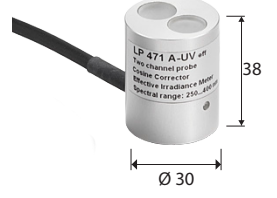


## RADIOMETRIC-PHOTOMETRIC PROBES FOR PORTABLE INSTRUMENTS

| Code       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                       |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| LP471PHOT  | Photometric probe for measuring <b>ILLUMINANCE</b> , spectral response according to the photopic curve, class B according to CIE N° 69, cosine correction diffuser.<br>Measuring range: 0.1 lux...200·10 <sup>3</sup> lux.                                                                                                                                                                                                                              |    |
| LP471LUM2  | Photometric probe for measuring <b>LUMINANCE</b> , spectral response according to the photopic curve, angular field 2°.<br>Measuring range: 1 cd/m <sup>2</sup> ...2000·10 <sup>3</sup> cd/m <sup>2</sup> .                                                                                                                                                                                                                                             |    |
| LP471PAR   | Quantum-radiometric probe for measuring <b>PHOTONS FLOW</b> in the chlorophyll field <b>PAR</b> (photosynthetically Active Radiation 400 nm...700 nm), µmol m <sup>-2</sup> s <sup>-1</sup> measure, cosine correction diffuser.<br>Measuring range: 0.1 µmol m <sup>-2</sup> s <sup>-1</sup> ...10·10 <sup>3</sup> µmol m <sup>-2</sup> s <sup>-1</sup>                                                                                                |    |
| LP471PAR02 | Quantum-radiometric probe for measuring the <b>PHOTONS FLOW</b> in the chlorophyll field <b>PAR</b> (photosynthetically Active Radiation 400 nm...700 nm), µmol m <sup>-2</sup> s <sup>-1</sup> measure, opaline quartz diffuser for cosine correction. The probe uses a special filter that optimizes the spectral response.<br>Measuring range: 0.1 µmol m <sup>-2</sup> s <sup>-1</sup> ...10·10 <sup>3</sup> µmol m <sup>-2</sup> s <sup>-1</sup> . |   |
| LP471RAD   | Radiometric probe for measuring <b>IRRADIANCE</b> in the spectral range 400 nm...1050 nm, cosine correction diffuser.<br>Measuring range: 1.0·10 <sup>-3</sup> W/m <sup>2</sup> ...2000 W/m <sup>2</sup> .                                                                                                                                                                                                                                              |  |
| LP471UVA   | Radiometric probe for measuring <b>IRRADIANCE</b> in the <b>UVA</b> spectral range 315 nm...400 nm, peak at 360 nm, quartz diffuser for cosine correction.<br>Measuring range: 1.0·10 <sup>-3</sup> W/m <sup>2</sup> ... 2000 W/m <sup>2</sup> .                                                                                                                                                                                                        |  |
| LP471UVB   | Radiometric probe for measuring <b>IRRADIANCE</b> in the <b>UVB</b> spectral range 280 nm...315 nm, peak at 305 nm...310 nm, quartz diffuser for cosine correction.<br>Measuring range: 1.0·10 <sup>-3</sup> W/m <sup>2</sup> ... 2000 W/m <sup>2</sup> .                                                                                                                                                                                               |  |
| LP471UVC   | Radiometric probe for measuring <b>IRRADIANCE</b> in the <b>UVC</b> spectral range 220 nm...280 nm, peak at 260 nm, quartz diffuser for cosine correction.<br>Measuring range: 1.0·10 <sup>-3</sup> W/m <sup>2</sup> ... 2000 W/m <sup>2</sup> .                                                                                                                                                                                                        |  |
| LP471UVBC  | Radiometric probe for measuring the <b>IRRADIANCE</b> in the <b>UV-BC</b> spectral range 210 nm...355 nm, peak at 265 nm, quartz diffuser for cosine correction.<br>Measuring range: 1.0·10 <sup>-3</sup> W/m <sup>2</sup> ... 2000 W/m <sup>2</sup> .                                                                                                                                                                                                  |  |

