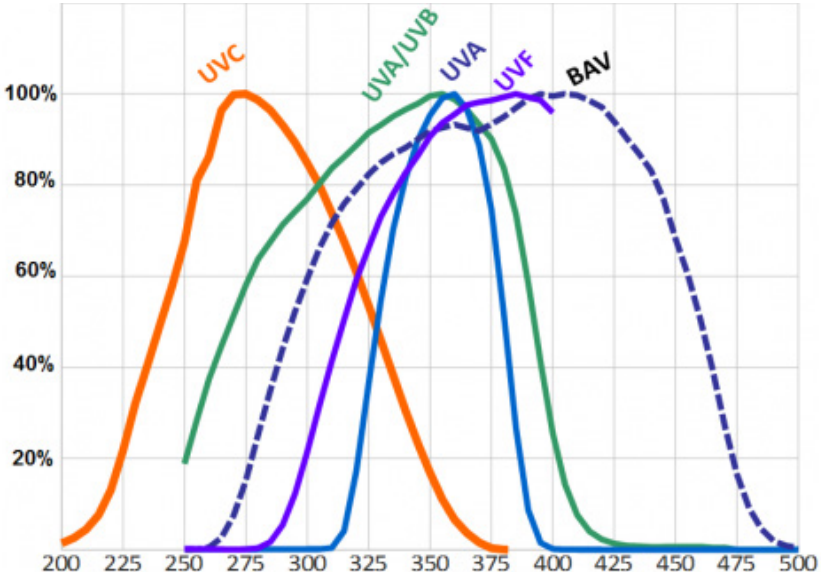
Peak: The maximum intensity or irradiance measured. Assures the light level is powerful enough to penetrate the substrate to offer a full cure. Displayed in W/cm² or mW/cm²

Dose exposure: The summation or total amount of light seen during the duration of the test. Assures the exposure was long enough to allow full cure. Displayed in J/cm² or J/cm².

Time: The measurement duration. Duration of a test is helpful for QC.As lamps age, it is often possible to extend the life of the lamp by using longer integration times.

Profile: The profile is a graph of the intensity over time. Profiling is an excellent trouble shooting tool.

Range: Five standard models cover the ranges of UV-Vis from 225 nm to 475 nm. (see graph, custom ranges are also available)



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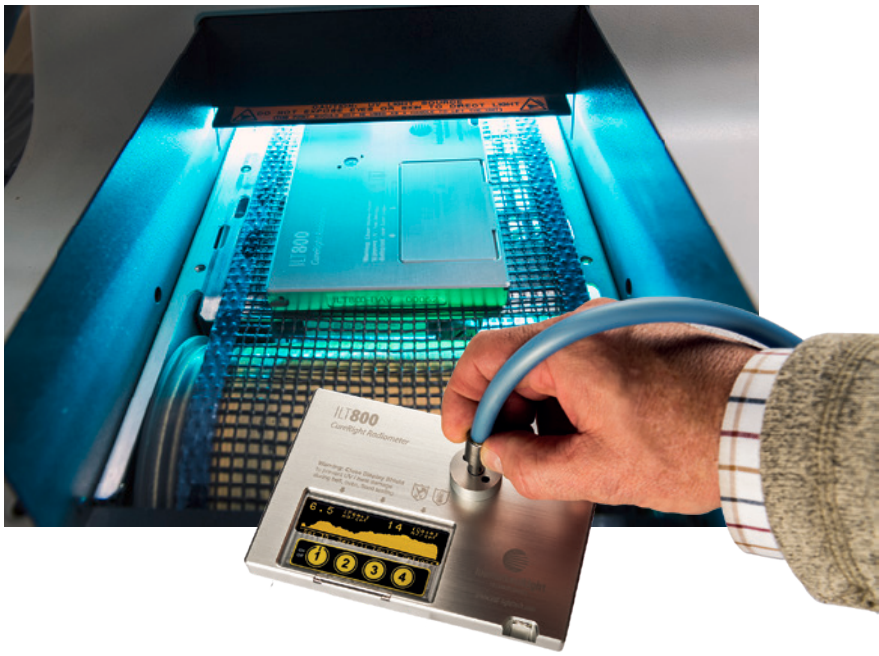
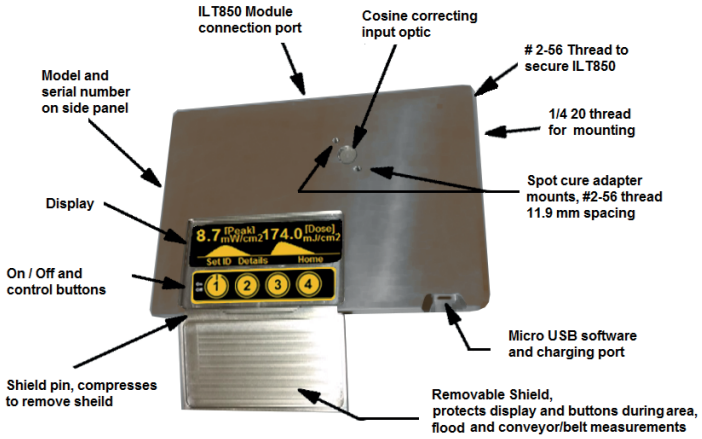
The ILT800 for process validation



Features

- Largest measurement range 5 mW/cm² to 40 W/cm²
- Device ID - store up to 20 unique source ID
- Customization with user-programmable settings
- Measures 3000 samples per second
- Measure pulsed and continuous sources
- Store/recall up to 1000 profiles
- Temperature measurement
- Custom & OEM inquiries welcome
- PC software for live measurements & data retrieval
- Low battery warning
- ISO17025 calibration
- Smart design with control and input optic on the same side



Ordering information ILT-ILT800 CureRight belt radiometer	
ILT-ILT800-UVA	315 - 390 nm
ILT-ILT800-BAV	275 - 475 nm
ILT-ILT800-UV	250 - 400 nm
ILT-ILT800-UVC	215 - 350 nm
ILT-ILT800-UVF	275 - 450 nm, (360 - 400 nm flat)
OEM/Custom filtration available	

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