

Photometry and Radiometry, Slovak Republic, SMU (Slovensky Metrologicki Ustav)



| Calibration or Measurement Service | | | Measurand Level or Range | | | Measurement Conditions/Independent Variable | | Expanded Uncertainty | | | | | Comments |
|---|------------------------|--|--------------------------|---------------|-------------------|---|-------------------|---|-------|-----------------|---------------------|---|---------------------------|
| Quantity | Instrument or Artifact | Instrument Type or Method | Minimum value | Maximum value | Units | Parameter | Specifications | Value | Units | Coverage factor | Level of Confidence | Is the expanded uncertainty a relative one? | |
| Luminous intensity | Tungsten lamp | Comparison to standard lamps of luminous intensity | 8 | 3 000 | cd | Colour temperature | 2856 K | 3.0 | % | 2 | 95% | Yes | |
| Illuminance responsivity, tungsten source | Illuminance meter | Spectroradiometric measurements | | | A/lx | Wavelength | 360 nm to 780 nm | 1.5 | % | 2 | 95% | Yes | |
| | | | | | | Illuminance | 40 lx | | | | | | |
| Luminous flux | Tungsten lamp | Integrating sphere | 80 | 15 000 | lm | Colour temperature | 2787 K | 3.0 | % | 2 | 95% | Yes | |
| Illuminance | Tungsten lamp | Comparison with luminous intensity reference standard | 2 | 10000 | lx | Correlated colour temperature | 2042 K to 3200 K | 4.0 | % | 2 | 95% | Yes | |
| Luminance | Tungsten-based source | Comparison with luminous intensity reference standard | 10 | 2500 | cd/m ² | Correlated colour temperature | 2856 K | 5.0 | % | 2 | 95% | Yes | |
| Responsivity, spectral, power | Broad band detector | Double grating monochromator with standard radiometers | | | Reading/W | Wavelength | 300 nm to 400 nm | 3 to 0.4, varies linearly with wavelength | % | 2 | 95% | Yes | Approved on 18 April 2006 |
| | | | | | | Bandwidth | 1 nm to 5 nm | | | | | | |
| Responsivity, spectral, power | Broad band detector | Double grating monochromator with standard radiometers | | | Reading/W | Wavelength | 400 nm to 1000 nm | 0.4 | % | 2 | 95% | Yes | Approved on 18 April 2006 |
| | | | | | | Bandwidth | 1 nm to 10 nm | | | | | | |

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|------------------------------------|---------------------------|--|--------------------------|---------------|-----------|---|---------------------|---|-------|-----------------|---------------------|---|---------------------------|
| Quantity | Instrument or Artifact | Instrument Type or Method | Minimum value | Maximum value | Units | Parameter | Specifications | Value | Units | Coverage factor | Level of Confidence | Is the expanded uncertainty a relative one? | |
| | | | | | | Radiant power | < 50 μ W | | | | | | |
| Responsivity, spectral, power | Broad band detector | Double grating monochromator with standard radiometers | | | Reading/W | Wavelength | 1001 nm to 1600 nm | 0.5 | % | 2 | 95% | Yes | Approved on 18 April 2006 |
| | | | | | | Bandwidth | 1 nm to 10 nm | | | | | | |
| | | | | | | Radiant power | < 100 μ W | | | | | | |
| Responsivity, spectral, power | Broad band detector | Double prism monochromator with standard radiometers | | | Reading/W | Wavelength | 1601 nm to 12000 nm | 0.5 to 3, varies linearly with wavelength | % | 2 | 95% | Yes | Approved on 18 April 2006 |
| | | | | | | Bandwidth | 10 nm to 50 nm | | | | | | |
| | | | | | | Radiant power | < 50 μ W | | | | | | |
| Wavelength | Fibre optic source | Direct measurement by spectrum analyser | 600 | 1700 | nm | | | 0.15 | nm | 2 | 95% | No | Approved on 18 April 2006 |
| Wavelength | Optical spectrum analyser | Direct measurement of lines | 600 | 1700 | nm | | | 0.03 | nm | 2 | 95% | No | Approved on 18 April 2006 |