## RADIOMETRIC-PHOTOMETRIC PROBES FOR PORTABLE INSTRUMENTS

| Code               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                       |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| LP471BLUE          | Radiometric probe for measuring the <b>EFFECTIVE IRRADIANCE</b> in the spectral range of the <b>BLUE LIGHT</b> 380 nm...550 nm, diffuser for cosine correction.<br>Measuring range: $1.0 \cdot 10^{-3} \text{ W/m}^2 \dots 2000 \text{ W/m}^2$ .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |    |
| LP471P-A           | Combined probe for measuring <b>ILLUMINANCE</b> (lux), with standard photopic response, and <b>IRRADIANCE</b> ( $\mu\text{W/cm}^2$ ) in the <b>UVA spectral range</b> (315...400 nm, with peak at 360 nm).<br>Both the sensors are equipped with diffuser for the correction according to the cosine law.<br>Illuminance measuring range: 0.3 lux ... $200 \cdot 10^3$ lux.<br>Irradiance measuring range: $1.0 \cdot 10^{-3} \text{ W/m}^2 \dots 2000 \text{ W/m}^2$ .<br>This probe provides the ratio between UVA irradiance and illuminance in $\mu\text{W/lumen}$ (quantity of interest in museums).                                                                                                                                                         |    |
| LP471A-UVeff       | Combined probe for measuring the <b>TOTAL EFFECTIVE IRRADIANCE</b> ( $\text{W/m}^2$ ) weighted according to the UV action curve. The probe is made of two sensors for the correct measure of the Total Effective Irradiance in the range 250...400 nm. Both these sensors are equipped with a diffuser for the correction according to the cosine law.<br>This probe supplies the Total effective irradiance ( $E_{\text{eff}}$ ), the UV-CB effective irradiance and the UVA irradiance.<br>Total effective irradiance measuring range: $0.010 \text{ W/m}^2 \dots 20 \text{ W/m}^2$ .<br>B_C effective irradiance measuring range: $0.010 \text{ W/m}^2 \dots 20 \text{ W/m}^2$<br>UVA irradiance measuring range: $0.1 \text{ W/m}^2 \dots 2000 \text{ W/m}^2$ |    |
| LP471 SILICON-PYRA | Pyranometer with silicon photodiode for measuring the <b>GLOBAL SOLAR IRRADIANCE</b> , diffuser for cosine correction. Spectral range 400...1100 nm.<br>Measuring range: $0 \dots 2000 \text{ W/m}^2$ .<br>Fixed cable 5 m long with SICRAM module.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| LP471PYRA...       | The probes LP471PYRA... consist of a pyranometer LPPYRA03, LPPYRA02 or LPPYRA10 and a SICRAM module equipped with a 5 m cable for the connection to the instruments DO9847, HD2102.1, HD2102.2, HD2302.0 and get a reading expressed directly in $\text{W/m}^2$ .<br>LPPYRA03 is a Spectrally Flat Class C (Second Class) pyranometer; LPPYRA02 is a Spectrally Flat Class B (First Class) pyranometer and LPPYRA10 is a Spectrally Flat Class A (Secondary Standard) pyranometer.                                                                                                                                                                                                                                                                                |  |
| LPBL               | Base with levelling device (not suitable for LP471LUM2 and LP471PYRA... probes).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| LPBL3              | Adjustable wall support for Ø 30 mm photometric and radiometric probes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |



| LP471PHOT - Probe for the measure of ILLUMINANCE           |                                                |           |          |                           |
|------------------------------------------------------------|------------------------------------------------|-----------|----------|---------------------------|
| Measuring range (lux):                                     | 0.10...199.99                                  | ...1999.9 | ...19999 | ...199.99·10 <sup>3</sup> |
| Resolution (lux):                                          | 0.01                                           | 0.1       | 1        | 0.01·10 <sup>3</sup>      |
| Spectral range:                                            | in agreement with standard photopic curve V(λ) |           |          |                           |
| Class                                                      | B                                              |           |          |                           |
| Calibration uncertainty:                                   | <4%                                            |           |          |                           |
| f <sub>1</sub> (in agreement with photopic response V(λ)): | <6%                                            |           |          |                           |
| f <sub>2</sub> (response according to the cosine law):     | <3%                                            |           |          |                           |
| f <sub>3</sub> (linearity):                                | <1%                                            |           |          |                           |
| f <sub>4</sub> (instrument reading error):                 | <0.5%                                          |           |          |                           |
| f <sub>5</sub> (fatigue):                                  | <0.5%                                          |           |          |                           |
| α (temp. coefficient) f <sub>6</sub> (T)                   | <0.05%K                                        |           |          |                           |
| Drift after 1 year:                                        | <1%                                            |           |          |                           |
| Working temperature:                                       | 0...50°C                                       |           |          |                           |
| Reference Standards                                        | CIE n.69 - UNI 11142                           |           |          |                           |

Photometric probe for **ILLUMINANCE** measurement, spectral response in agreement with standard photopic vision, diffuser for cosine correction. Measurement range: 0.10 lux...200·10<sup>3</sup> lux.

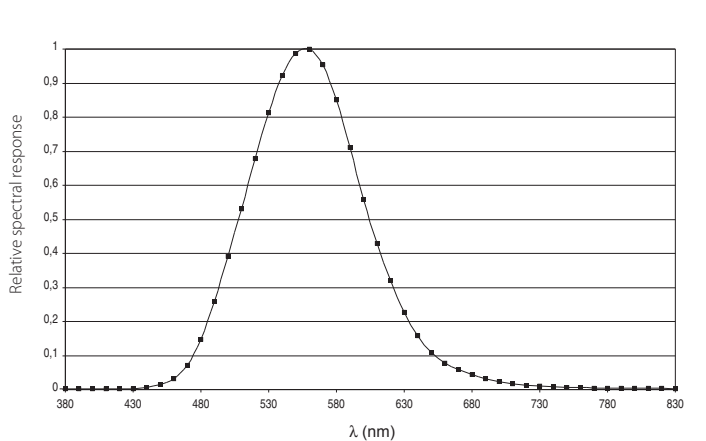


| LP471LUM2 - Probe for the measure of LUMINANCE             |                                                |          |                           |                           |
|------------------------------------------------------------|------------------------------------------------|----------|---------------------------|---------------------------|
| Measuring range (cd/m²):                                   | 1.0...1999.9                                   | ...19999 | ...199.99·10 <sup>3</sup> | ...1999.9·10 <sup>3</sup> |
| Resolution (cd/m²):                                        | 0.1                                            | 1        | 0.01·10 <sup>3</sup>      | 0.1·10 <sup>3</sup>       |
| Optical angle:                                             | 2°                                             |          |                           |                           |
| Spectral range:                                            | in agreement with standard photopic curve V(λ) |          |                           |                           |
| Class:                                                     | C                                              |          |                           |                           |
| Calibration uncertainty:                                   | <5%                                            |          |                           |                           |
| f <sub>1</sub> (in agreement with photopic response V(λ)): | <8%                                            |          |                           |                           |
| f <sub>3</sub> (linearity):                                | <1%                                            |          |                           |                           |
| f <sub>4</sub> (instrument reading error):                 | <0.5%                                          |          |                           |                           |
| f <sub>5</sub> (fatigue):                                  | <0.5%                                          |          |                           |                           |
| α (temp. coefficient) f <sub>6</sub> (T)                   | <0.05%K                                        |          |                           |                           |
| Drift after 1 year:                                        | <1%                                            |          |                           |                           |
| Working temperature:                                       | 0...50°C                                       |          |                           |                           |
| Reference Standards:                                       | CIE n.69 - UNI 11142                           |          |                           |                           |

Photometric probe for **LUMINANCE** measurement, spectral response in agreement with standard photopic vision, vision angle 2°. Measurement range: 1 cd/m²...2000·10<sup>3</sup> cd/m².



Typical response curve: LP471PHOT and LP471LUM2

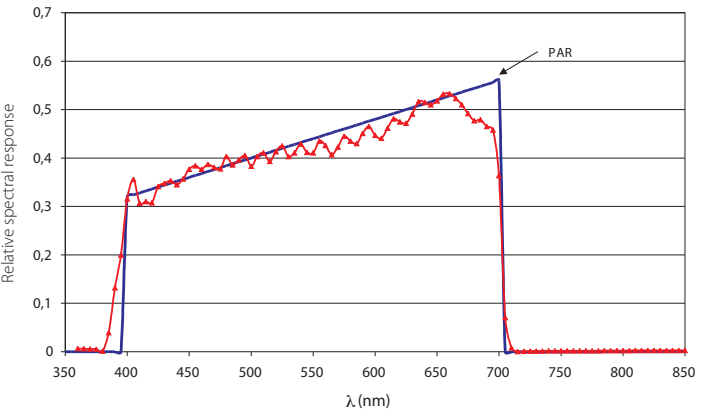


| LP471PAR - Quantum radiometric probe for the measure of the PHOTON FLOW across the chlorophyll range PAR |                 |                |              |
|----------------------------------------------------------------------------------------------------------|-----------------|----------------|--------------|
| Measuring range (μmol·m <sup>-2</sup> ·s <sup>-1</sup> ):                                                | 0.10...199.99   | 200.0...1999.9 | 2000...10000 |
| Resolution (μmol·m <sup>-2</sup> ·s <sup>-1</sup> ):                                                     | 0.01            | 0.1            | 1            |
| Spectral range:                                                                                          | 400 nm...700 nm |                |              |
| Calibration uncertainty:                                                                                 | <5%             |                |              |
| f <sub>2</sub> (response according to the cosine law):                                                   | <6%             |                |              |
| f <sub>3</sub> (linearity):                                                                              | <1%             |                |              |
| f <sub>4</sub> (instrument reading error):                                                               | ±1 digit        |                |              |
| f <sub>5</sub> (fatigue):                                                                                | <0.5%           |                |              |
| Drift after 1 year:                                                                                      | <1%             |                |              |
| Working temperature:                                                                                     | 0...50°C        |                |              |

Quantum radiometric probe for the measurement of the photonflow across the chlorophyll range **PAR** (**Photosynthetically Active Radiation** 400 nm...700 nm), measurement in μmol/m²·s. Measurement range: 0.10 μmol·m<sup>-2</sup>·s<sup>-1</sup>...10·10<sup>-3</sup> μmol·m<sup>-2</sup>·s<sup>-1</sup>.



Typical response curve: LP471PAR

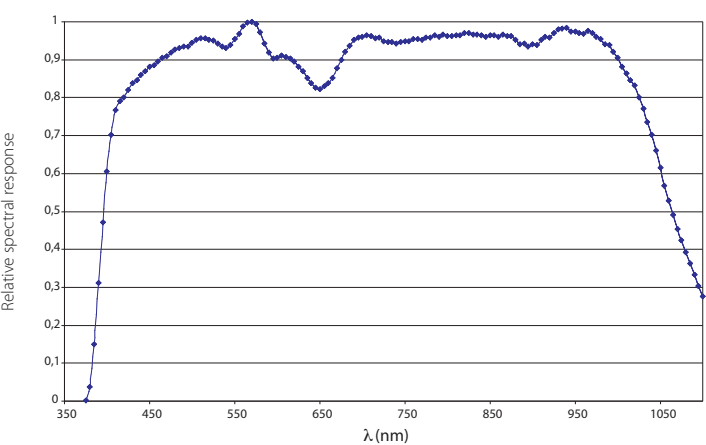


| LP471RAD - Probe for the measure of IRRADIANCE         |                                                |                |                |                |
|--------------------------------------------------------|------------------------------------------------|----------------|----------------|----------------|
| Measuring range (W/m²):                                | 1.0·10 <sup>-3</sup> ...999.9·10 <sup>-3</sup> | 1.000...19.999 | 20.00...199.99 | 200.0...1999.9 |
| Resolution (W/m²):                                     | 0.1·10 <sup>-3</sup>                           | 0.001          | 0.01           | 0.1            |
| Spectral range:                                        | 400nm...1050nm                                 |                |                |                |
| Calibration uncertainty:                               | <5%                                            |                |                |                |
| f <sub>2</sub> (response according to the cosine law): | <6%                                            |                |                |                |
| f <sub>3</sub> (linearity):                            | <1%                                            |                |                |                |
| f <sub>4</sub> (instrument reading error):             | ±1 digit                                       |                |                |                |
| f <sub>5</sub> (fatigue):                              | <0.5%                                          |                |                |                |
| Drift after 1 year:                                    | <1%                                            |                |                |                |
| Working temperature:                                   | 0...50°C                                       |                |                |                |

Radiometric probe for **IRRADIANCE** measurement in the spectral range 400 nm...1050 nm, diffuser for cosine correction. Measurement range: 1.0·10<sup>-3</sup> W/m²...2000 W/m².



Typical response curve: LP471RAD

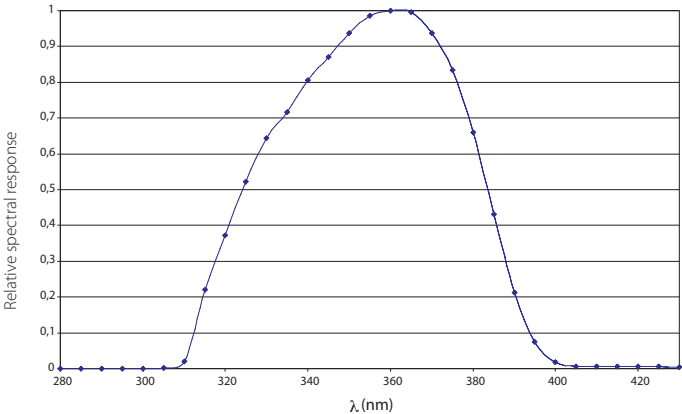


| LP471UVA - Probe for the measure of UVA IRRADIANCE |                                                     |                  |                  |                  |
|----------------------------------------------------|-----------------------------------------------------|------------------|------------------|------------------|
| Measuring range (W/m²):                            | 1.0 · 10 <sup>-3</sup> ... 999.9 · 10 <sup>-3</sup> | 1.000 ... 19.999 | 20.00 ... 199.99 | 200.0 ... 1999.9 |
| Resolution (W/m²):                                 | 0.1 · 10 <sup>-3</sup>                              | 0.001            | 0.01             | 0.1              |
| Spectral range:                                    | 315 nm...400 nm (Peak 360nm)                        |                  |                  |                  |
| Calibration uncertainty:                           | <5%                                                 |                  |                  |                  |
| f <sub>3</sub> (linearity):                        | <1%                                                 |                  |                  |                  |
| f <sub>4</sub> (instrument reading error):         | ±1 digit                                            |                  |                  |                  |
| f <sub>5</sub> (fatigue):                          | <0.5%                                               |                  |                  |                  |
| Drift after 1 year:                                | <2%                                                 |                  |                  |                  |
| Working temperature:                               | 0...50°C                                            |                  |                  |                  |

Radiometric probe for **IRRADIANCE** measurement, in the **UVA** spectral range 315 nm...400 nm, peak 360 nm.  
Measurement range: 1.0·10<sup>-3</sup>W/m²...2000 W/m².



Typical response curve: LP471UVA

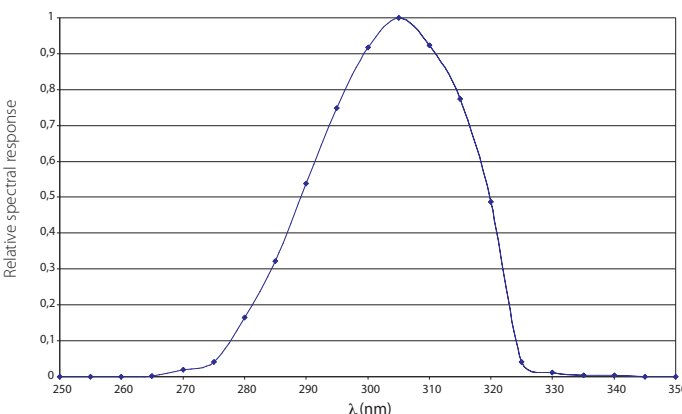


| LP471UVB - Probe for the measure of UVB IRRADIANCE |                                                 |                  |                  |                  |
|----------------------------------------------------|-------------------------------------------------|------------------|------------------|------------------|
| Measuring range (W/m²):                            | 1.0·10 <sup>-3</sup> ... 999.9·10 <sup>-3</sup> | 1.000 ... 19.999 | 20.00 ... 199.99 | 200.0 ... 1999.9 |
| Resolution (W/m²):                                 | 0.1·10 <sup>-3</sup>                            | 0.001            | 0.01             | 0.1              |
| Spectral range:                                    | 280nm...315nm (Peak 305nm...310nm)              |                  |                  |                  |
| Calibration uncertainty:                           | <5%                                             |                  |                  |                  |
| f <sub>3</sub> (linearity):                        | <2%                                             |                  |                  |                  |
| f <sub>4</sub> (instrument reading error):         | ±1 digit                                        |                  |                  |                  |
| f <sub>5</sub> (fatigue):                          | <0.5%                                           |                  |                  |                  |
| Drift after 1 year:                                | <2%                                             |                  |                  |                  |
| Working temperature:                               | 0...50°C                                        |                  |                  |                  |

Radiometric probe for **IRRADIANCE** measurement in the **UVB** spectral range 280 nm...315 nm, peak 305 nm...310 nm.  
Measurement range: 1.0·10<sup>-3</sup>W/m²...2000 W/m².



Typical response curve: LP471UVB

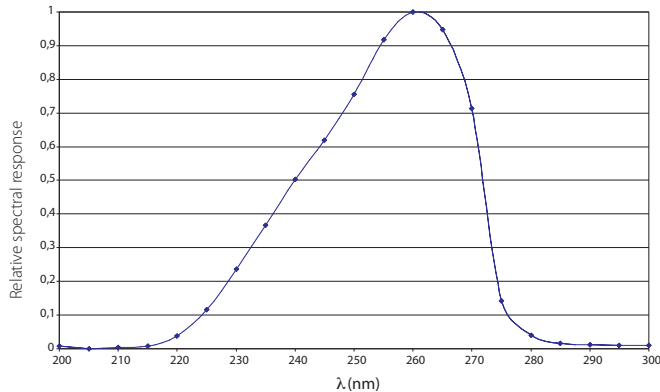


| LP471UVC - Probe for the measure of UVC IRRADIANCE |                                                 |                  |                  |                  |
|----------------------------------------------------|-------------------------------------------------|------------------|------------------|------------------|
| Measuring range (W/m²):                            | 1.0·10 <sup>-3</sup> ... 999.9·10 <sup>-3</sup> | 1.000 ... 19.999 | 20.00 ... 199.99 | 200.0 ... 1999.9 |
| Resolution (W/m²):                                 | 0.1·10 <sup>-3</sup>                            | 0.001            | 0.01             | 0.1              |
| Spectral range:                                    | 220nm...280nm (Peak 260nm)                      |                  |                  |                  |
| Calibration uncertainty:                           | <5%                                             |                  |                  |                  |
| f <sub>3</sub> (linearity):                        | <1%                                             |                  |                  |                  |
| f <sub>4</sub> (instrument reading error):         | ±1 digit                                        |                  |                  |                  |
| f <sub>5</sub> (fatigue):                          | <0.5%                                           |                  |                  |                  |
| Drift after 1 year:                                | <2%                                             |                  |                  |                  |
| Working temperature:                               | 0...50°C                                        |                  |                  |                  |

Radiometric probe for **IRRADIANCE** measurement, in the **UVC** spectral range 220 nm...280 nm, peak 260 nm.  
Measurement range: 1.0·10<sup>-3</sup>W/m²...2000 W/m².



Typical response curve: LP471UVC

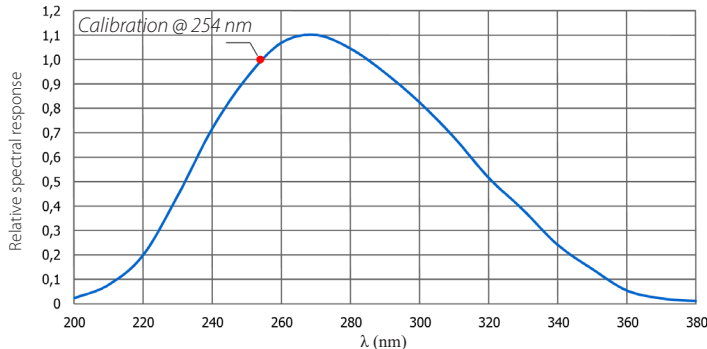


| LP471UVBC - Probe for the measure of UV-BC IRRADIANCE |                                                 |                  |                  |                  |
|-------------------------------------------------------|-------------------------------------------------|------------------|------------------|------------------|
| Measuring range (W/m²):                               | 1.0·10 <sup>-3</sup> ... 999.9·10 <sup>-3</sup> | 1.000 ... 19.999 | 20.00 ... 199.99 | 200.0 ... 1999.9 |
| Resolution (W/m²):                                    | 0.1·10 <sup>-3</sup>                            | 0.001            | 0.01             | 0.1              |
| Spectral range:                                       | 210 nm...335 nm (Peak 265 nm)                   |                  |                  |                  |
| Calibration uncertainty:                              | <7% (calibration @ 254 nm)                      |                  |                  |                  |
| f <sub>3</sub> (linearity):                           | <2%                                             |                  |                  |                  |
| f <sub>5</sub> (fatigue):                             | <0.5%                                           |                  |                  |                  |
| Drift after 1 year:                                   | <2%                                             |                  |                  |                  |
| Working temperature:                                  | 0...50°C                                        |                  |                  |                  |

Radiometric probe for measuring the **IRRADIANCE** in the **UV-BC** spectral range 210 nm...355 nm, peak at 265 nm.  
Measuring range: 1.0·10<sup>-3</sup> W/m² ... 2000 W/m².

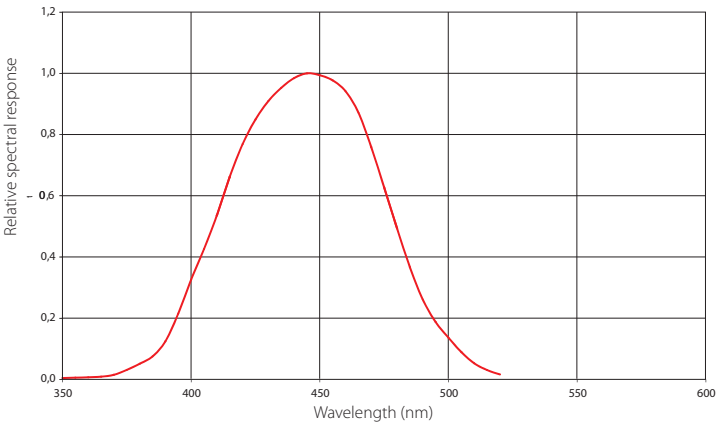


Typical response curve: LP471UVBC



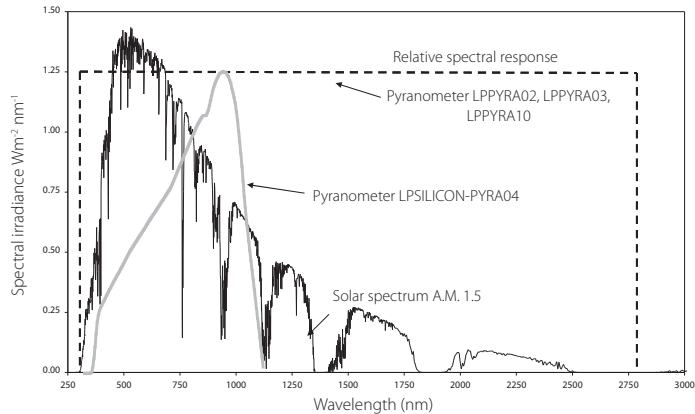
| LP471BLUE - Probe for the measure of IRRADIANCE in spectral band of BLUE LIGHT |                                                                   |                  |                  |                  |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------|------------------|------------------|
| Measurement range (W/m <sup>2</sup> ):                                         | 1.0·10 <sup>-3</sup> ... 999.9·10 <sup>-3</sup>                   | 1.000 ... 19.999 | 20.00 ... 199.99 | 200.0 ... 1999.9 |
| Resolution (W/m <sup>2</sup> ):                                                | 0.1·10 <sup>-3</sup>                                              | 0.001            | 0.01             | 0.01             |
| Spectral range:                                                                | 380 nm ... 550 nm.<br>Action curve for damages of Blue light B(λ) |                  |                  |                  |
| Calibration uncertainty:                                                       | <10%                                                              |                  |                  |                  |
| f <sub>2</sub> (response according to the cosine law):                         | <6%                                                               |                  |                  |                  |
| f <sub>3</sub> (linearity):                                                    | <3%                                                               |                  |                  |                  |
| f <sub>4</sub> (instrument reading error):                                     | ±1 digit                                                          |                  |                  |                  |
| f <sub>5</sub> (fatigue):                                                      | <0.5%                                                             |                  |                  |                  |
| Drift after 1 year:                                                            | <2%                                                               |                  |                  |                  |
| Working temperature:                                                           | 0 ... 50°C                                                        |                  |                  |                  |

Relative spectral response



The radiometric probe **LP471BLUE** measures irradiance (W/m<sup>2</sup>) in spectral band of blue light. The probe consists of a photodiode plus an appropriate filter and it is provided with diffuser for proper measure in accordance with the cosine law. The spectral response curve of the probe allows to measure the radiation effective for damages caused by blue light (curve B(λ) according to the standards ACGIH / ICNIRP) in the spectral range from 380 nm to 550 nm. The radiation optics in this portion of the spectrum can produce photochemical damage to the retina. Another field of application is the monitoring of the probe irradiance from blue light used in the treatment of neonatal jaundice.

| LP471SILICON-PYRA - Probe for the measure of GLOBAL SOLAR RADIATION |                                                 |                  |                  |                  |
|---------------------------------------------------------------------|-------------------------------------------------|------------------|------------------|------------------|
| Measurement range (W/m <sup>2</sup> ):                              | 1.0·10 <sup>-3</sup> ... 999.9·10 <sup>-3</sup> | 1.000 ... 19.999 | 20.00 ... 199.99 | 200.0 ... 1999.9 |
| Resolution (W/m <sup>2</sup> ):                                     | 0.1·10 <sup>-3</sup>                            | 0.001            | 0.01             | 0.1              |
| Spectral range:                                                     | 400 nm ... 1100 nm                              |                  |                  |                  |
| Calibration uncertainty:                                            | <3%                                             |                  |                  |                  |
| f <sub>2</sub> (response according to the cosine law):              | <3%                                             |                  |                  |                  |
| f <sub>3</sub> (linearity):                                         | <1%                                             |                  |                  |                  |
| f <sub>4</sub> (instrument reading error):                          | ±1 digit                                        |                  |                  |                  |
| f <sub>5</sub> (fatigue):                                           | <0.5%                                           |                  |                  |                  |
| Drift after 1 year:                                                 | <2%                                             |                  |                  |                  |
| Working temperature:                                                | 0 ... 50°C                                      |                  |                  |                  |



| LP471P-A - Combined probe with two sensors for the measure of ILLUMINANCE and UVA IRRADIANCE |                                                |            |           |                            |
|----------------------------------------------------------------------------------------------|------------------------------------------------|------------|-----------|----------------------------|
| <b>Illuminance</b>                                                                           |                                                |            |           |                            |
| Measuring range (lux):                                                                       | 0.3 ... 199.9                                  | ... 1999.9 | ... 19999 | ... 199.99·10 <sup>3</sup> |
| Resolution (lux):                                                                            | 0.01                                           | 0.1        | 1         | 0.01·10 <sup>3</sup>       |
| Spectral range:                                                                              | in agreement with standard photopic curve V(λ) |            |           |                            |
| α (temp. coefficient) f <sub>6</sub> (T)                                                     | <0.05%K                                        |            |           |                            |
| Calibration uncertainty:                                                                     | <4%                                            |            |           |                            |
| f' <sub>1</sub> (in agreement with photopic response V(λ)):                                  | <6%                                            |            |           |                            |
| f <sub>2</sub> (response according to the cosine law):                                       | <3%                                            |            |           |                            |
| f <sub>3</sub> (linearity):                                                                  | <1%                                            |            |           |                            |
| f <sub>4</sub> (instrument reading error):                                                   | <0.5%                                          |            |           |                            |
| f <sub>5</sub> (fatigue):                                                                    | <0.5%                                          |            |           |                            |
| Class:                                                                                       | B                                              |            |           |                            |
| Drift after 1 year:                                                                          | <1%                                            |            |           |                            |
| Working temperature:                                                                         | 0 ... 50°C                                     |            |           |                            |
| Reference Standards:                                                                         | CIE n.69 - UNI 11142                           |            |           |                            |

Please refer to the spectral response of the LP471PHOT probe.

|                                                        |                                 |            |           |                            |
|--------------------------------------------------------|---------------------------------|------------|-----------|----------------------------|
| <b>UVA Irradiance</b>                                  |                                 |            |           |                            |
| Measuring range (μW/cm <sup>2</sup> ):                 | 0.10 ... 199.99                 | ... 1999.9 | ... 19999 | ... 199.99·10 <sup>3</sup> |
| Resolution (μW/cm <sup>2</sup> ):                      | 0.01                            | 0.1        | 1         | 0.01·10 <sup>3</sup>       |
| Spectral range:                                        | 315 nm ... 400 nm (Peak 360 nm) |            |           |                            |
| Calibration uncertainty:                               | <5%                             |            |           |                            |
| f <sub>2</sub> (response according to the cosine law): | <6%                             |            |           |                            |
| f <sub>3</sub> (linearity):                            | <1%                             |            |           |                            |
| f <sub>4</sub> (instrument reading error):             | ±1 digit                        |            |           |                            |
| f <sub>5</sub> (fatigue):                              | <0.5%                           |            |           |                            |
| Drift after 1 year:                                    | <2%                             |            |           |                            |
| Working temperature:                                   | 0 ... 50°C                      |            |           |                            |

Please refer to the spectral response of the LP471UVA probe.

| LP471A-UVEff - Probe for the measure of TOTAL EFFECTIVE IRRADIANCE weighted according to the UV action curve (CEI EN 60335-2-27) |                                                            |
|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| <b>Total Effective Irradiance</b>                                                                                                |                                                            |
| Measuring range (W/m <sup>2</sup> ):                                                                                             | 0.010 ... 19.999                                           |
| Resolution (W/m <sup>2</sup> ):                                                                                                  | 0.001                                                      |
| Spectral range:                                                                                                                  | UV action curve for measuring erythema (250 nm ... 400 nm) |
| Calibration uncertainty:                                                                                                         | <15%                                                       |
| f <sub>3</sub> (linearity):                                                                                                      | <3%                                                        |
| f <sub>4</sub> (instrument reading error):                                                                                       | ±1 digit                                                   |
| f <sub>5</sub> (fatigue):                                                                                                        | <0.5%                                                      |
| Drift after 1 year:                                                                                                              | <2%                                                        |
| Working temperature:                                                                                                             | 0 ... 50°C                                                 |
| <b>UV Irradiance</b>                                                                                                             |                                                            |
| Measuring range (W/m <sup>2</sup> ):                                                                                             | 0.1 ... 1999.9                                             |
| Resolution (W/m <sup>2</sup> ):                                                                                                  | 0.1                                                        |
| Spectral range:                                                                                                                  | 315 nm ... 400 nm                                          |
| <b>UV_BC Irradiance</b>                                                                                                          |                                                            |
| Measuring range (W/m <sup>2</sup> ):                                                                                             | 0.010 ... 19.999                                           |
| Resolution (W/m <sup>2</sup> ):                                                                                                  | 0.001                                                      |
| Spectral range:                                                                                                                  | 250 nm ... 315 nm                                          |

